DRAFT
Duluth-Superior, Minnesota-Wisconsin Open Water Evaluation
Sediment Sampling, Analysis and Biological Testing

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TABLE OF CONTENTS

1.0 INTRODUCTION 9
1.1 Project Objective 10
2.0 SITE DESCRIPTION 10
3.0 FIELD SAMPLING ACTIVITIES 10
3.1 Sampling Preparation 11
3.1.1 Biological Sediment Samples 12
3.1.2 Bulk Sediment Samples 13
3.2 Utility Clearance 13
3.3 Field Documentation 13
3.4 Weather / Climatic Conditions 14
3.5 Water Level 15
3.6 Sample Locations 15
3.7 Sample Collection 15
3.7.1 Sediment Sampling Procedures 15
3.7.2 Water Sampling Procedures 16
3.7.3 Decontamination Procedures 16
3.7.4 Field Log 16
3.7.5 Photographic Log 17
3.7.6 Sample Containers and Sample Preservation 17
3.7.7 Sample Custody 17
4.0 ANALYTICAL RESULTS 17
4.1 Quality Assurance / Quality Control 19
4.2 Data Qualifiers 20
4.2.1 Trace Laboratory Report 20
4.2.2 RTI Laboratory Report 21
4.3 Biological Toxicity Analysis Results 22
4.3.1 Elutriate Sample Biological Exposure Results and Conclusions 22
4.3.2 Sediment Sample Biological Exposure Results and Conclusions 23
4.3.3 Lumbriculus Sediment Sample Biological Exposure Results and Conclusions 24
4.3.4 Lumbriculus Sample PCB Results and Conclusions 25
4.3.4 Lumbriculus Sample 209 PCB Results and Conclusions 33
4.4 Quality Assurance/Quality Control Review 34

TABLE OF TABLES

Table 3-1: Sample Identification 11
Table 3-2: Biological Sediment and Water Analytical Parameters 12
Table 3-3: Bulk Sediment Analytical Parameters 13
Table 3-4: Weather / Climatic Conditions 14
Table 4-1: Elutriate Analytical Results 22
Table 4-2: Sediment Toxicity Analytical Results 23
Table 4-3: Lumbriculus Summary Results 24
Table 4-4: Total 22 PCB Statistical Summary Results (ND = MDL) 26
Table 4-5: Total 22 PCB Congeners Statistical Summary Results (ND = MDL) 28
Table 4-6: Normalized 22 PCB Congeners Statistical Summary Results (ND = MDL). 29
Table 4-7: Total 22 PCB Statistical Summary Results (ND = 0) 30
Table 4-8: Total 22 PCB Congeners Statistical Summary Results ND = 0 32
Table 4-9: Normalized 22 PCB Congeners Statistical Summary Results ND = 0 33
Table 4-10: Lumbriculus 209 PCB Congeners Analytical Results 33
Table 4-11: Lumbriculus 209 PCB Congeners Analytical Results 34

APPENDICES

APPENDIX A – Figures

Figure 1: **Duluth-Superior, Minnesota-Wisconsin, Harbor Map**

Figure 2: **USACE Provided Management Unit Sampling Map**

Figure 3: **Aerial Photograph of Duluth-Superior Harbor with 2011 Sample Locations**

Figure 4: **Lake Superior – Minnesota Open Water Placement Unit (MOPU) Sample Locations Map - Samples DS-11-36 to DS-11-40 and DS-11-MOPU**

Figure 5: **Lake Superior – Wisconsin Open Water Placement Unit (WOPU) Sample Locations Map - Samples DS-11-31 to DS-11-35 and DS-11-WOPU**

Figure 6: **Hearding Island Placement Unit (HIPU) Sample Locations Map - Samples DS-11-41 to DS-11-45 and DS-11-HIPU**

Figure 7: **Interstate Island Placement Unit (IIPU) Map - Samples DS-11-47 to DS-11-50 and DS-11-IIPU**

Figure 8: **Management Unit One (MU-1) Sample Locations Map - Minnesota and Upper Channel (DS-11-01 to DS-11-05 and DS-11-MU1)**

Figure 9: **Management Unit Two (MU-2) Sample Locations Map - West Gate Basin, Howards Bay, and South Channel (DS-11-06 to DS-11-10 and DS-11-MU2)**

Figure 10: **Management Unit Three (MU-3) Sample Locations Map - Duluth Harbor Basin (DS-11-11 to DS-11-15 and DS-11-MU3)**

Figure 11: **Management Unit Four (MU-4) Sample Locations Map - East Gate Basin (DS-11-16 to DS-11-20 and DS-11-MU4)**

Figure 12: **Management Unit Five (MU-5) Sample Locations Map - Superior Front Channel (DS-11-21 to DS-11-25 and DS-11-MU5)**

Figure 13: **Management Unit Six (MU-6) Sample Locations Map - Superior Harbor Basin (DS-11-26 to DS-11-30 and DS-11-MU6)**

Figure 14: **Management Unit One (MU-1) Sample Locations Map - Minnesota and Upper Channel (DS-11-01)**

Figure 15: **Management Unit One (MU-1) Sample Locations Map - Minnesota and Upper Channel (DS-11-02)**

Figure 16: Management Unit One (MU-1) Sample Locations Map - Minnesota and Upper Channel (DS-11-03 to DS-11-04)

Figure 17: Management Unit One (MU-1) Sample Locations Map - Minnesota and Upper Channel (DS-11-05)

Figure 18: Management Unit Two (MU-2) and Interstate Island Management Unit (IIMU) Sample Locations Map - West Gate Basin, Howards Bay, and South Channel (DS-11-06 to DS-11-09 and DS-11-46 to DS-11-50)

Figure 19: Management Unit Two (MU-2) Sample Locations Map - Howards Bay (DS-11-10)

Figure 20: Management Unit Three (MU-3) Sample Locations Map - Duluth Harbor Basin (DS-11-11 and DS-11-12)

Figure 21: Management Unit Three (MU-3) Sample Locations Map - Duluth Harbor Basin (DS-11-13)

Figure 22: Management Unit Three (MU-3) and Management Unit Four (MU-4) Sample Locations Map - Duluth Harbor Basin (DS-11-14 and DS-11-15) and East Gate Basin (DS-11-16 to DS-11-18)

Figure 23: Management Unit Four (MU-4) Sample Locations Map - East Gate Basin (DS-11-19 to DS-11-20)

Figure 24: Management Unit Five (MU-5) Sample Locations Map - Superior Front Channel (DS-11-21 and DS-11-22)

Figure 25: Management Unit Five (MU-5) Sample Locations Map - Superior Front Channel (DS-11-23)

Figure 26: Management Unit Five (MU-5) Sample Locations Map - Superior Front Channel (DS-11-24)

Figure 27: Management Unit Five (MU-5) Sample Locations Map - Superior Front Channel (DS-11-25)

Figure 28: Management Unit Six (MU-6) Sample Locations Map - Superior Harbor Basin (DS-11-26 to DS-11-29)

Figure 29: Management Unit Six (MU-6) Sample Locations Map - Superior Harbor Basin (DS-11-30)

Figure 30: Hearding Island Placement Unit (HIPU) Sample Locations Map - Duluth Harbor Basin (Samples DS-11-41 to DS-11-45)

Figure 31: Wisconsin Open Water Placement Unit (WOPU) Location Map - Lake Superior (Samples DS-11-31 to DS-11-35)

Figure 32: Minnesota Open Water Placement Unit (MOPU) Sample Locations Map - Lake Superior (Samples DS-11-36 to DS-11-40)

APPENDIX B – Sediment Analytical Results Summary Tables

Table 1: Management Unit Bulk Sediment Chemical Analytical Results Summary Table

Table 2: Placement Unit Bulk Sediment Chemical Analytical Results Summary Table

Table 3: Composite Samples Nutrient Kit Analytical Results Summary Table

Table 4: Management Unit Elutriate Sediment Chemical Analytical Summary Table

Table 5: Duluth-Superior Harbor Sediment Grain Size Analysis Results Summary Table

Table 6: PCB Congener Analytical Results Summary Table

APPENDIX C – Tissue PCBs Analytical Results Summary Tables

Table 7: Management Unit PCB Congener Lumbriculus Tissue Analysis Summary Table

Table 8: Placement Unit PCB Congener Lumbriculus Tissue Analysis Summary Table

Table 9: 209 PCB Congener Analyses of Lumbriculus Tissue Samples

Table 10: 209 PCB Congener Comparison

Table 11: PCB Congener Results Comparison Table, Soil and Tissue

APPENDIX D – Duluth-Superior, Minnesota-Wisconsin, Harbor Typed Field Logbook Form

APPENDIX E – Duluth-Superior, Minnesota-Wisconsin Harbor Sediment Boring Logs

APPENDIX F – Duluth-Superior, Minnesota-Wisconsin Harbor Management Unit Photographs

APPENDIX G – Duluth-Superior, Minnesota-Wisconsin Harbor Placement Unit Photographs

APPENDIX H – Trace Soil Bulk Laboratory Reports

- **Table 12: Laboratory Analytical Results Table**
- **Trace Analytical Reports and Chain-of Custodies**

APPENDIX I – RTI Soil Bulk Laboratory Reports

- **Table 13: Laboratory Analytical Results Table**
- **RTI Analytical Reports and Chain-of Custodies**

APPENDIX J – GLEC Laboratory Report – Sediment Elutriate Acute Toxicity Test Results

APPENDIX K – GLEC Laboratory Report – 10-day Whole Sediment Toxicity Test Results

APPENDIX L – GLEC Laboratory Report – 28-day Lumbriculus variegatus Bioaccumulation Tests

APPENDIX M – RTI 26 Congeners PCB Lumbriculus Laboratory Report

- **Table 14: RTI Laboratory Analytical Results Table for October Samples**
- **Table 15: RTI Laboratory Analytical Results Table for November Samples**
- **RTI Analytical Reports and Chain-of Custodies**

APPENDIX N – Test America 209 Congeners PCB Lumbriculus Laboratory Report

- **Table 16: TA Laboratory Analytical Results Table for October Samples**
- **Table 17: TA Laboratory Analytical Results Table for November Samples**
- **TA Analytical Reports and Chain-of Custodies**

APPENDIX O – Statistical Analysis Report

APPENDIX P – QC/QA Certificate / ITR Certificate

ABBREVIATIONS

COC	Chain-of-custody
Coleman	Coleman Engineering Company
DS	Duluth-Superior Harbor
FNG	FutureNet Group Inc.
GLEC	Great Lakes Environmental Center Inc.
GPS	Global Positioning Systems
HIPU	Hearding Island Placement Unit
IIPU	Interstate Island Placement Unit
LWD	Low Water Datum
MN	Minnesota
MOPU	Minnesota Open Water Placement Unit
MS/MSD	Method Spike/Method Spike Duplicate
MU	Management Unit
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	PolyChlorinated Biphenyl
PU	Placement Unit
QA/QC	Quality Assurance/Quality Control
RTI	RTI Laboratories Inc.
SAP	Sampling and Analysis Plan
SOW	Scope of Work
TA	Test America Inc.
TRACE	Trace Analytical Laboratory Inc.
USACE	United States Army Corps of Engineers
USCS	Unified Soil Classification System
WHO	World Health Organization
WI	Wisconsin
WOPU	Wisconsin Open Water Placement Unit

1.0 INTRODUCTION

The U.S. Army Corps of Engineers, Detroit District (USACE) retained Future Net Group. Inc. (FNG) as a contractor to provide sediment, and water sampling services at designated sampling stations in the Duluth-Superior Harbor located in Duluth, Minnesota and Superior, Wisconsin (**Appendix A)**.

Sample collection activities were performed from Monday, August 15, 2011 through Saturday, August 20, 2011. The sampling crew consisted of Ms. Mariah Hope from FNG, and Mr. Joe Lantagne and Mr. Barry Levenburg from Coleman Engineering Company (Coleman) of Iron Mountain, Michigan.

- A total of fifty (50) bulk sediment, ten (10) composite sediment and six (6) water samples were collected from fifty (50) locations in the Federal Navigation Channel and Lake Superior. Bulk samples were identified as DS-11-01 through DS-11-50 **(Appendix A)**.
- Composite samples were collected from four (4) placement units and six (6) management units
- Placement Units composite samples were identified as DS-11-MOPU, DS-11-WOPU, DS-11-HIPU and DS-11-IIPU.
- Management Units composite samples were identified as DS-11-MU1, DS-11-MU2, DS-11-MU3, DS-11-MU4, DS-11-MU5, and DS-11-MU6.
- Five (5) sediment samples (DS-11-06, DS-11-18, DS-11-27, DS-11-33, and DS-11-45) were collected as quality control (QC) duplicate sample.

FNG provided sediment and soil sampling services. Coleman of Iron Mountain, Michigan, provided and operated the pontoon boat-mounted Macrocore® sediment sampler as well as gravity core sampling equipment mounted on a tri-hull boat.

Trace Analytical Laboratories Inc (Trace) of Muskegon, Michigan provided chemical, physical and geotechnical (grain size analysis) analysis services. RTI Laboratories Inc. (RTI) of Livonia, Michigan, provided sediment analysis and biological tissue analysis services for PCBs 26 congeners. Great Lakes Environmental Center Inc. (GLEC) of Traverse City, Michigan, provided biological toxicity analysis services. Test America (TA) of W. Sacramento, California provided biological tissue analysis services for PCBs 209 congeners.

Sediment samples were collected using a boat-mounted gravity core sampler or a ponar sampler. Water for the standard elutriate preparation was collected using a Geotech™ geosub pump with disposable tubing. Sample collection activities are described below in **Section 3.7**.

Sampling, sample handling, and analytical techniques were conducted in accordance with the Scope of Work (SOW) dated August 2011 and specifications of the current USACE Contract No. W911XK-09-D-0014 Task Order # 0040 in addition to “Methods for Evaluating Solid Waste” 3rd ED, U.S. EPA No. SW-846 and “Description of Soils (Visual-Manual Procedure)”, ASTM D 2488-69.

1.1 Project Objective

The objective of the project was:

- Collect sediment samples to accurately characterize the physical, chemical, and biological toxicity properties of the sediment in the Federal Navigation Channel.
- Collect sediment samples from Lake Superior Placement Units and the Harbor Island Placement Units the for biological toxicity analysis to compare to the biological toxicity properties of the sediment in the Federal Navigation Channel.

This report aims to provide information on the: (I) Existing methodologies and procedures for collection of bottom sediments, (II) Sediment sample chemical and physical analysis results and related analytical techniques (**Appendix B**), (III) Sediment sample biological PCBs analysis results and related analytical techniques (**Appendix C**), (IV)Sediment characteristics, boring logs and photographs (**Appendix D, E, F and G**), and (IV) Documentation of field activities.

The information obtained is intended to be used to evaluate the removal and disposal practices for dredge material from Duluth-Superior Harbor, Minnesota-Wisconsin.

2.0 SITE DESCRIPTION

Duluth-Superior Harbor, Minnesota-Wisconsin is located on the western shore of Lake Superior. Duluth-Superior Harbor provides major international receiving and shipping port on the Great Lakes; and Harbor of Refuge. Commodities shipped or received include iron ore, Limestone, coal, coke, steel, and scrap iron.

The maintenance dredge depth for Duluth-Superior Harbor ranges from 20 to 32 feet. The sediment and elutriate samples were collected within the Harbor between the Superior Entrance, the Duluth Entrance, and the upstream location of the Bong Bridge in the Federal Navigation Channel of Duluth- Superior Harbor, Minnesota-Wisconsin, see **Appendix A**.

3.0 FIELD SAMPLING ACTIVITIES

The field sampling activities were conducted according to the SOW for the Duluth-Superior Harbor, Minnesota-Wisconsin, USACE task order #0040, as prepared and refined based upon discussions with the USACE Project Coordinators, Ms. Pam Horner and Ms. Amanda McCallister.

The sampling crew mobilized to the site on August 14, 2011 with all equipment and materials required for collecting and processing sediment samples. Sampling activities were started on the morning of Monday, August 15, 2011 and were completed on Saturday, August 20, 2011.

3.1 Sampling Preparation

The SOW, provided by USACE, required sediment, and water sampling to be collected at fifty (50) locations within the Federal Navigation Channel of Duluth-Superior Harbor and Lake Superior, **(Appendix A)**.

Table 3-1: Sample Identification

Management Unit	Sample ID	Location
MU1	DS-11-01, DS-11-02, DS-11-03, DS-11-04, DS-11-05, and DS-11-MU1	Minnesota and Upper Channel, Upstream of the Bong Bridge
MU2	DS-11-06, DS-11-07, DS-11-08, DS-11-09, DS-11-10, and DS-11-MU2	West Gate Basin, Howards Bay, South Channel, between Bong Bridge and Blatnik Bridge
MU3	DS-11-11, DS-11-12, DS-11-13, DS-11-14, DS-11-15, and DS-11-MU3	Duluth Harbor Basin between Blatnik Bridge and Duluth Entrance
MU4	DS-11-16, DS-11-17, DS-11-18, DS-11-19, DS-11-20, and DS-11-MU4	East Gate Basin, downstream of Blatnik Bridge
MU5	DS-11-21, DS-11-22, DS-11-23, DS-11,24, DS-11-25, and DS-11-MU5	Superior Front Channel, between Blatnik Bridge and Superior Entrance
MU6	DS-11-26, DS-11-27, DS-11-28, DS-11-29, DS-11-30 and DS-11-MU6	Superior Harbor Basin, between Blatnik Bridge and Superior Entrance

Placement Unit	Sample ID	Location
Minnesota Open Water Lake Superior	DS-11-36, DS-11-37, DS-11-38, DS-11-39, DS-11-40, and DS-11-MOPU	Lake Superior
Wisconsin Open Water Lake Superior	DS-11-31, DS-11-32, DS-11-33, DS-11-34, DS-11-35, and DS-11-WOPU	Lake Superior
Hearding Island	DS-11-41, DS-11-42, DS-11-43, DS-11-44, DS-11-45, and DS-11-HIPU	Duluth Harbor Basin between Blatnik Bridge and Duluth Entrance
Interstate Island	DS-11-46, DS-11-47, DS-11-48, DS-11-49, DS-11-50, and DS-11-IIPU	West Gate Basin between Bong Bridge and Blatnik Bridge

Sample locations were determined by USACE prior to field sampling activities based on shoaling.

Based on the SOW, five (5) samples were selected as laboratory QC samples. Samples DS-11-06, DS-11-18, DS-11-27, DS-11-33, and DS-11-45 were designated as the laboratory method spike/method spike duplicate (MS/MSD) sample for laboratory quality assurance/quality control (QA/QC) purposes.

In order to organize the sampling effort and prepare the sample containers, a Sampling and Analysis Plan (SAP) was developed to clearly define the objective based on the SOW. The overall sampling plan summarized the following: Channel maintenance dredge depth, project depth and elevation, amount of sediment required for chemical, physical, and biological analysis, sampling equipment, sample locations, analytical parameters, containers required, sample preservation requirements, chain-of-custody, and planned shipment and delivery of the samples to the laboratory.

The analytical parameters for sediment samples included:

3.1.1 Biological Sediment Samples

Table 3-2: Biological Sediment and Water Analytical Parameters

Biological Sediment	
Analysis Required	**Number of Samples**
Chironomus Dilutus 10 days toxicity	10
Hyalella Azteca 10 days toxicity	10
Ceriodaphnia dubia 2 days elutriate	6
Fathead Minnow 4 days elutriate	6
Lumbriculus variegatus 28 day toxicity	10
PCBs USACE/ WHO List 26 Congeners with lipid analysis Tissue Test 8082	56*
PCBs USACE/ WHO List 209 Congeners with lipid analysis Tissue Test 1668a	4*

* includes laboratory control samples

3.1.2 Bulk Sediment Samples

Table 3-3: Bulk Sediment Analytical Parameters

Sediment	
Analysis Required	**Number of Samples**
PCBs	50
PAHs	50
Organic Kit	50
Nutrient Kit	50
Metals Kit	50
Physical Kit w/o hydrometer	50
Composite	
Nutrient	10
PCBs USACE/ WHO List 26 Congeners	10
Elutriate	
Nutrient Kit	6
Metals Kit	6

3.2 Utility Clearance

The sampling crew confirmed with the utility companies, prior to mobilization and sampling, the locations of any underground utilities crossing Duluth-Superior Harbor, and sampling locations in Lake Superior to ensure that no sample locations were located near any underground utility.

3.3 Field Documentation

Field conditions, activities, and field data were documented in a field log **(Appendix D)**. Information recorded in the field log includes:

- Station identification number,
- Sample collection date,
- Depth at each sampling location,

- Thickness of each core retrieved,
- Number of cores or grabs and attempts at each station,
- Description, measurement and identification of the material of each core retrieved according to ASTM D 2488-69, "Description of Soils (Visual Manual Procedure)",
- Type of sampling equipment used,
- Latitude and Longitude of station locations, and
- Time of sample collection.

3.4 Weather / Climatic Conditions

The weather conditions during the sampling activities were mostly sunny with variable wind speed. Water clarity in the Duluth-Superior Harbor was typically poor with two feet (2 ft) or less visibility due the water turbidity. Lake Superior water clarity was good at greater than eight feet (8 ft).

Table 3-4: Weather / Climatic Conditions

Date	Temperature	Wind Direction	Wind Speed	Weather
August 15, 2011	60°F to 78°F	SSW	6 mph	Clear to Scattered Clouds
August 16, 2011	63°F to 80°F	Varies ESE to SSW	6 to 26 mph	Clear to thunderstorm
August 17, 2011	57°F to 77°F	Varies W to WSW	12 to 24 mph	Clear to Scattered Clouds
August 18, 2011	56°F to 79°F	Variable W to WSW	6 to 16 mph	Clear to Scattered Clouds
August 19, 2011	55°F to 74°F	Variable W to WNW	6 to 8 mph	Scattered Clouds to Partly Cloudy
August 20, 2011	50°F to 73°F	Variable calm to WNW	Calm to 18 mph	Partly Cloudy

3.5 Water Level

Referenced water level data were obtained hourly during the sampling activities and were used to calculate the amount of sediment required at each sample location. Water level data obtained was corrected based on the Low Water Datum (LWD) of Lake Superior. The LWD of Lake Superior is 601.1 feet above sea level.

Water level data was obtained from the National Oceanic and Atmospheric Administration (NOAA) gauge located at Duluth, Minnesota (Station ID# 9099064). The water levels fluctuated between 601.2. ft. to 601.6 ft. during the sampling activity period on from August 15, 2011 through August 20, 2011.

3.6 Sample Locations

Sampling activities were initiated by navigating as close as possible to the coordinates of the pre-determined sample locations (provided by USACE). Prior to collecting sediment samples, the sample coordinates were determined using two (2) programmable Global Positioning Systems (GPS's) (Garmin GPSMAP 276C & Garmin 541S) units with one to three meter (1-3 m) accuracy. Landmarks and water depth served as additional guidance during sampling in the harbor. The water depth at each sample location was measured using a weighted scale tape. An electronic depth finder (sonar) was used for navigation and depth estimation purposes.

All samples were collected within the Duluth-Superior Harbor Federal Navigation Channel close to the pre-determined sampling locations. (**Appendix A)**.

3.7 Sample Collection

Two (2) types of samples were required: sediment and water. The sampling crew considered many factors in the selection of suitable sampling equipment. These factors include the sampling plan, the type of available sampling equipment, physical character of the sediments, and weather conditions.

The sampling boat was equipped with a portable radio to check the weather conditions during sampling, on-board GPS unit, additional life vests and hard hats, portable light, first aid kit, portable horn, guardrail, and toolbox for emergency maintenance.

3.7.1 Sediment Sampling Procedures

Proposed sample locations were provided by USACE on a map. The sample depth was pre-determined and varied based on location. The proposed sample location coordinates were calculated and translated from Minnesota North State Plane coordinates to geographical coordinates (latitude and longitude) prior to mobilization to the site. The sampling crew navigated to the pre-determined sampling location coordinates and recorded the actual sample location latitude and longitude. Water depth was measured.

Based on the SOW it was decided to utilize a motor boat-mounted gravity core sediment sampling tool with four foot (4') long, two inch (2") diameter single sample tube or a ponar sampler to recover representative, undisturbed, sub-bottom sediment samples to the pre-determined depth. The core sediment sampling device will advance through the sediment column to collect a continuous section of sediment at each sampling location.

Once retrieved from the harbor, each sample was transferred to the designated sample preparation area on the boat. The length (sediment thickness), and lithography for each core was then measured and described in accordance with the Unified Soil Classification System (USCS) by professional engineer **(Appendices D and E)**. The sediment was removed from the sampler, placed in the sampling pan, and photographed. Unwanted materials such as wood, stones, and shells were removed and the sample was thoroughly mixed with a stainless steel spoon. The sediment samples were then placed in labeled sample jars, see **Section 3.7.7**.

A total of fifty (50) samples were collected from forty (40) sample locations from Duluth-Superior Harbor and ten (10) samples from Lake Superior.

3.7.2 Water Sampling Procedures

The water samples used for the standard elutriate procedure for the biological analysis were collected using a Geotech™ geosub pump with disposable polyethylene tubing. The water pump was lowered to the depth of half the water column (between the surface water level and top of sediment) to collect the sample. Cube containers were filled with water from Duluth-Superior Harbor for elutriate preparation. All water samples were immediately placed in a sturdy cooler with ice until delivered to the laboratory.

3.7.3 Decontamination Procedures

All non-disposable sampling equipment was decontaminated after each sample was collected. The decontamination procedure included scrubbing and rinsing the sampling equipment, sampling pans, and spoons with Alconox™ and site water.

New gloves, sample core liners and tubing were used for each sample location. All used gloves, core tubing, and paper towels used during sampling activities were cleaned of loose soil then placed in black trash bags, and deposited in a trash receptacle for disposal in a Type II landfill.

3.7.4 Field Log

The field log and field forms were filled out completely, recording each sample before leaving each sample location. The typed summary of the field log form is included in **Appendix D.** The sediment boring logs are included in **Appendix E.** The field coordinates readings from latitude and longitude were translated to Minnesota North State Plane coordinates in the office using Corpscon6 software for the report maps.

3.7.5 Photographic Log

Digital, color photographs **(Appendix F and Appendix G)** were taken of the sediment samples, prior to mixing, to illustrate color, texture, and homogeneity. Sample location photographs were taken with regard to downstream and upstream features for orientation. Photograph code numbers were logged on all of the photographs.

3.7.6 Sample Containers and Sample Preservation

All sediment samples were collected in pre-cleaned, laboratory supplied borosilicate glass containers with Teflon® linings for the chemical and physical analysis. Biological analysis samples were collected, stored and shipped in pre-cleaned laboratory supplied 1-gallon and 2.5-gallon pails for the biological samples. The elutriate water for the biological samples were collected in pre-cleaned, laboratory supplied 1-gallon and 2.5-gallon plastic cube containers.

The sediment and soil sample jars were placed in sealable plastic storage bags and wrapped in bubble wrap to prevent breakage. All samples were then cooled to 4°C using ice inside coolers. The samples were stored in darkness, except transiently during handling operations. Chain-of-custody was maintained during sampling activities and transportation to the laboratory. Based on the proposed analytical parameters, none of the samples (sediment or water) required additional chemical or physical preservation other than ice and darkness.

3.7.7 Sample Custody

Chain-of-custody (COC) protocol over samples was maintained at all times **(Appendix G)**. Procedures for sample packaging, shipping, and chain-of-custody explicitly followed the guidelines as listed in the U.S. Army Corps of Engineers Sample Handling Protocol for Low, Medium, and High Concentration Samples of Hazardous Waste, dated October, 1986. Samples for this project were considered low level / environmental samples for safety, packaging and shipping purposes.

The signed chain-of-custody form was stored in a sealable plastic bag and attached to the cooler lid. The cooler was then sealed with tape and signed chain-of-custody cooler seals. The sealed coolers with the sediment and elutriate water samples were delivered on the following day after sampling activities were completed by FedEx to Trace, RTI and GLEC. GLEC shipped the *Lumbriculus* tissue samples to RTI and TA after harvest and processing using the same COC protocols.

4.0 ANALYTICAL RESULTS

Sediment and elutriate samples were analyzed by Trace in Muskegon, Michigan and RTI in Livonia, Michigan. Biological analyses were performed by GLEC in Traverse City, Michigan. PCB congeners in *Lumbriculus* tissues were analyzed by RTI in Livonia, Michigan and TA in W. Sacramento, California.

Sediment and soil samples were analyzed for various compounds based on sample location as described in **Section 3.1**.

Appendix B presents the bulk and elutriate analytical results summary tables for chemical and physical properties of the sediment. The sediment samples had no detectable levels of PCB aroclors or PAHs (Tables 1 and 2). Table 3 documents the ranges of the nutrient analysis for both the individual sample, the average sample, and the composite sample. The elutriate of the Management Unit samples had detectable levels of six (6) metals; chromium, copper, iron, lead, manganese, and silver (Table 4). The majority of the samples contained more than 50% sand (Table 5). Table 6 documents the analytical results of the bulk composite sediment samples for 25 PCB congeners. DS-11-MU2 and DS-11-MU5 were the only samples to have detectable levels of PCBs. Total PCBs were calculated for both non-detects (ND) equal to the method detection limit (MDL) and ND = zero.

Table 1: Management Unit Bulk Sediment Chemical Analytical Results Summary Table

Table 2: Placement Unit Bulk Sediment Chemical Analytical Results Summary Table

Table 3: Composite Samples Nutrient Kit Analytical Results Summary Table

Table 4: Management Unit Elutriate Sediment Chemical Analytical Summary Table

Table 5: Duluth-Superior Harbor Sediment Grain Size Analysis Results Summary Table

Table 6: PCB Congener Analytical Results Summary Table

Appendix C presents the Lumbriculus PCB summary tables. Table 7 and 8 documents the analytical results for 26 PCB congeners. These tables also calculates the total PCBs and the normalized PCBs using both ND=MDL and ND=0 (Normalized = Total 26 PCBs x 2 / % lipids). Table 9 documents the analytical results of the 209 PCB congeners for DS-11-MOPU, DS-11-MU5 and the two QA/QC samples. Table 10 documents the calculations of the total PCBs and the Normalized PCBs for the 209 PCB congeners based on ND=MDL and ND=0 for both the documented results from Table 9 (page1) and the coeluting PCBs (page 6) using the calculation of Normalized = Total 209 PCBs / % lipids. Table 11 compares the bulk soil results to the Lumbriculus results for DS-11-MOPU and DS-11-MU5 for only the 26 congeners for both ND=MDL and ND=0. This table documents the differences between the three analytical methods for PCBs, bulk 8082, tissue 1668 and tissue 8082.

Table 7: Management Unit PCB Congener Lumbriculus Tissue Analysis Summary Table

Table 8: Placement Unit PCB Congener Lumbriculus Tissue Analysis Summary Table

Table 9: 209 PCB Congener Analyses of Lumbriculus Tissue Samples

Table 10: 209 PCB Congener Comparison

Table 11: PCB Congener Results Comparison Table, Soil and Tissue

The detailed analytical reports from Trace and RTI and chain-of-custody documentation are included in **Appendices H and I**. The biological analytical results are included in **Appendices J, K and L.** The RTI PCB analytical results for the *Lumbriculus* toxicity tissue samples are included in **Appendix M**. The TA PCB analytical results for the *Lumbriculus* toxicity tissue samples are included in **Appendix N**.

4.1 Quality Assurance / Quality Control

Data quality refers to the level of uncertainty associated with a particular data point. All elements of the sampling event, from the sampling design through the laboratory analysis and reporting, affect the quality of the data. Data quality associated with environmental measurement is a function of the sampling plan rationale and procedures used to collect the samples, as well as, the analytical methods and instrumentation used in making the measurements. Uncertainty cannot be eliminated from environmental data. However, quality assurance programs effective in measuring uncertainty in data are employed to monitor and control excursions from the desired data quality objectives.

Sources of uncertainty traced to the sampling component are poor sampling plan design, incorrect sample handling, faulty sample transportation, and inconsistent use of standard operating procedures. The most common sources of uncertainty that can be traced to the analytical component of the total measurement system are problems associated with calibration and contamination. To address this, the laboratory performs the following laboratory QA/QC procedures:

Laboratory terms concerning quality control include:

- BLK – Method Blank (applies to whole batch)
- LCS – Laboratory Control Sample (applies to whole batch)
- LCSD – Laboratory Control Duplicate Sample (applies to whole batch)
- MS – Matrix Spike (only applies to the soil spiked)
- MSD – Matrix Spike Duplicate (only applies to the soil spiked)
- RPD – Relative Percent Difference

For a spike QA/QC sample (LCS, MS, MSD), the sample or blank material is spiked with a known concentration prior to extraction. This is a test of extraction efficiency. Internal standards of a known concentration are added after the extraction has been performed. The laboratory also spiked the organic samples with surrogate organic compounds as part of the laboratory QA/QC procedures. The purpose is to test the QA/QC of the analytical system. The percent recovery equals the amount detected divided by the amount added or spiked. If any of the analytes added or spiked in the QA/QC samples is found in the unspiked sample, that concentration is taken into account. RPD is the difference between the recovery for the MS and the MSD or possibly as LCS and LCSD. QA/QC measures include submitting MS/MSD samples (DS-11-06, DS-11-18, DS-11-27, DS-11-33, and DS-11-45) for internal laboratory QA/QC testing. No duplicate or split samples collected for this project.

4.2 Data Qualifiers

4.2.1 Trace Laboratory Report

A case narrative is presented with the laboratory report on pages 4 through 13, and is summarized below. The detailed data qualifiers results are presented on pages 108 through 222 of the Trace report T11H197 **(Appendix H)**. Below is a summary of the sample results that are considered estimated based on the laboratory QA/QC procedures.

- Sample ID DS-11-06 (Lab ID T11H197-10) Analysis: *EPA 350.1 Rev 2.0*. Ammonia as N. Note 205: The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

- Sample ID DS-11-06 (Lab ID T11H197-10) Analysis: *EPA 6020*. Chromium, Copper, Nickel, and Selenium. Note 205: The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

- Sample ID DS-11-06 (Lab ID T11H197-10) Analysis: *EPA 7471A*. Mercury. Note 205: The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

- Sample ID DS-11-06 (Lab ID T11H197-10) Analysis: *EPA 8270 C*. Phenanthrene. Note 205: The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

- Sample ID DS-11-06 (Lab ID T11H197-10) Analysis: *PLUMB*. Chemical Oxygen Demand. Note 202: The MS and MSD recoveries were out of control low, resulting in an out of control RPD between the MS and MSD. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

- Sample ID DS-11-06 (Lab ID T11H197-10) Analysis: *WALKLEY BLACK*. Total Organic Carbon. Note 205: The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

- Sample ID DS-11-MU4 Elutriate (Lab ID T11H197-15) Analysis: *EPA 350.1*. Ammonia as N. Note 205: The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

- Sample ID DS-11-45 (Lab ID T11H197-26) Analysis: *EPA 6020.* Copper, Nickel. Note 205: The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

- Sample ID DS-11-28 (Lab ID T11H197-47) Analysis: *EPA 8082.* Aroclor-1254. Note 900: Sample had PCB peaks present throughout the entire aroclor range. Arochor 1254 potentially present but quantitification is not possible due to peak overlaps.

- Sample ID DS-11-27 (Lab ID T11H197-57) Analysis: *EPA 351.2 Rev.* 2.0. Total Kjeldahl Nitrogen. Note 203: The MSD recovery was out of control high, resulting in an out of control RPD

between the MS and MSD. The result for this analyte, in the non-spiked version of the sample, must be considered estimated.

- Sample ID DS-11-27 (Lab ID T11H197-57) Analysis: *EPA 6020.* Copper, Manganese, and Nickel, Note 205: The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

All other laboratory sample data required no qualification.

All other individual samples associated surrogates were in control limit when analyzed.

4.2.2 RTI Laboratory Report

A case narrative is presented with the laboratory report on pages 1 through 2, and is summarized below. The detailed data qualifiers results are presented on pages 19 through 32 of the RTI report 1108806 **(Appendix I)**. Below is a summary of the sample results that are considered estimated based on the laboratory QA/QC procedures.

- Samples were received on wet ice and sample blank temperatures are recorded on the chain of custody and sample receiving documents. Sample preservation was checked on receipt and noted on the chain of custody. Adjustments required for sample preservation are recorded for the affected samples. The sample set consisted of ten (10) sediment samples.
- On data review minor discrepancies were noted for the following samples:

Lab Sample ID	Sample ID	Congener	Original results	Actual results
1108806-002	DS-11-MU2	2,2',2,3,3',4,4',5- HpCB	0.43 µg/Kg-dry	0.44 µg/Kg-dry
1108806-002	DS-11-MU2	2,2',3,4,4',5'- HxCB	0.79 µg/Kg-dry	0.80 µg/Kg-dry
1108806-004	DS-11-MU4	Surr. Tetrachloro-m-xylene	121%	122%
1108806-005	DS-11-MU5	2,2',3,4,4',5'- HxCB	0.51 µg/Kg-dry	0.50 µg/Kg-dry
1108806-005	DS-11-MU5	2,2',4,4',5,5'- HxCB	0.65 µg/Kg-dry	0.64 µg/Kg-dry

These discrepancies were due to inadvertent re-processing of the instrument data

- Sample DS-11-MU2 (Lab ID 1108806-002), Analytical results for 2,2',3,3',4,4',5-HpCB, the recovery was out of control limit high, resulting in an out of control RPD >40%. The reporting limit for this analyte must be considered estimated.
- PCBs, all sample analysis included a Method Blank, LCS and MS/MSD where applicable. All QC parameters were within established control limits except where noted on the QC summary forms or below. Initial and continuing calibration results were within method specifications.
- Surrogate recoveries were within established control limits.

- Wet Chemistry Analysis, all sample analysis included the method specified quality control samples.
- No other problems were noted during the analytical events associated with RTI analytical report.

4.3 Biological Toxicity Analysis Results

GLEC provided three (3) reports for the biological and toxicological analysis performed on the sediment and water samples collected. These reports are included in **Attachments J, K, and L**. Ten (10) sediment and six (6) water samples were collected and logged as DS-11-MU1, DS-11-MU2, DS-11-MU3, DS-11-MU4, DS-11-MU5, DS-11-MU6 (Management Units) DS-11-MOPU, DS-11-WOPU, DS-11-HIPU, and DS-11-IIPU (Placement Units). Four (4) background samples were collected from Lake Superior and the Duluth-Superior Harbor (Placement Units) to be used as control samples. Sediment samples were collected from sample locations DS-11-01 through DS-11-50 were composited in roughly equal amount into ten composite samples sample (see table 3.1).

4.3.1 Elutriate Sample Biological Exposure Results and Conclusions

The 48-hour elutriate tests using *Ceriodaphnia dubia* and 4-day elutriate tests using fathead minnows (*Pimephales promelas*) were performed to measure the toxicity of selected sediment samples on the test organisms. The sole endpoint of the C. dubia and fathead minnow acute toxicity tests was survival. The following conclusions were drawn from the study results.

- All six samples were not acutely toxic to both species, *C. dubia* and fathead minnow.

Table 4-1: Elutriate Analytical Results

Sample ID	Elutriate			
	C. dubia Survival **%**	*C. dubia* Survival **TU**	*P. promelas* Survival **%**	*P. promelas* Survival **TU**
DS-11-MU1	100	0	100	0
DS-11-MU2	100	0	100	0
DS-11-MU3	100	0	100	0
DS-11-MU4	100	0	100	0
DS-11-MU5	100	0	100	0
DS-11-MU6	100	0	100	0

4.3.2 Sediment Sample Biological Exposure Results and Conclusions

The 10-day tests were performed to measure the toxicity of selected sediment samples to *Hyalella azteca* (amphipod) and larval *Chironomus dilutus* (midge). The following conclusions can be drawn from the study results.

- The laboratory control sediment used for this study supported acceptable organism survival for both test species and acceptable *Chironomus* growth.
- The reference area samples (DS-11-WOPU, DS-11-MOPU, DS-11-HIPU, DS-11-IIPU) sediment used for this study supported acceptable organism survival for both test species and acceptable *Chironomus* growth.
- There was no statistically significant reduction in *C. dilutes* survival in the Management Unit sediment samples when compared to the Placement Unit samples.
- There was no statistically significant reduction in *Hyalella* survival in the Management Unit sediment samples when compared to the Placement Unit samples

Table 4-2: Sediment Toxicity Analytical Results

Sample ID		*H. azteca* Survival (%)	*C. dilutus* Survival (%)	*C. dilutus* Average Ash-Free-Dry Weight, mg	*C. dilutus* Average Biomass Weight, mg
Management Unit	DS-11-MU1	88	96	1.24	1.19
	DS-11-MU2	96	96	1.22	1.16
	DS-11-MU3	96	96	1.06	1.03
	DS-11-MU4	98	98	1.24	1.22
	DS-11-MU5	98	98	1.20	1.18
	DS-11-MU6	98	92	1.15	1.04
Placement Unit	DS-11-WOPU	100	98	1.19	1.16
	DS-11-MOPU	98	98	1.02	1.00
	DS-11-HIPU	100	98	1.38	1.42
	DS-11-IIPU	94	94	1.14	1.06

4.3.3 Lumbriculus Sediment Sample Biological Exposure Results and Conclusions

Two procedures were utilized as part of the Lumbriculus bioaccumulation, a 4-day whole sediment toxicity screening test and a 28-day whole sediment bioaccumulation test.

The 4-day toxicity screening test included exposing 10 animals to the sediment for 4 days in 470 mL glass test chambers with 100 ml of sediment and 175 ml of overlying water. The statistical analysis of the results revealed that there was no statistically significant reduction in the ten samples Lumbriculus survival as compared to the laboratory control sample.

The 28-day bioaccumulation test included exposing 30 grams of Lumbriculus to one-liter (1 L) of sediment and two-liters (2 L) of overlying water. After 28-days of exposure, approximately 20 grams of surviving Lumbriculus were harvested and then depurated for 24 hours in overlying water to purge all gut contents. The organisms were then sent to RTI Laboratories Inc. or Test America for tissue analysis. Due to the size of the project, the samples were exposed in two batches. The first batch was harvested in October and contained DS-11-MOPU, DS-11-HIPU, DS-11- MU2, DS-11-MU3 and DS-11-MU4. The second batch was harvested in November and contained DS-11-WOPU, DS-11-IIPU, DS-11-MU1, DS-11-MU5, and DS-11-MU6.

Table 4-3: Lumbriculus Summary Results

Sample ID		4 – Day Screening Survival (%)	28- Day Average Wet Depurated Weight (g)
Management Unit	DS-11-MU1	90	20.2
	DS-11-MU2	92.5	19.4
	DS-11-MU3	90	19.1
	DS-11-MU4	100	17.5
	DS-11-MU5	90	18.8
	DS-11-MU6	87.5	20.3
Placement Unit	DS-11-WOPU	100	18.2
	DS-11-MOPU	100	19.1
	DS-11-HIPU	95	19.2
	DS-11-IIPU	90	18.3

4.3.4 Lumbriculus Sample PCB Results and Conclusions

Fifty-six (56) Lumbriculus samples were sent by GLEC to RTI for PCB analysis of 26 congeners. The samples included two (2) Day 0 sample (no exposure), two (2) sets of four (4) replicates of a laboratory control sample, five (5) replicates of samples DS-11-MU1, DS-11-MU2, DS-11-MU3, DS-11-MU4, DS-11-MU6, DS-11-WOPU, DS-11-HIPU, and DS-11-IIPU, and four (4) replicates of the DS-11-MU5 and DS-11-MOPU samples. The results (**Appendix C Tables 7 and 8**) indicated:

- Sample DS-11-MU6 and Sample DS-11-WOPU did not have detectable levels of PCBs.
- DS-11-MU1 had 6 detected congeners, DS-11-MU2 and DS-11-MU4 had 13 detected congeners, DS-11-MU3 had 11 detected congeners, and DS-11-MU5 had 7 detected congeners.
- DS-11-IIPU had 6 detected congeners, DS-11-HIPU had 9 detected congeners, and DS-11-MOPU had 7 detected congeners.
- Statistical analysis was performed on the Total 22 PCBs and the Normalized Total 22 PCBs both non-detects (ND) = method detection limit (MDL) and ND = 0.

Table 4-4: Total 22 PCB Statistical Summary Results (ND = MDL)

Sample ID	22 Total PCBs * (ppb)	% Lipids	Total Normalized PCBs (ppb)	Normalized PCBs Average	Normalized PCBs Standard Deviation	Normalized PCBs CV	Normalized PCBs Skew	Normalized PCBs SW
DS-11-MU1	8.6	3.6	238.2	237.3	11.5	0.05	-0.49	0.94
	9.3	3.7	251.9					
	8.9	3.7	241.6			0.009 (ln)	-0.60 (ln)	0.94 (ln)
	10.1	4.6	220.2					
	9.2	3.9	234.6					
DS-11-MU2	25.0	3.7	675.7	653.6	84.5	0.13	0.62	0.86
	21.8	3.3	659.1					
	19.5	3.5	557.4			0.02 (ln)	0.38 (ln)	0.86 (ln)
	31.1	4.0	778.5					
	22.1	3.7	597.3					
DS-11-MU3	21.6	2.8	772.1	618.3	123.3	0.20	0.14	0.66
	23.6	3.8	622.1					
	20.7	4.1	504.2			0.03 (ln)	-0.02 (ln)	0.65 (ln)
	18.6	3.8	489.0					
	29.0	2.7	704.1					
DS-11-MU4	11.1	4.0	276.8	487.7	131.8	0.27	-1.24	0.81
	12.8	2.8	457.1					
	22.4	3.9	575.1			0.05 (ln)	-1.60 (ln)	0.79 (ln)
	22.0	3.6	612.2					
	23.3	4.5	517.3					
DS-11-MU5	17.8	5.3	335.5	448.1	82.3	0.18	-0.99	1.91
	17.0	3.2	532.2					
	16.0	3.4	470.6			0.03 (ln)	-1.27 (ln)	1.85 (ln)
	15.9	3.5	454.3					

Sample ID	22 Total PCBs * (ppb)	% Lipids	Total Normalized PCBs (ppb)	Normalized PCBs Average	Normalized PCBs Standard Deviation	Normalized PCBs CV	Normalized PCBs Skew	Normalized PCBs SW
DS-11-MU6	5.5 5.6 5.5 5.5 5.3	3.3 2.7 3.0 3.5 3.6	166.4 206.3 183.3 158.0 147.8	172.4	23.0	0.13 0.03 (ln)	0.77 0.58 (ln)	0.81 0.81 (ln)
DS-11-MOPU	13.1 10.9 11.2 11.0	3.2 3.1 3.6 3.9	410.0 350.0 311.7 282.3	338.5	55.14	0.16 0.03 (ln)	0.68 0.45 (ln)	0.89 0.90 (ln)
DS-11-WOPU	5.5 5.5 5.5 5.7 5.6	3.6 4.1 3.3 3.5 4.0	152.5 133.2 167.3 161.4 139.8	150.8	14.3	0.09 0.02 (ln)	-0.17 -0.26 (ln)	0.71 0.71 (ln)
DS-11-HIPU	17.8 20.2 17.4 16.9 16.9	3.0 2.9 2.6 2.8 2.8	593.3 695.9 670.0 602.9 604.6	633.3	46.4	0.07 0.01 (ln)	0.74 0.72 (ln)	0.61 0.61 (ln)
DS-11-IIPU	9.7 10.2 10.7 11.8 11.0	4.3 3.2 3.9 3.6 4.7	226.5 318.4 274.4 328.1 234.7	276.4	46.6	0.17 0.03 (ln)	0.06 -0.04 (ln)	0.50 0.60 (ln)

* Total PCBs were calculated using the method detection limit (MDL) value for all non-detects.

Table 4-5: Total 22 PCB Congeners Statistical Summary Results (ND = MDL)

Statistical Summary		Placement Unit			
		DS-11-MOPU 11.6 ug/kg	DS-11-WOPU 5.5 ug/kg	DS-11-HIPU 17.8 ug/kg	DS-11-IIPU 10.7 ug/kg
Management Unit	DS-11-MU1 9.2 ug/kg		H		
	DS-11-MU2 23.9 ug/kg	H	H	H	H
	DS-11-MU3 20.7 ug/kg	H	H		H
	DS-11-MU4 18.3 ug/kg	H	H		H
	DS-11-MU5 16.7 ug/kg	H	H		H
	DS-11-MU6 5.5 ug/kg				

H Management Unit sample is statistically different higher from the Placement Unit sample.

Table 4-6: Normalized 22 PCB Congeners Statistical Summary Results (ND = MDL)

Statistical Summary		Placement Unit			
		DS-11-MOPU 338.5 ug/kg	DS-11-WOPU 150.8 ug/kg	DS-11-HIPU 633.3 ug/kg	DS-11-IIPU 276.4 ug/kg
Management Unit	DS-11-MU1 237.3 ug/kg				
	DS-11-MU2 653.6 ug/kg	H	H		H
	DS-11-MU3 618.3 ug/kg	H	H		H
	DS-11-MU4 487.7 ug/kg	H	H		H
	DS-11-MU5 448.1 ug/kg	H	H		H
	DS-11-MU6 172.3 ug/kg				

H Management Unit sample is statistically different higher from the Placement Unit sample

Table 4-7: Total 22 PCB Statistical Summary Results (ND = 0)

Sample ID	22 Total PCBs * (ppb)	% Lipids	Total Normalized PCBs (ppb)	Normalized PCBs Average	Normalized PCBs Standard Deviation	Normalized PCBs CV	Normalized PCBs Skew	Normalized PCBs SW
DS-11-MU1	4.4	3.6	122.5	130.1	5.3	0.04	-0.30	0.95
	5.1	3.7	137.3			0.008 (ln)	-0.40 (ln)	0.95 (ln)
	4.9	3.7	131.6					
	6.0	4.6	130.9					
	5.0	3.9	128.5					
DS-11-MU2	22.4	3.7	604.3	579.6	93.9	0.16	0.84	0.86
	18.9	3.3	573.3			0.02 (ln)	0.55 (ln)	0.87 (ln)
	16.7	3.5	476.6					
	28.9	4.0	723.0					
	19.3	3.7	520.8					
DS-11-MU3	18.6	2.8	665.0	523.7	105.7	0.20	0.20	0.74
	20.7	3.8	544.5			0.03 (ln)	-0.03 (ln)	0.72 (ln)
	17.7	4.1	431.0					
	15.4	3.8	407.6					
	15.4	2.7	570.4					
DS-11-MU4	7.5	4.0	187.5	403.9	140.5	0.35	-1.10	0.74
	9.6	2.8	341.1			0.07 (ln)	-1.50 (ln)	0.73 (ln)
	19.5	3.9	500.0					
	19.0	3.6	528.9					
	20.8	4.5	462.0					
DS-11-MU5	13.8	5.3	260.4	340.5	61.4	0.18	-0.53	0.98
	13.1	3.2	409.4			0.03 (ln)	-0.88 (ln)	0.96 (ln)
	12.0	3.4	352.9					
	11.9	3.5	339.1					

Sample ID	22 Total PCBs * (ppb)	% Lipids	Total Normalized PCBs (ppb)	Normalized PCBs Average	Normalized PCBs Standard Deviation	Normalized PCBs CV	Normalized PCBs Skew	Normalized PCBs SW
DS-11-MU6	0.0 0.0 0.0 0.0 0.0	3.3 2.7 3.0 3.5 3.6	0.0 0.0 0.0 0.0 0.0	0.0	0.0	NC	NC	NC
DS-11-MOPU	9.1 6.7 7.1 6.5	3.2 3.1 3.6 3.9	285.6 214.8 196.1 165.9	215.6	50.8	0.24 0.04 (ln)	1.08 0.72 (ln)	0.92 0.95 (ln)
DS-11-WOPU	0.0 0.0 0.0 0.0 0.0	3.6 4.1 3.3 3.5 4.0	0.0 0.0 0.0 0.0 0.0	0.0	0.0	NC	NC	NC
DS-11-HIPU	14.5 16.9 14.2 13.5 13.6	3.0 2.9 2.6 2.8 2.8	484.0 583.8 547.3 480.7 485.4	516.2	46.9	0.09 0.01 (ln)	0.93 0.89 (ln)	0.55 0.54 (ln)
DS-11-IIPU	5.6 6.1 6.5 7.8 6.9	4.3 3.2 3.9 3.6 4.7	130.9 189.1 165.6 215.6 146.8	169.6	33.6	0.20 0.04 (ln)	0.38 0.11 (ln)	0.79 0.79 (ln)

Table 4-8: Total 22 PCB Congeners Statistical Summary Results ND = 0

Statistical Summary		Placement Unit			
		DS-11-MOPU 7.3 ug/kg	DS-11-WOPU 0.0 ug/kg	DS-11-HIPU 14.6 ug/kg	DS-11-IIPU 6.6 ug/kg
Management Unit	DS-11-MU1 5.1 ug/kg		H		
	DS-11-MU2 21.2 ug/kg	H	H	H	H
	DS-11-MU3 17.5 ug/kg	H	H		H
	DS-11-MU4 15.3 ug/kg	H	H		H
	DS-11-MU5 12.7 ug/kg	H	H		H
	DS-11-MU6 0.0 ug/kg				

H Management Unit sample is statistically different higher from the Placement Unit sample.

Table 4-9: Normalized 22 PCB Congeners Statistical Summary Results ND = 0

Statistical Summary		Placement Unit			
		DS-11-MOPU 215.6 ug/kg	DS-11-WOPU 0.0 ug/kg	DS-11-HIPU 516.2 ug/kg	DS-11-IIPU 169.6 ug/kg
Management Unit	DS-11-MU1 130.1 ug/kg		H		
	DS-11-MU2 579.6 ug/kg	H	H		H
	DS-11-MU3 523.7 ug/kg	H	H		H
	DS-11-MU4 403.9 ug/kg	H	H		H
	DS-11-MU5 340.5 ug/kg	H	H		H
	DS-11-MU6 0.0 ug/kg				

H Management Unit sample is statistically different higher from the Placement Unit sample.

4.3.4 Lumbriculus Sample 209 PCB Results and Conclusions

Four (4) Lumbriculus samples were sent to Test America by GLEC for PCB analysis of the 209 PCB congeners. One (1) replicate was sent of DS-11-MU5 and DS-11-MOPU. The other two samples were laboratory control samples one for each sample. The results indicated:

Table 4-10: Lumbriculus 209 PCB Congeners Analytical Results

Sample ID	# of Non-Detect Congeners	# of J Values Congeners	# of Detectable Levels Congeners
DS-11-MU5	34	98	77
DS-11-MOPU	31	37	141

Table 4-11: Lumbriculus 209 PCB Congeners Analytical Results

Normalized PCBs			Placement Unit				Management Unit			
			MOPU Lake Superior				DS-11-MU5			
Parameter	Sample ID		209 PCBs ND = MDL	209 PCBs ND = 0	209 Coeluting PCBs ND = MDL	209 Coeluting PCBs ND = 0	209 PCBs ND = MDL	209 PCBs ND = 0	209 Coeluting PCBs ND = MDL	209 Coeluting PCBs ND = 0
Congener Number	Analysis Method	Units	Result	Result	Result	Result	Result	Result	Result	Result
Total PCBs	1668A	ppb	47.4	47.3	25.4	25.4	78.0	78.0	42.2	42.2
% Lipids			0.017	0.017	0.017	0.017	0.015	0.015	0.015	0.015
Normalized PCBs	1668A	ppb	2,786	2,784	1,495	1,492	5,203	5,201	2,813	2,811

4.4 Quality Assurance/Quality Control Review

FNG performed a QA/QC review regarding the laboratory data and the report. Based on the review performed, the data presented in this report is accurate and appropriate for the purposes they were collected. The QA/QC review is documented in **Appendix P.**

APPENDIX A

Figures

Figure 1: **Duluth-Superior, Minnesota-Wisconsin, Harbor Map**

Figure 2: **USACE Provided Management Unit Sampling Map**

Figure 3: **Aerial Photograph of Duluth-Superior Harbor with 2011 Sample Locations**

Figure 4: **Lake Superior – Minnesota Open Water Placement Unit (MOPU) Sample Locations Map - Samples DS-11-36 to DS-11-40 and DS-11-MOPU**

Figure 5: **Lake Superior – Wisconsin Open Water Placement Unit (WOPU) Sample Locations Map - Samples DS-11-31 to DS-11-35 and DS-11-WOPU**

Figure 6: **Hearding Island Placement Unit (HIPU) Sample Locations Map - Samples DS-11-41 to DS-11-45 and DS-11-HIPU**

Figure 7: **Interstate Island Placement Unit (IIPU) Map - Samples DS-11-47 to DS-11-50 and DS-11-IIPU**

Figure 8: **Management Unit One (MU-1) Sample Locations Map - Minnesota and Upper Channel (DS-11-01 to DS-11-05 and DS-11-MU1)**

Figure 9: **Management Unit Two (MU-2) Sample Locations Map - West Gate Basin, Howards Bay, and South Channel (DS-11-06 to DS-11-10 and DS-11-MU2)**

Figure 10: **Management Unit Three (MU-3) Sample Locations Map - Duluth Harbor Basin (DS-11-11 to DS-11-15 and DS-11-MU3)**

Figure 11: **Management Unit Four (MU-4) Sample Locations Map - East Gate Basin (DS-11-16 to DS-11-20 and DS-11-MU4)**

Figure 12: **Management Unit Five (MU-5) Sample Locations Map - Superior Front Channel (DS-11-21 to DS-11-25 and DS-11-MU5)**

Figure 13: **Management Unit Six (MU-6) Sample Locations Map - Superior Harbor Basin (DS-11-26 to DS-11-30 and DS-11-MU6)**

Figure 14: **Management Unit One (MU-1) Sample Locations Map - Minnesota and Upper Channel (DS-11-01)**

Figure 15: **Management Unit One (MU-1) Sample Locations Map - Minnesota and Upper Channel (DS-11-02)**

Figure 16: **Management Unit One (MU-1) Sample Locations Map - Minnesota and Upper Channel (DS-11-03 to DS-11-04)**

APPENDIX A

Figures

Figure 17: **Management Unit One (MU-1) Sample Locations Map - Minnesota and Upper Channel (DS-11-05)**

Figure 18: **Management Unit Two (MU-2) and Interstate Island Management Unit (IIMU) Sample Locations Map - West Gate Basin, Howards Bay, and South Channel (DS-11-06 to DS-11-09 and DS-11-46 to DS-11-50)**

Figure 19: **Management Unit Two (MU-2) Sample Locations Map - Howards Bay (DS-11-10)**

Figure 20: **Management Unit Three (MU-3) Sample Locations Map - Duluth Harbor Basin (DS-11-11 and DS-11-12)**

Figure 21: **Management Unit Three (MU-3) Sample Locations Map - Duluth Harbor Basin (DS-11-13)**

Figure 22: **Management Unit Three (MU-3) and Management Unit Four (MU-4) Sample Locations Map - Duluth Harbor Basin (DS-11-14 and DS-11-15) and East Gate Basin (DS-11-16 to DS-11-18)**

Figure 23: **Management Unit Four (MU-4) Sample Locations Map - East Gate Basin (DS-11-19 to DS-11-20)**

Figure 24: **Management Unit Five (MU-5) Sample Locations Map - Superior Front Channel (DS-11-21 and DS-11-22)**

Figure 25: **Management Unit Five (MU-5) Sample Locations Map - Superior Front Channel (DS-11-23)**

Figure 26: **Management Unit Five (MU-5) Sample Locations Map - Superior Front Channel (DS-11-24)**

Figure 27: **Management Unit Five (MU-5) Sample Locations Map - Superior Front Channel (DS-11-25)**

Figure 28: **Management Unit Six (MU-6) Sample Locations Map - Superior Harbor Basin (DS-11-26 to DS-11-29)**

Figure 29: **Management Unit Six (MU-6) Sample Locations Map - Superior Harbor Basin (DS-11-30)**

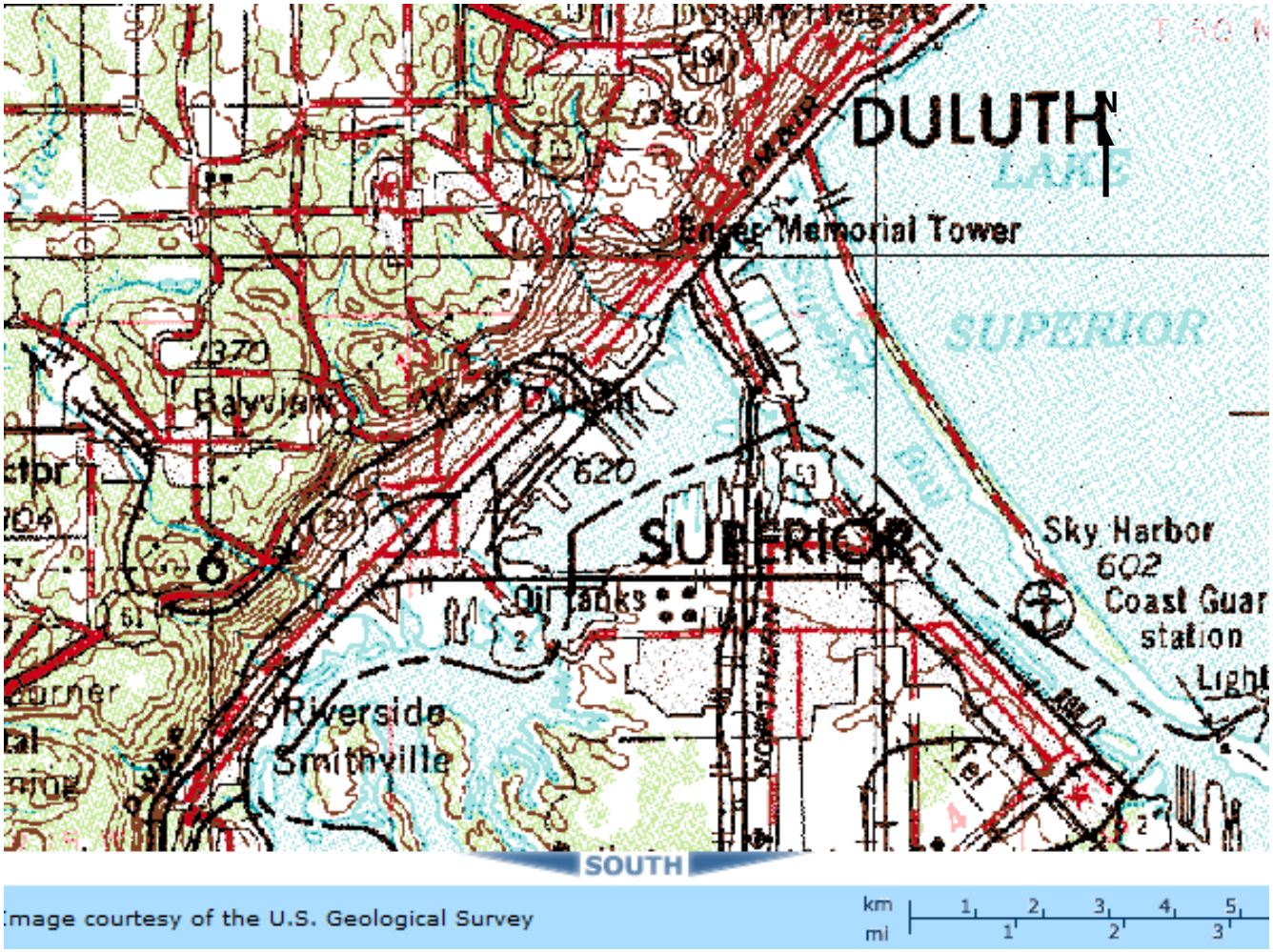
Figure 30: **Hearding Island Placement Unit (HIPU) Sample Locations Map - Duluth Harbor Basin (Samples DS-11-41 to DS-11-45)**

Figure 31: **Wisconsin Open Water Placement Unit (WOPU) Location Map - Lake Superior (Samples DS-11-31 to DS-11-35)**

Figure 32: **Minnesota Open Water Placement Unit (MOPU) Sample Locations Map - Lake Superior (Samples DS-11-36 to DS-11-40)**

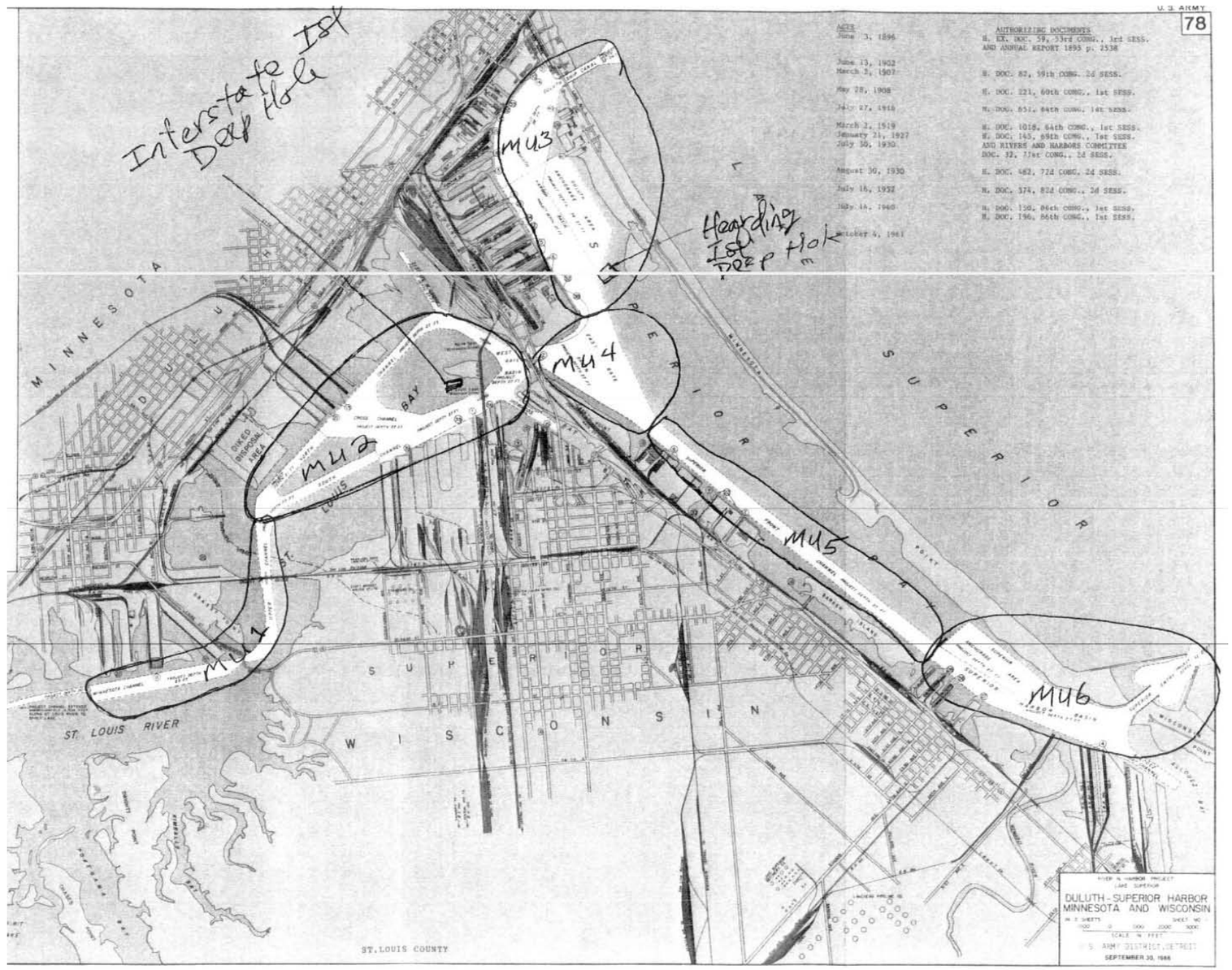
APPENDIX A

Figure 1: Duluth-Superior, Minnesota-Wisconsin, Harbor Map



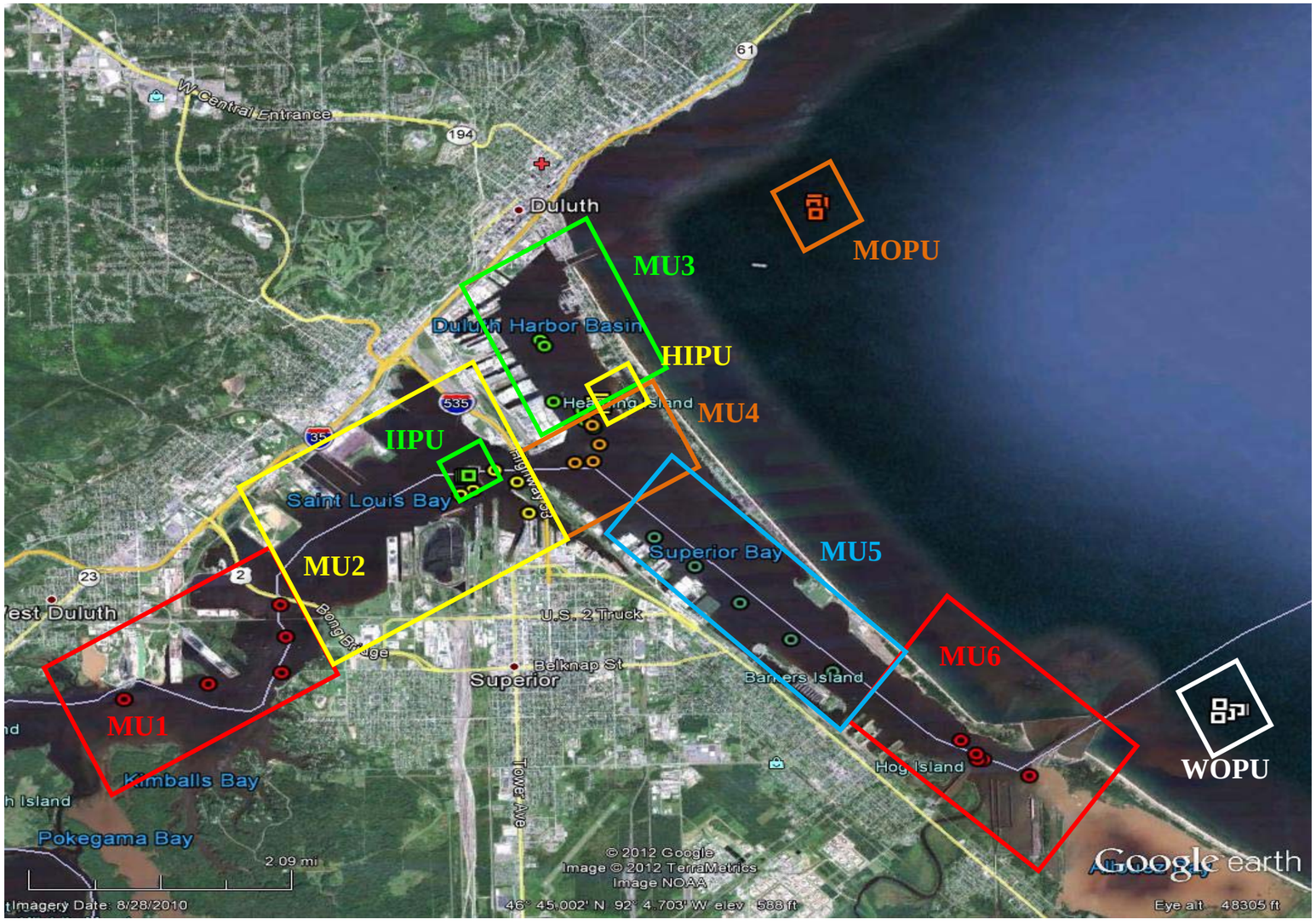
APPENDIX A

Figure 2: USACE Provided Management Unit Sampling Map



APPENDIX A

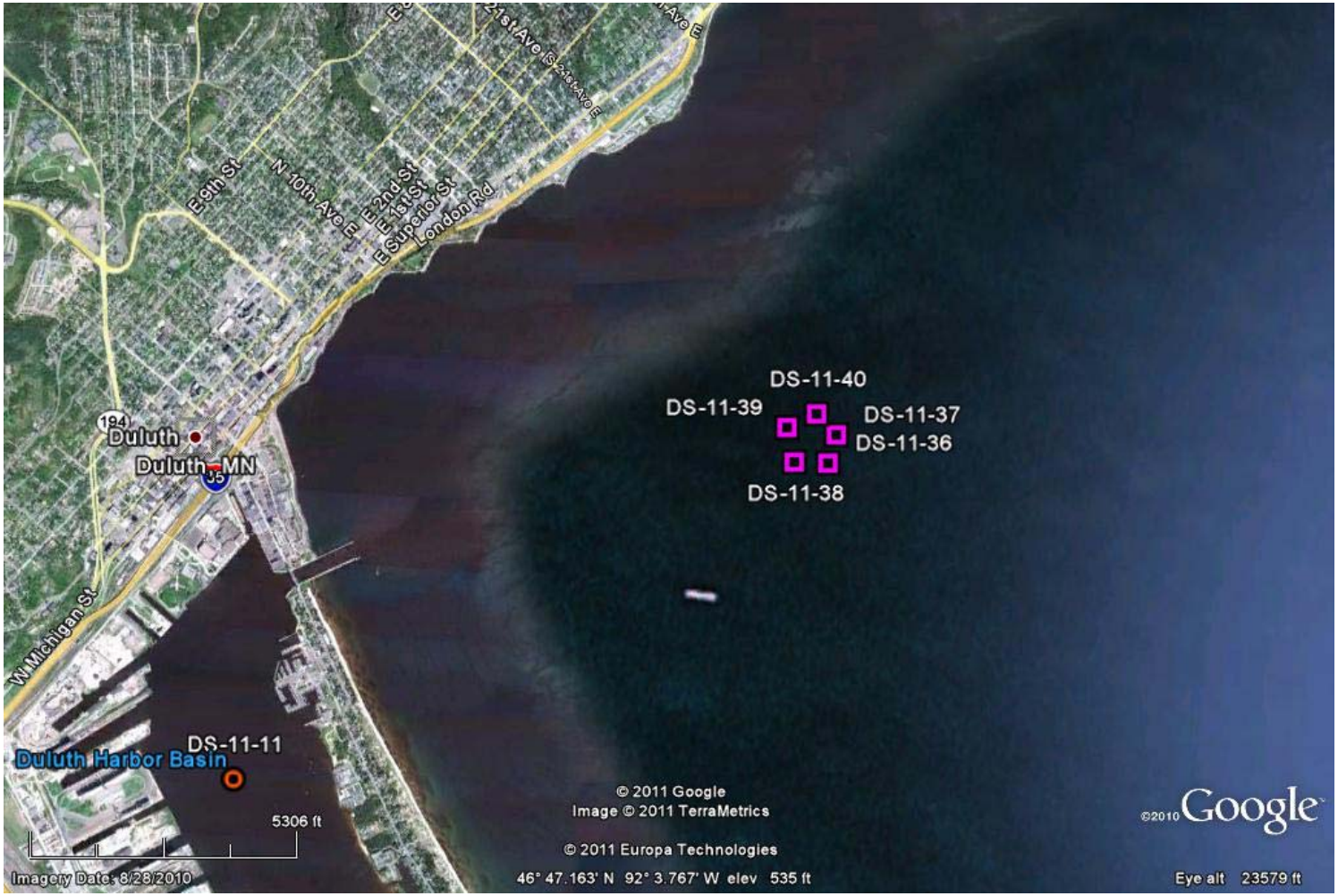
Figure 3: Aerial Photograph of Duluth-Superior Harbor with 2011 Sample Locations



Detailed Photographs of the Management Units(MU) and Placement Units (PU) are included in Pages 4-13
Shoaling Maps of the Management Units (MU), Interstate Island (IIPU), and Hearding Island (HIPU) are included in Pages 14-30
Interstate Island (IIPU) is located with MU2, Hearding Island (HIPU) is located with MU3
Minnesota Open Water Placement Unit (MOPU) and Wisconsin Open Water Placement Unit (WOPU) are located in Lake Superior

APPENDIX A

Figure 4: Lake Superior – Minnesota Open Water Placement Unit (MOPU) Sample Locations Map Samples DS-11-36 to DS-11-40 and DS-11-MOPU



APPENDIX A

Figure 5: Lake Superior – Wisconsin Open Water Placement Unit (WOPU) Sample Locations Map Samples DS-11-31 to DS-11-35 and DS-11-WOPU

APPENDIX A

Figure 6: Hearding Island Placement Unit (HIPU) Sample Locations Map
Samples DS-11-41 to DS-11-45 and DS-11-HIPU

APPENDIX A

Figure 7: Interstate Island Placement Unit (IIPU) Map
Samples DS-11-46 to DS-11-50 and DS-11-IIPU

APPENDIX A

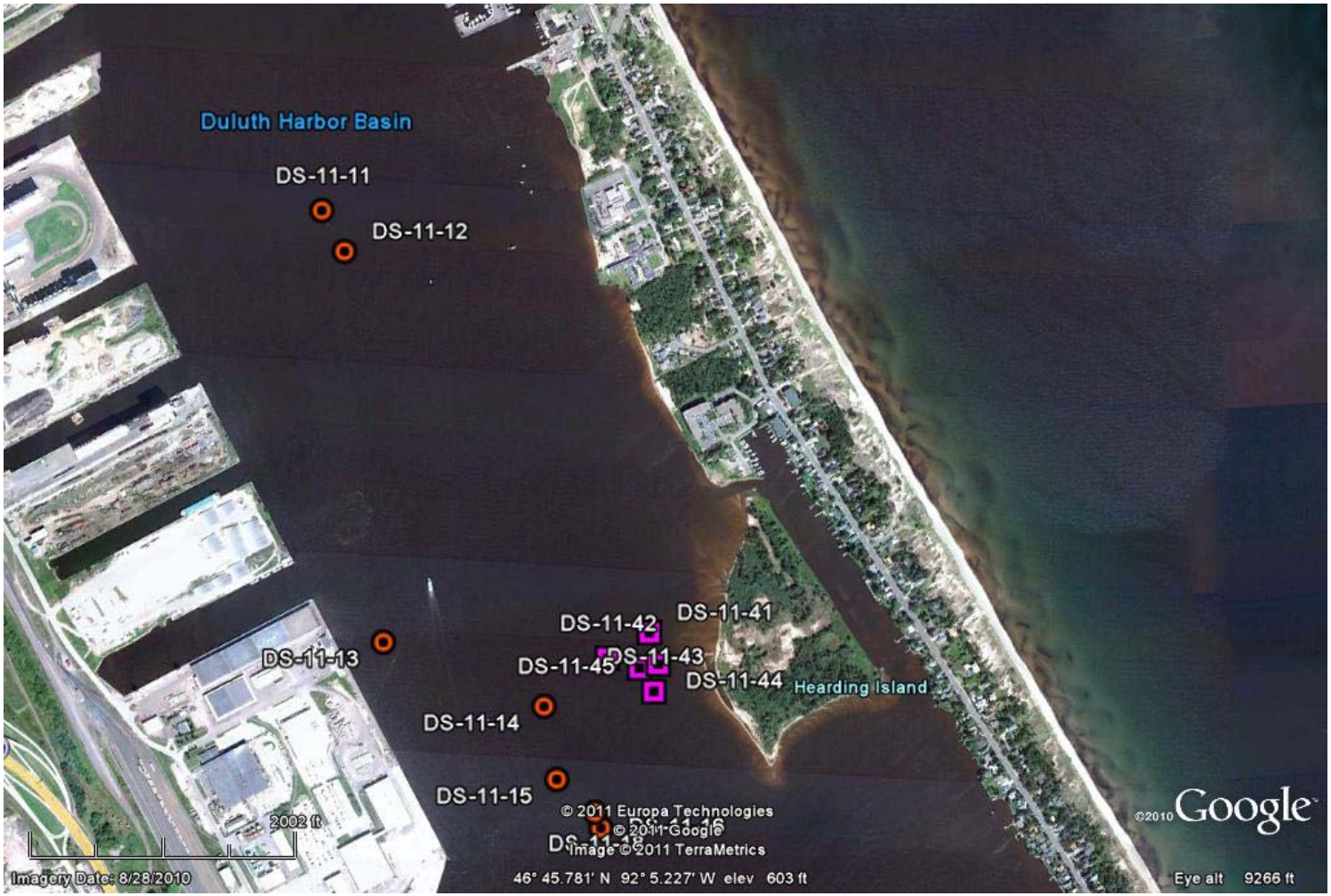
Figure 8: Management Unit One (MU-1) Sample Locations Map Minnesota and Upper Channel (DS-11-01 to DS-11-05 and DS-11-MU1)

APPENDIX A

Figure 9: Management Unit Two (MU-2) Sample Locations Map
West Gate Basin, Howards Bay, and South Channel (DS-11-06 to DS-11-10 and DS-11-MU2)

APPENDIX A

Figure 10: Management Unit Three (MU-3) Sample Locations Map
Duluth Harbor Basin (DS-11-11 to DS-11-15 and DS-11-MU3)



APPENDIX A

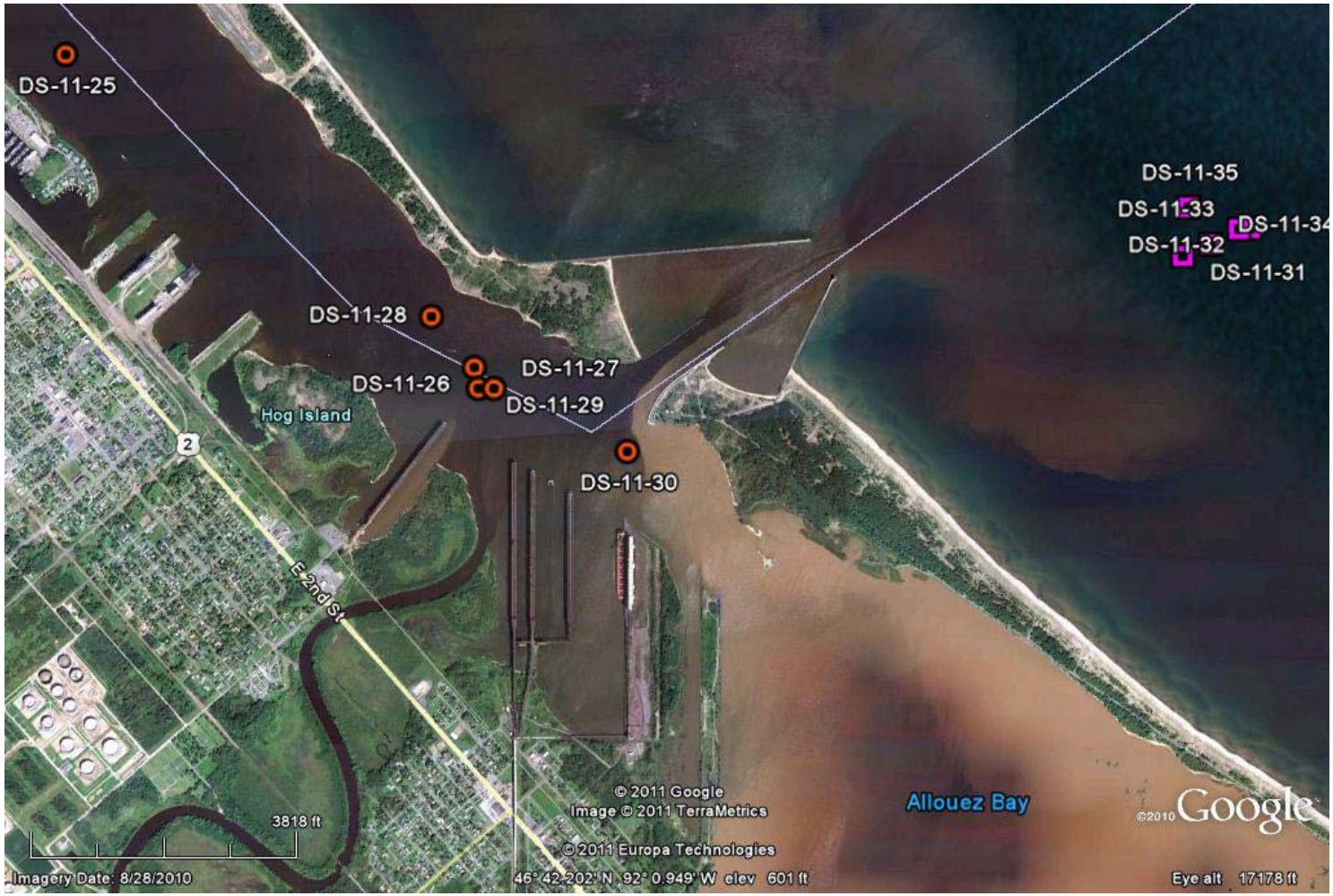
Figure 11: Management Unit Four (MU-4) Sample Locations Map East Gate Basin (DS-11-16 to DS-11-20 and DS-11-MU4)

APPENDIX A

Figure 12: Management Unit Five (MU-5) Sample Locations Map
Superior Front Channel (DS-11-21 to DS-11-25 and DS-11-MU5)

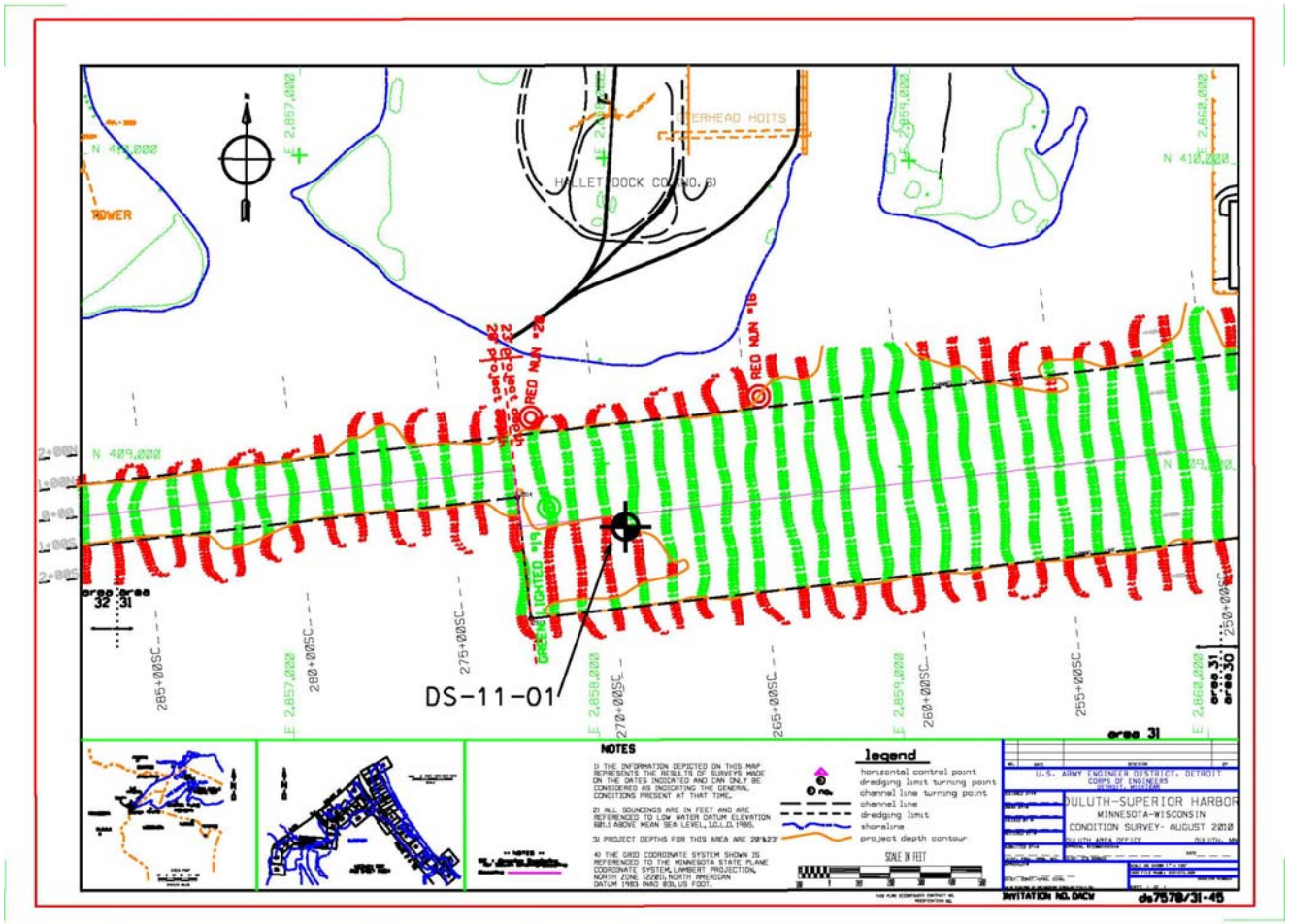
APPENDIX A

Figure 13: Management Unit Six (MU-6) Sample Locations Map
Superior Harbor Basin (DS-11-26 to DS-11-30 and DS-11-MU6)



APPENDIX A

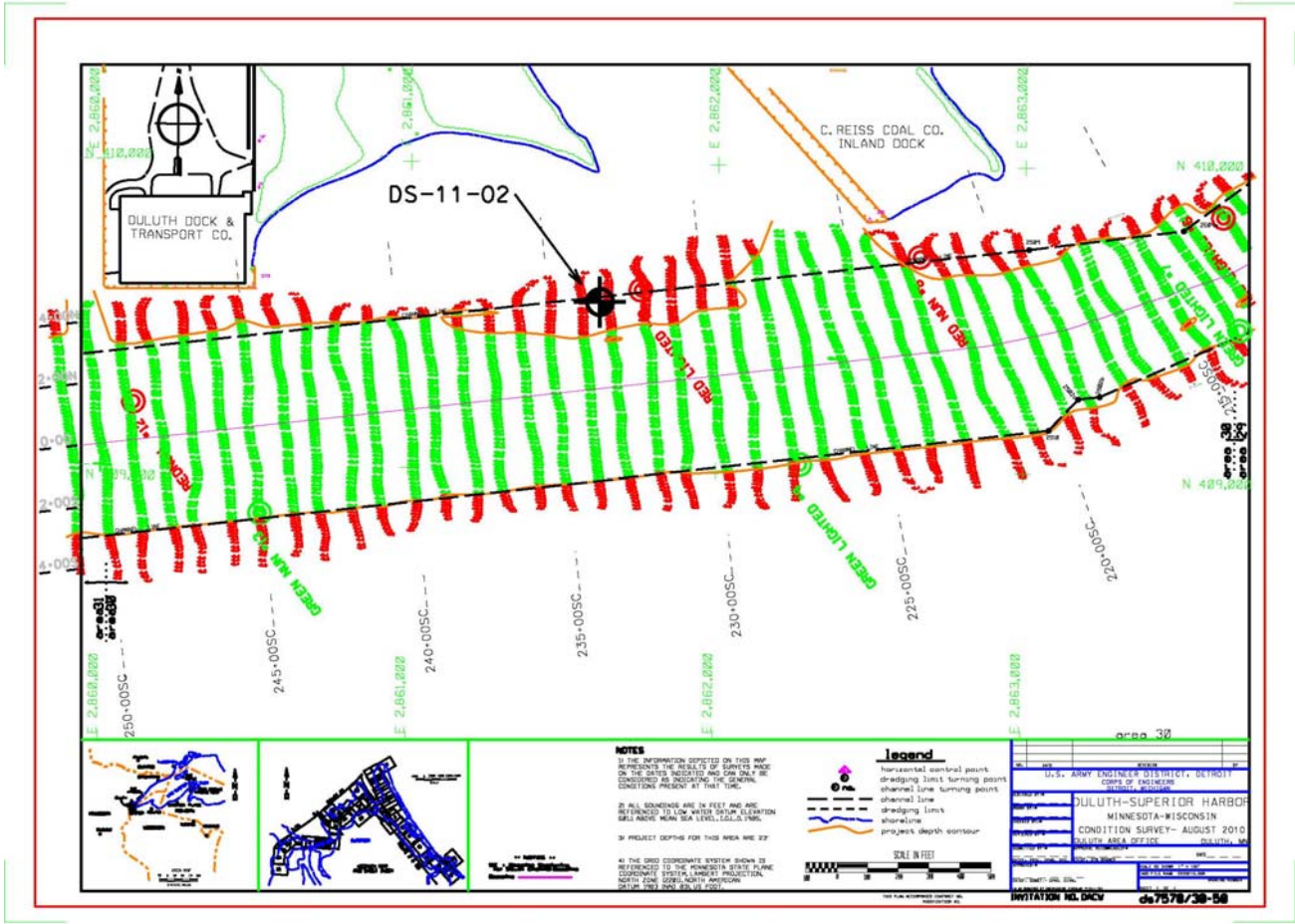
Figure 14: Management Unit One (MU-1) Sample Locations Map Minnesota and Upper Channel (DS-11-01)



Shoaling map data from 2010

APPENDIX A

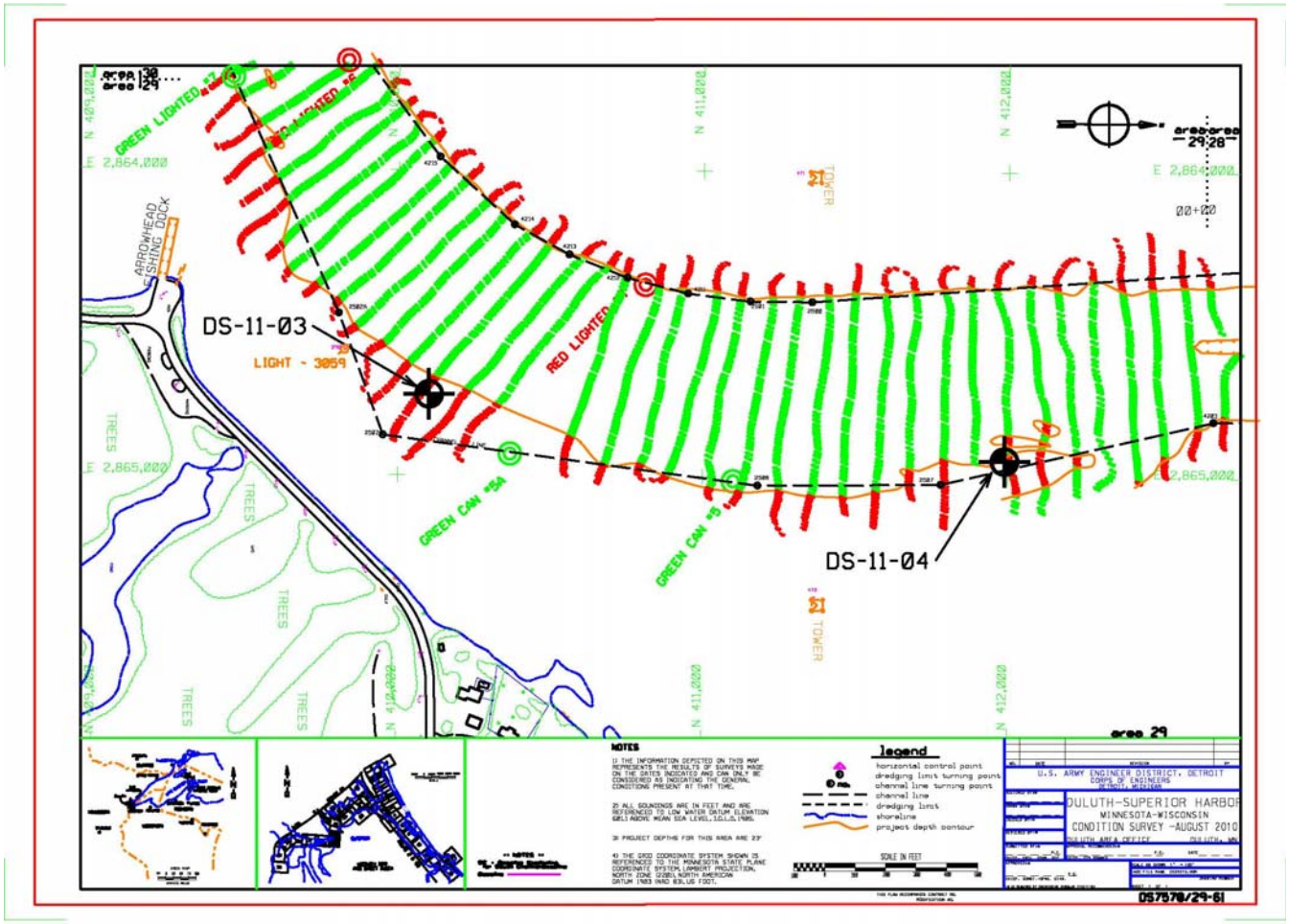
Figure 15: Management Unit One (MU-1) Sample Locations Map Minnesota and Upper Channel (DS-11-02)



Shoaling map data from 2010

APPENDIX A

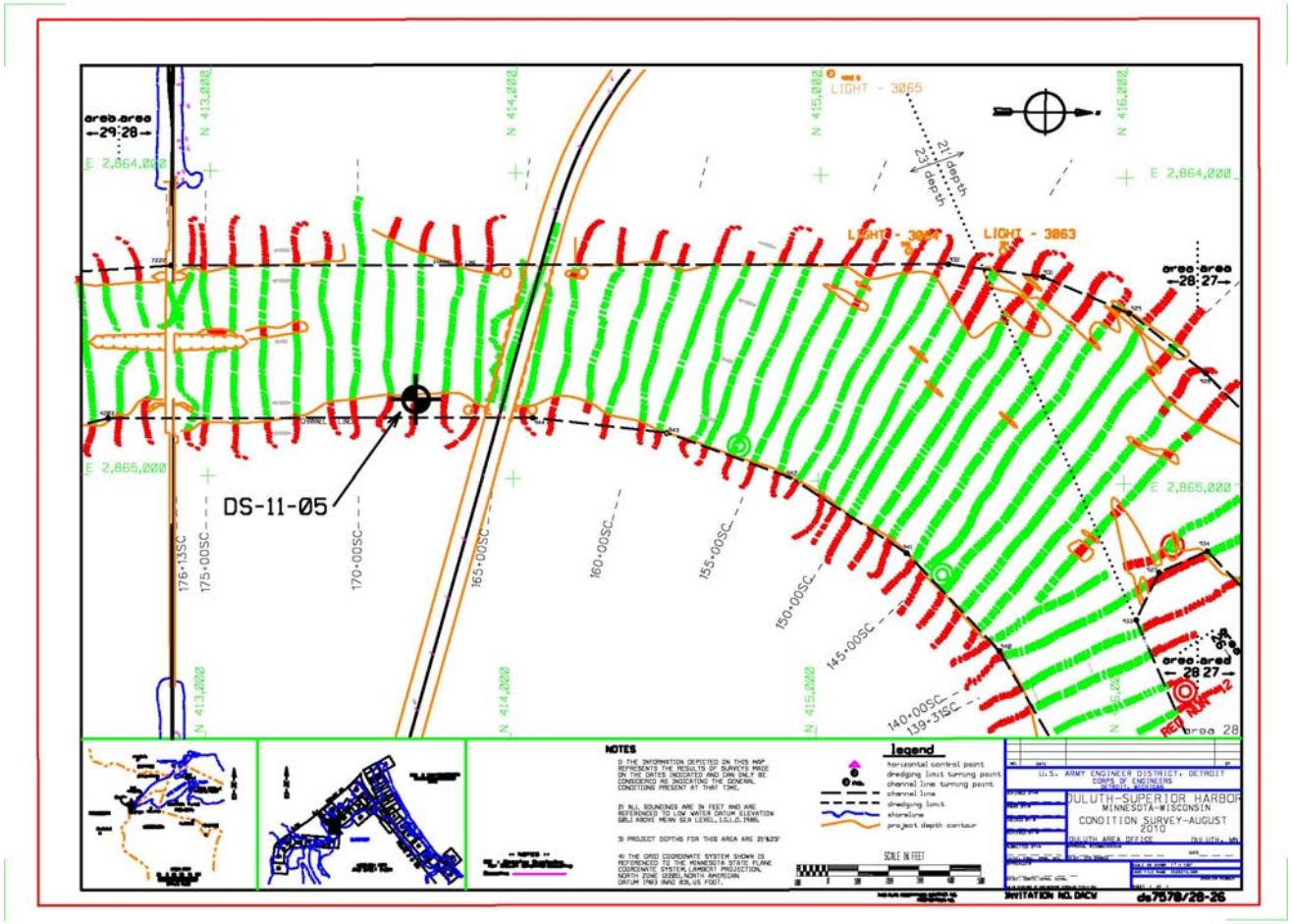
Figure 16: Management Unit One (MU-1) Sample Locations Map Minnesota and Upper Channel (DS-11-03 to DS-11-04)



Shoaling map data from 2010

APPENDIX A

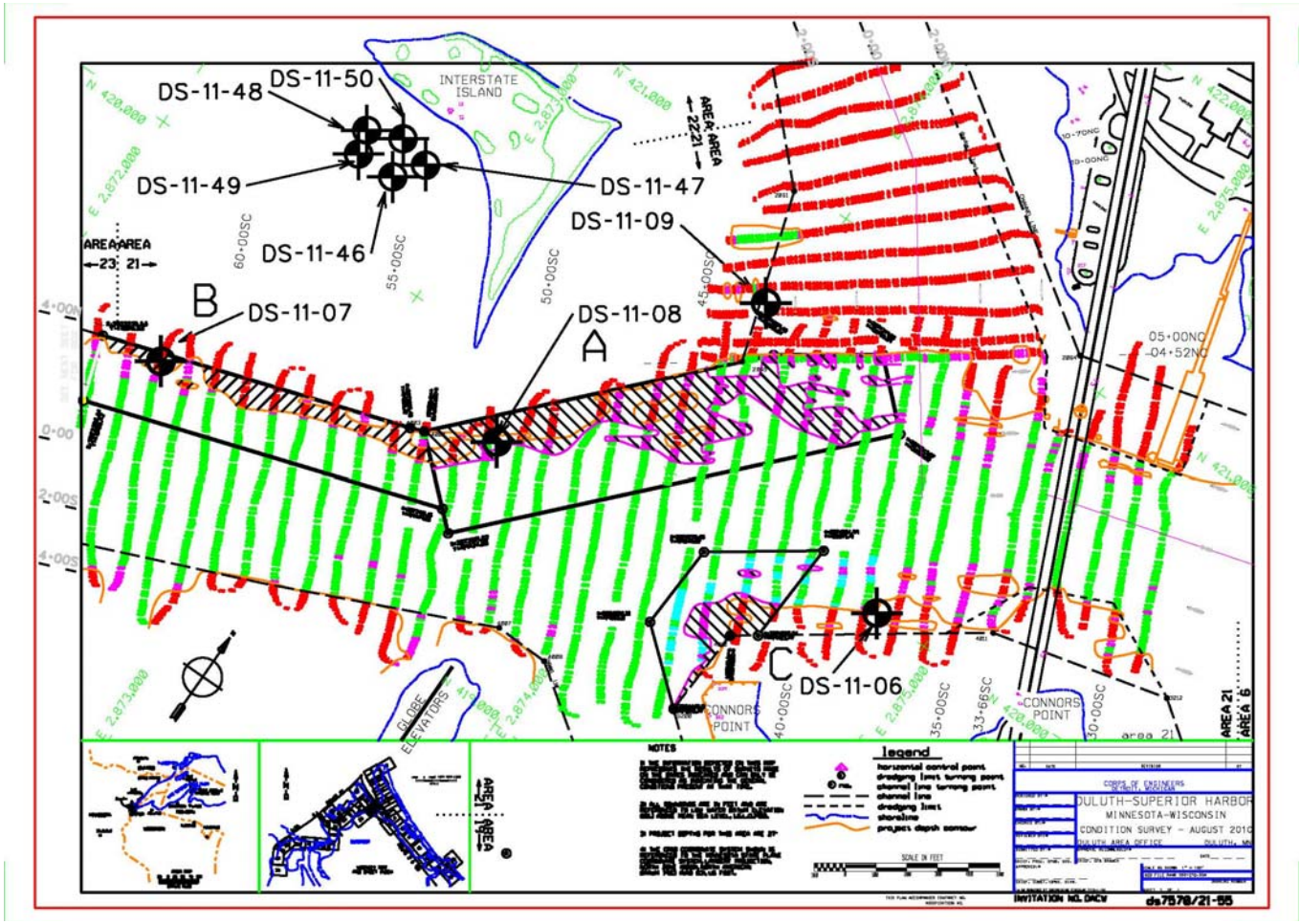
Figure 17: Management Unit One (MU-1) Sample Locations Map Minnesota and Upper Channel (DS-11-05)



Shoaling map data from 2010

APPENDIX A

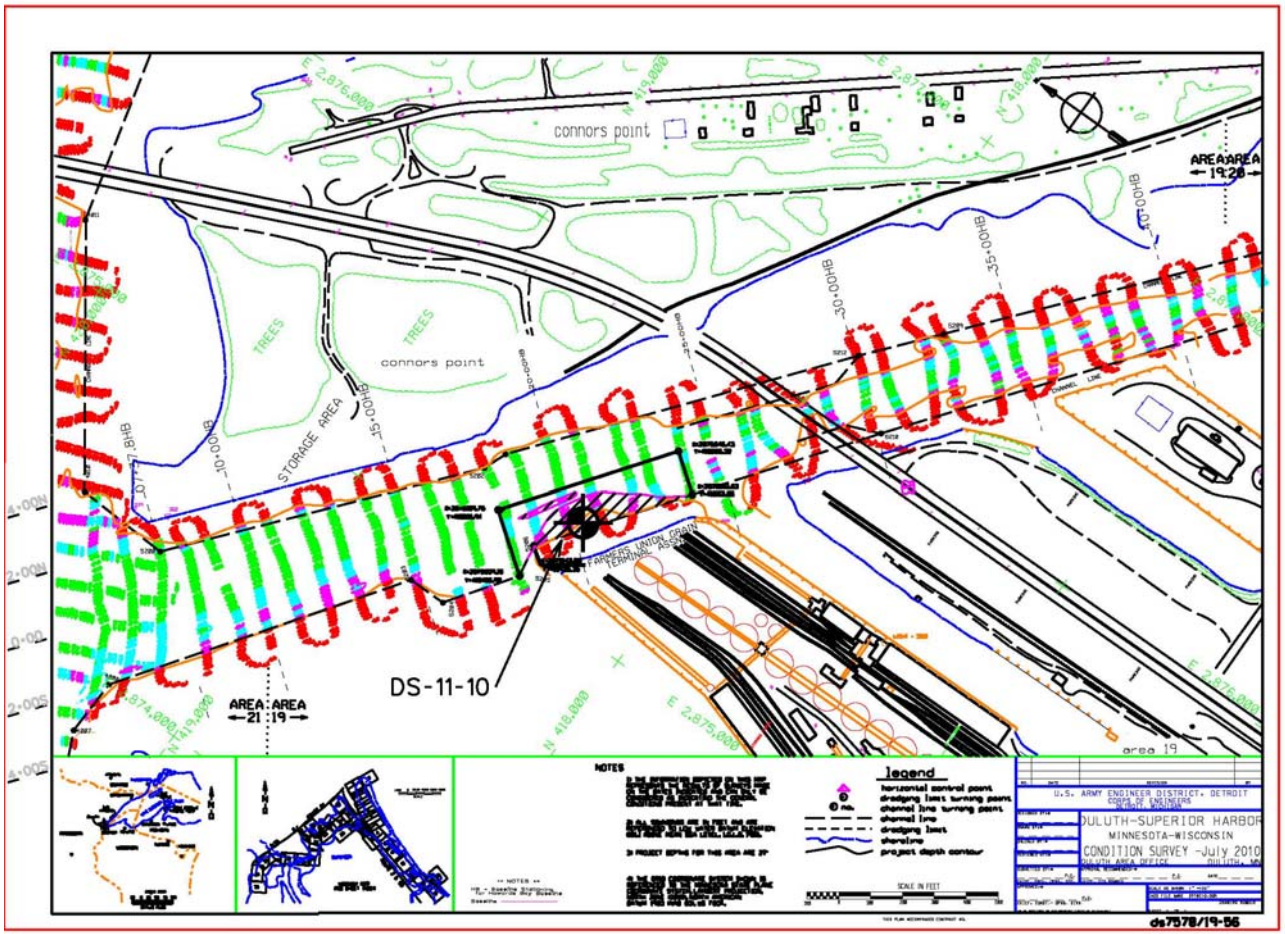
Figure 18: Management Unit Two (MU-2) and Interstate Island Management Unit (IIMU) Sample Locations Map West Gate Basin, Howards Bay, and South Channel (DS-11-06 to DS-11-09 and DS-11-46 to DS-11-50)



Shoaling map data from 2010, updated in August 2011

APPENDIX A

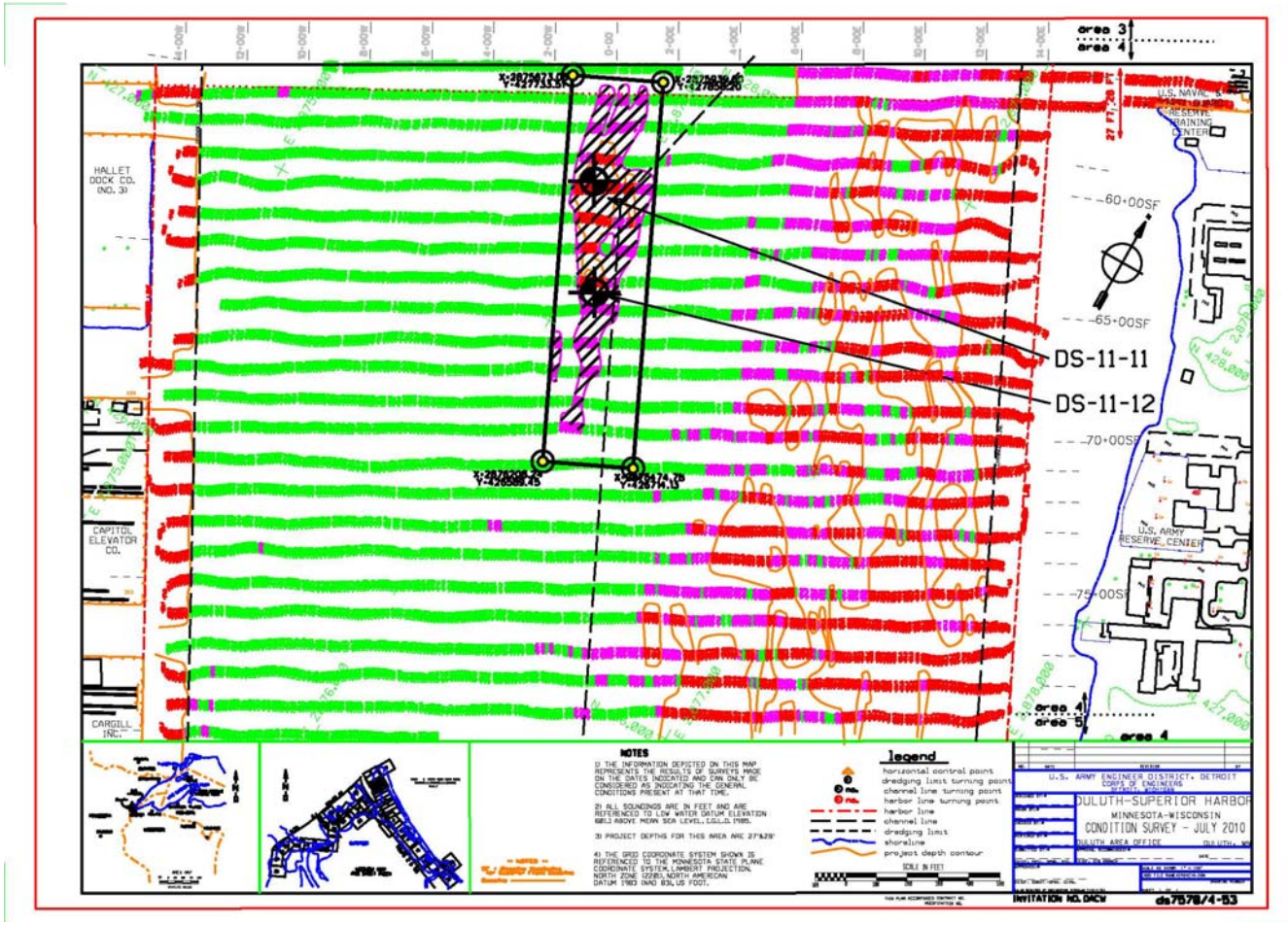
Figure 19: Management Unit Two (MU-2) Sample Locations Map Howards Bay (DS-11-10)



Shoaling map data from 2010, updated in August 2011

APPENDIX A

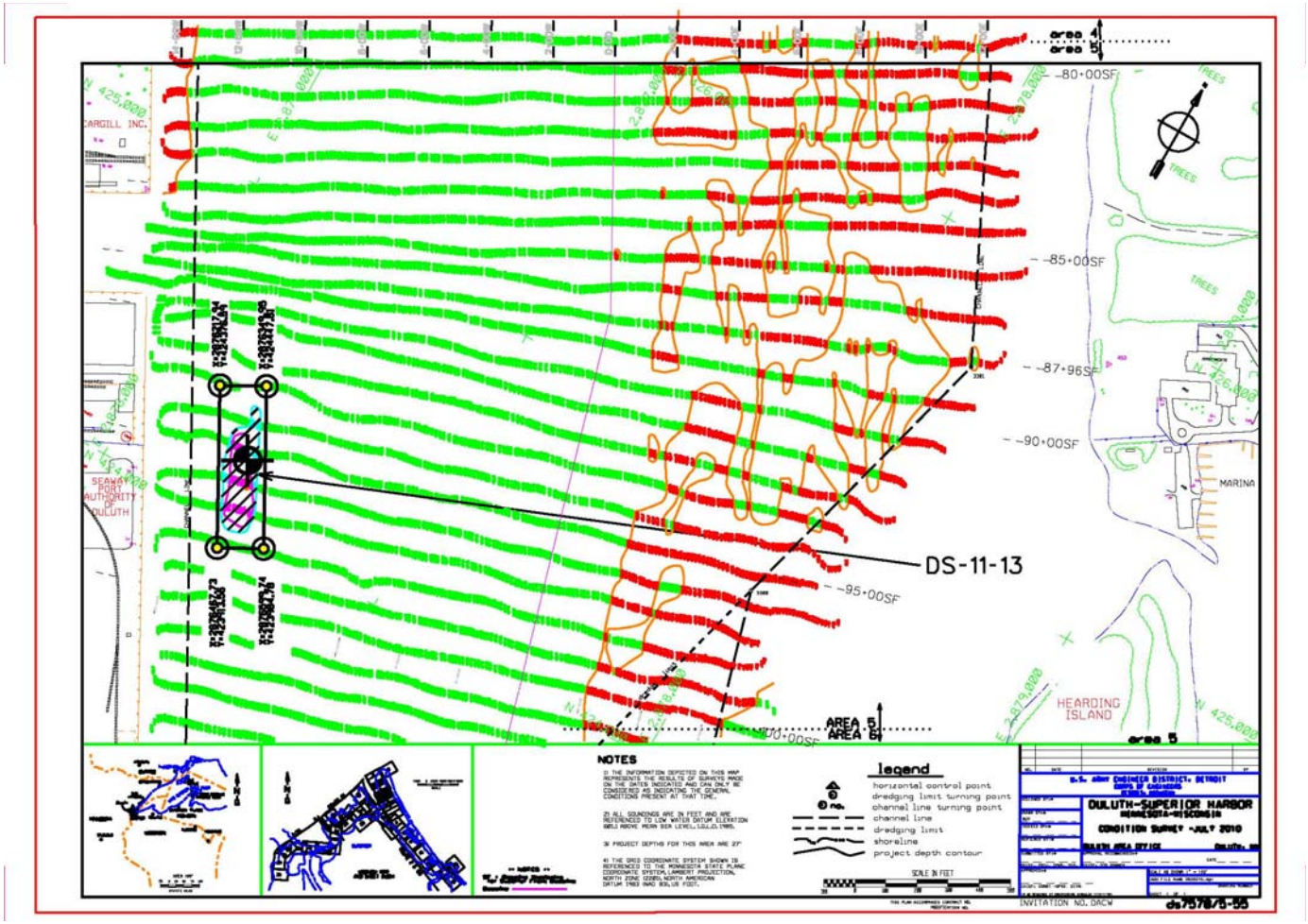
Figure 20: Management Unit Three (MU-3) Sample Locations Map
Duluth Harbor Basin (DS-11-11 and DS-11-12)



Shoaling map data from 2010, updated in August 2011

APPENDIX A

Figure 21: Management Unit Three (MU-3) Sample Locations Map
Duluth Harbor Basin (DS-11-13)



Shoaling map data from 2010, updated in August 2011

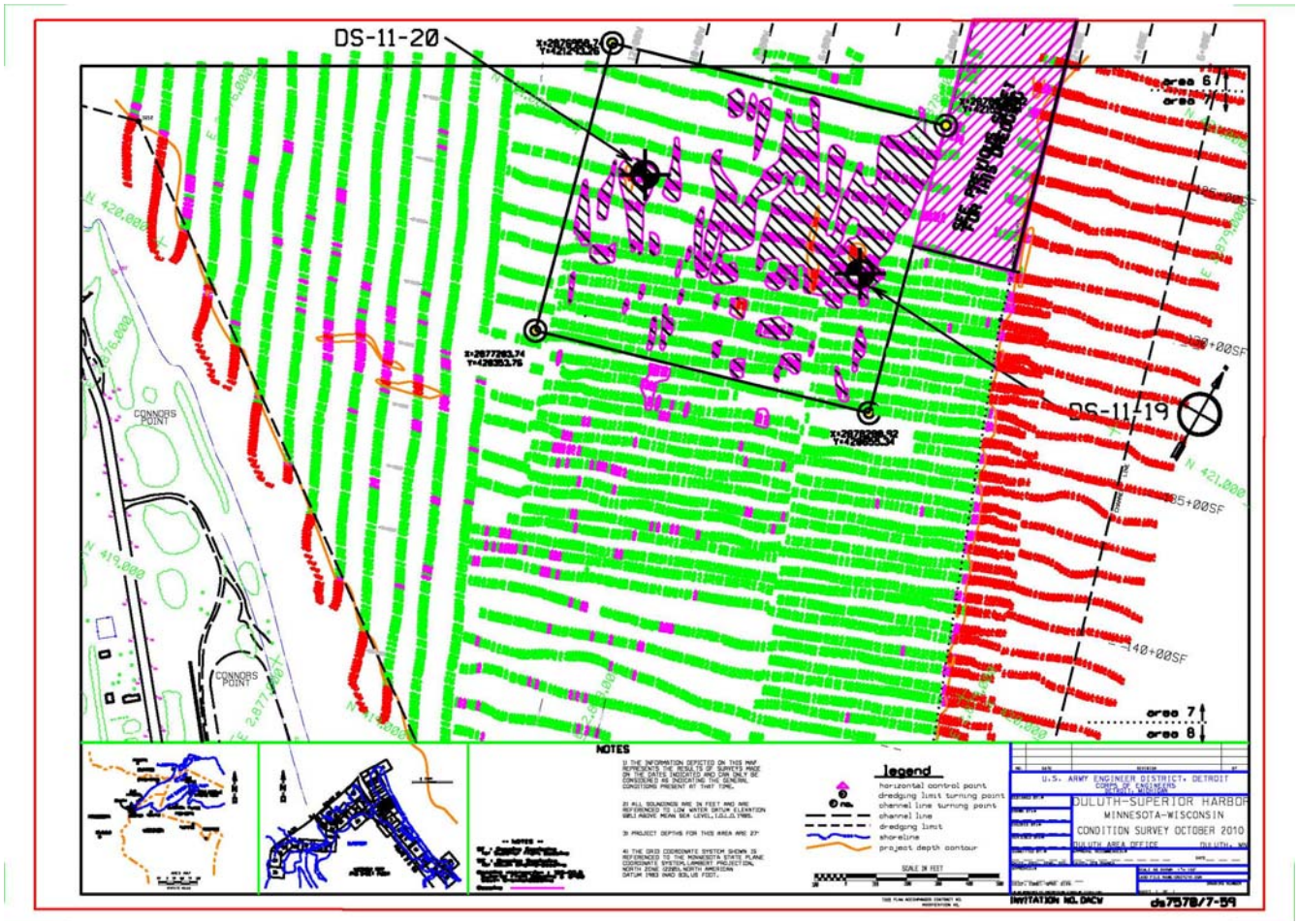
APPENDIX A

Figure 22: Management Unit Three (MU-3) and Management Unit Four (MU-4) Sample Locations Map Duluth Harbor Basin (DS-11-14 and DS-11-15) and East Gate Basin (DS-11-16 to DS-11-18)

Shoaling map data from 2010, updated in August 2011

APPENDIX A

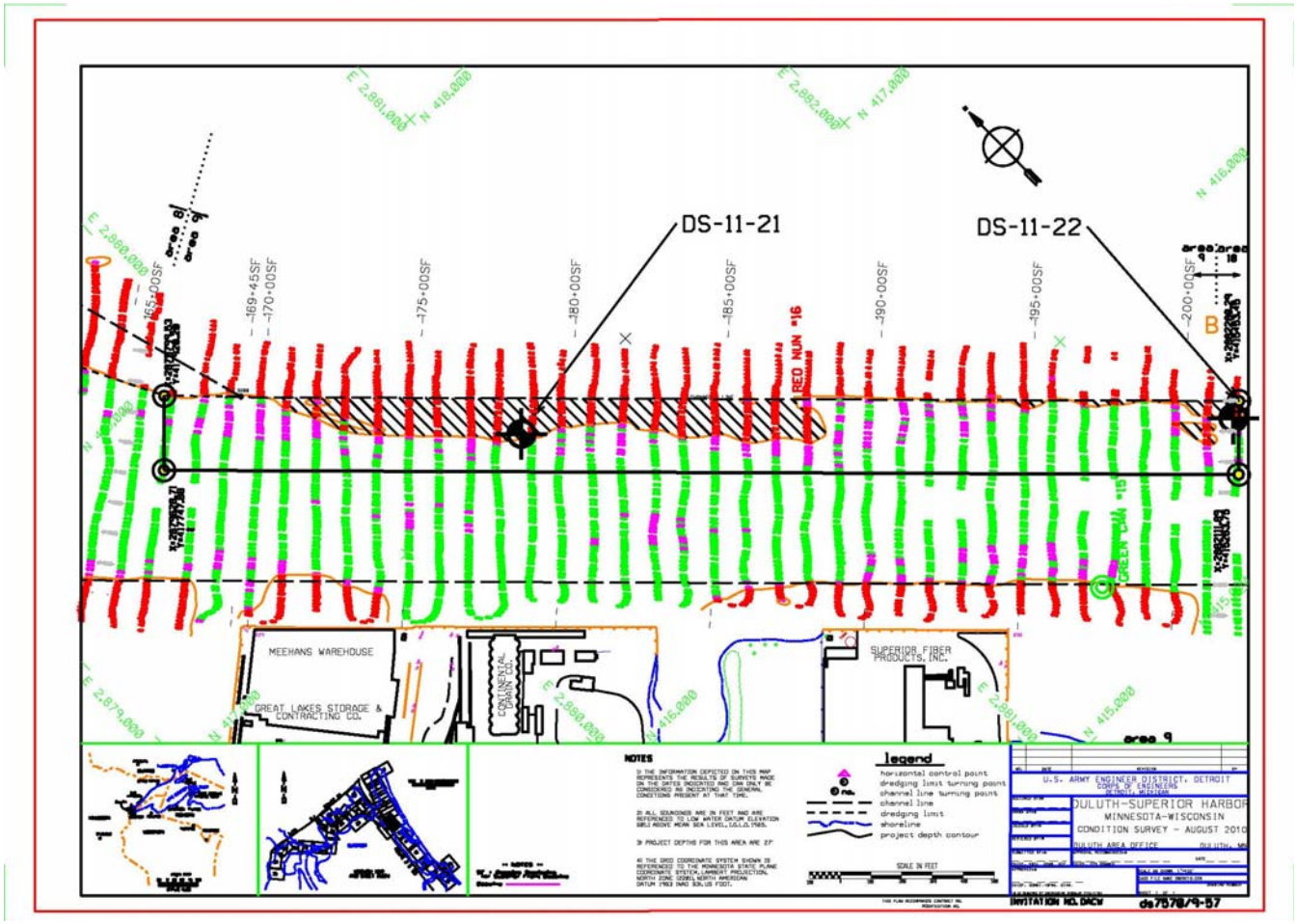
Figure 23: Management Unit Four (MU-4) Sample Locations Map East Gate Basin (DS-11-19 to DS-11-20)



Shoaling map data from 2010, updated in August 2011

APPENDIX A

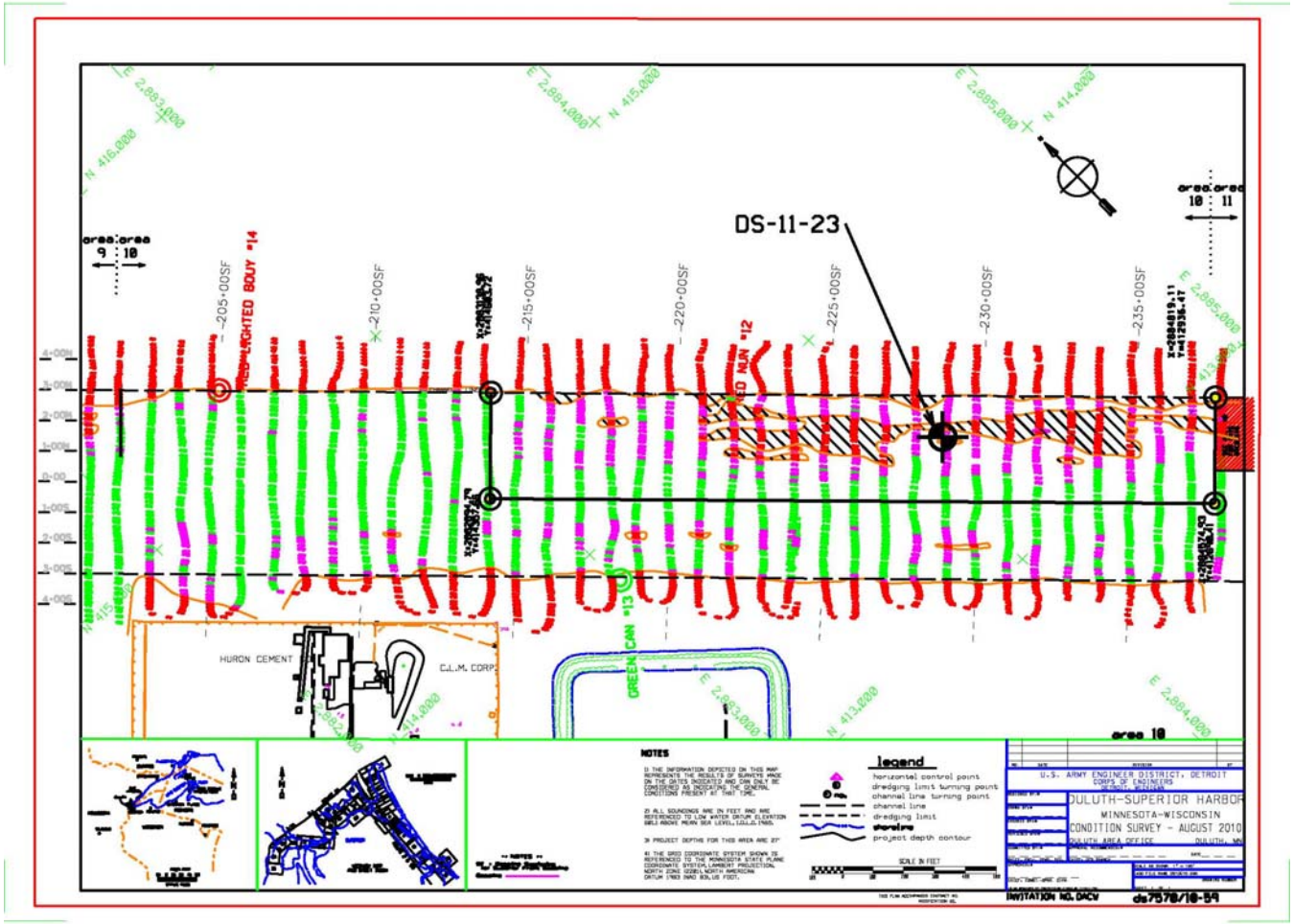
Figure 24: Management Unit Five (MU-5) Sample Locations Map Superior Front Channel (DS-11-21 and DS-11-22)



Shoaling map data from 2010, updated in August 2011

APPENDIX A

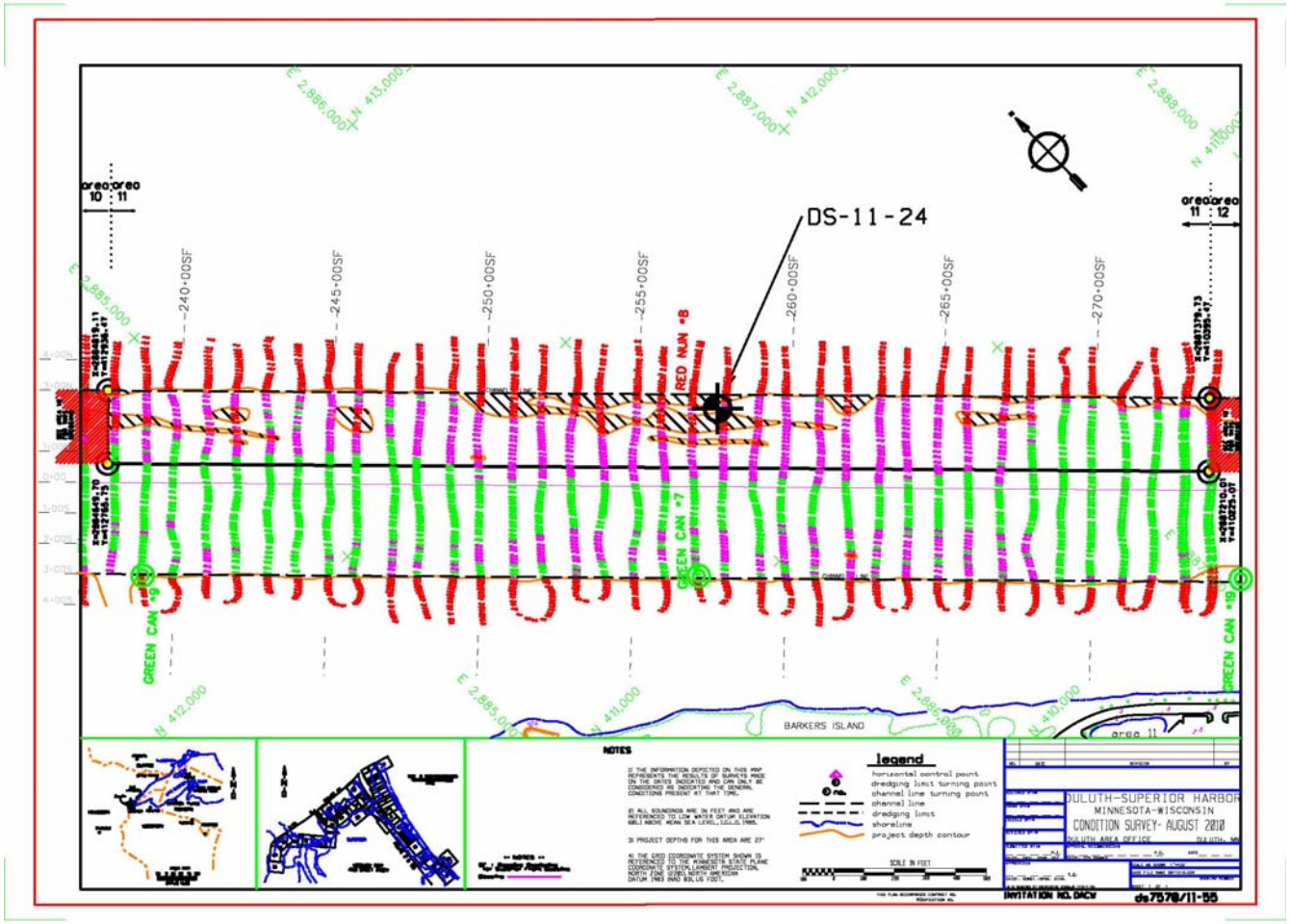
Figure 25: Management Unit Five (MU-5) Sample Locations Map
Superior Front Channel (DS-11-23)



Shoaling map data from 2010, updated in August 2011

APPENDIX A

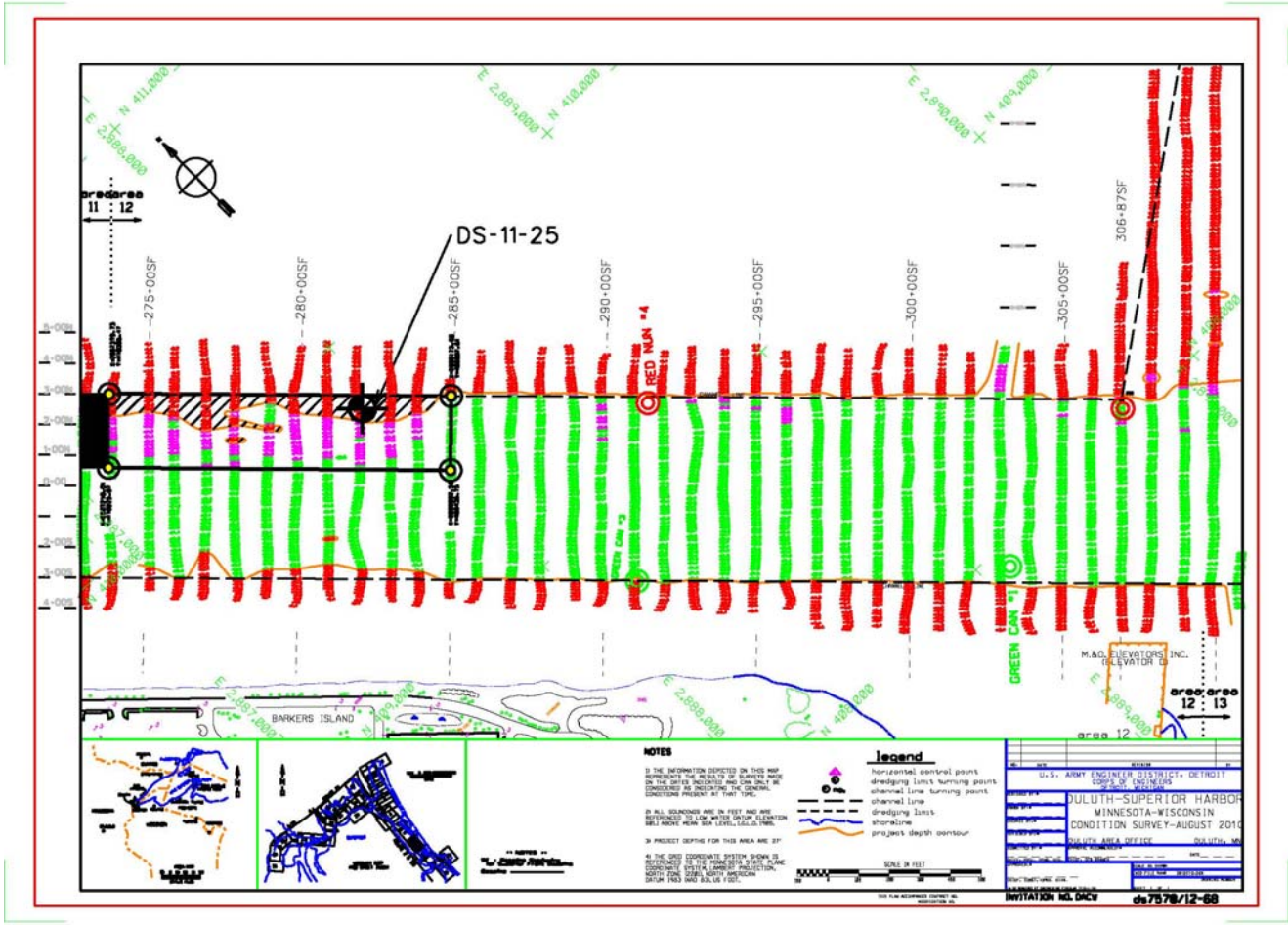
Figure 26: Management Unit Five (MU-5) Sample Locations Map
Superior Front Channel (DS-11-24)



Shoaling map data from 2010, updated in August 2011

APPENDIX A

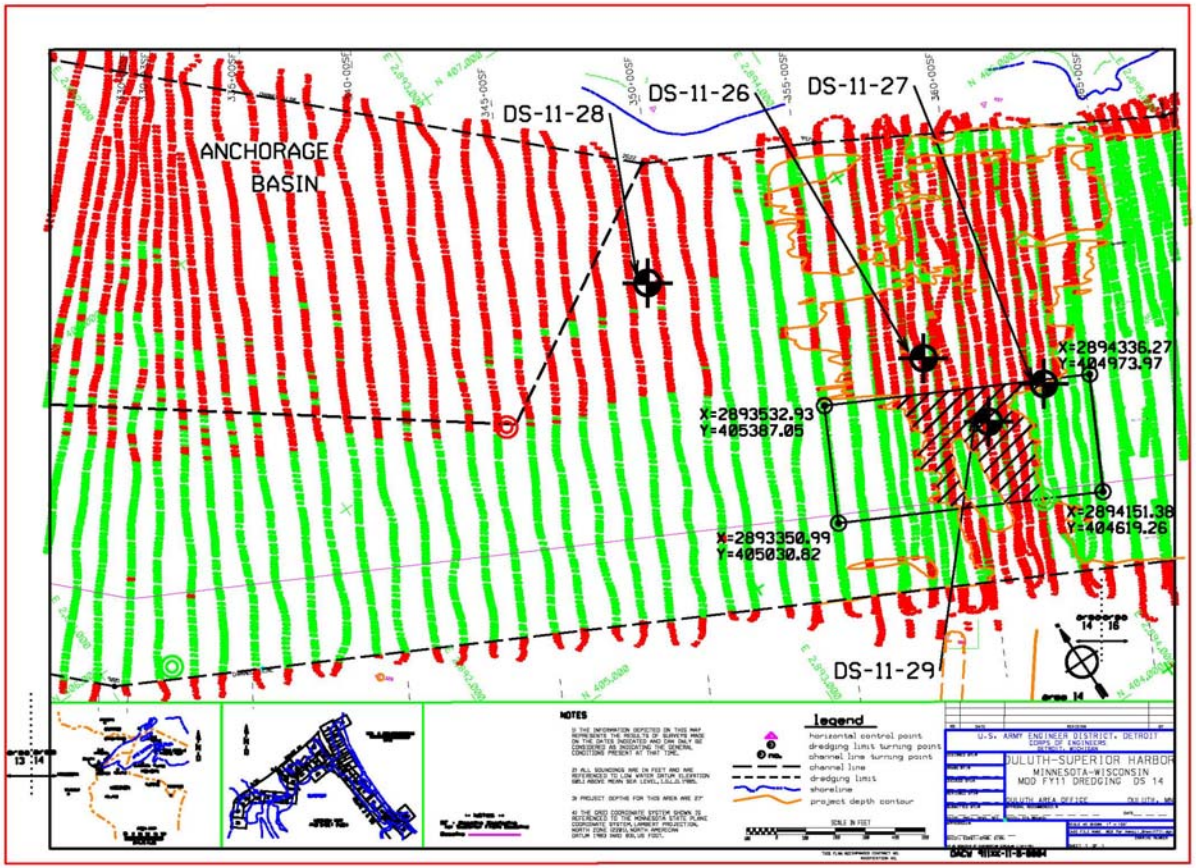
Figure 27: Management Unit Five (MU-5) Sample Locations Map Superior Front Channel (DS-11-25)



Shoaling map data from 2010, updated in August 2011

APPENDIX A

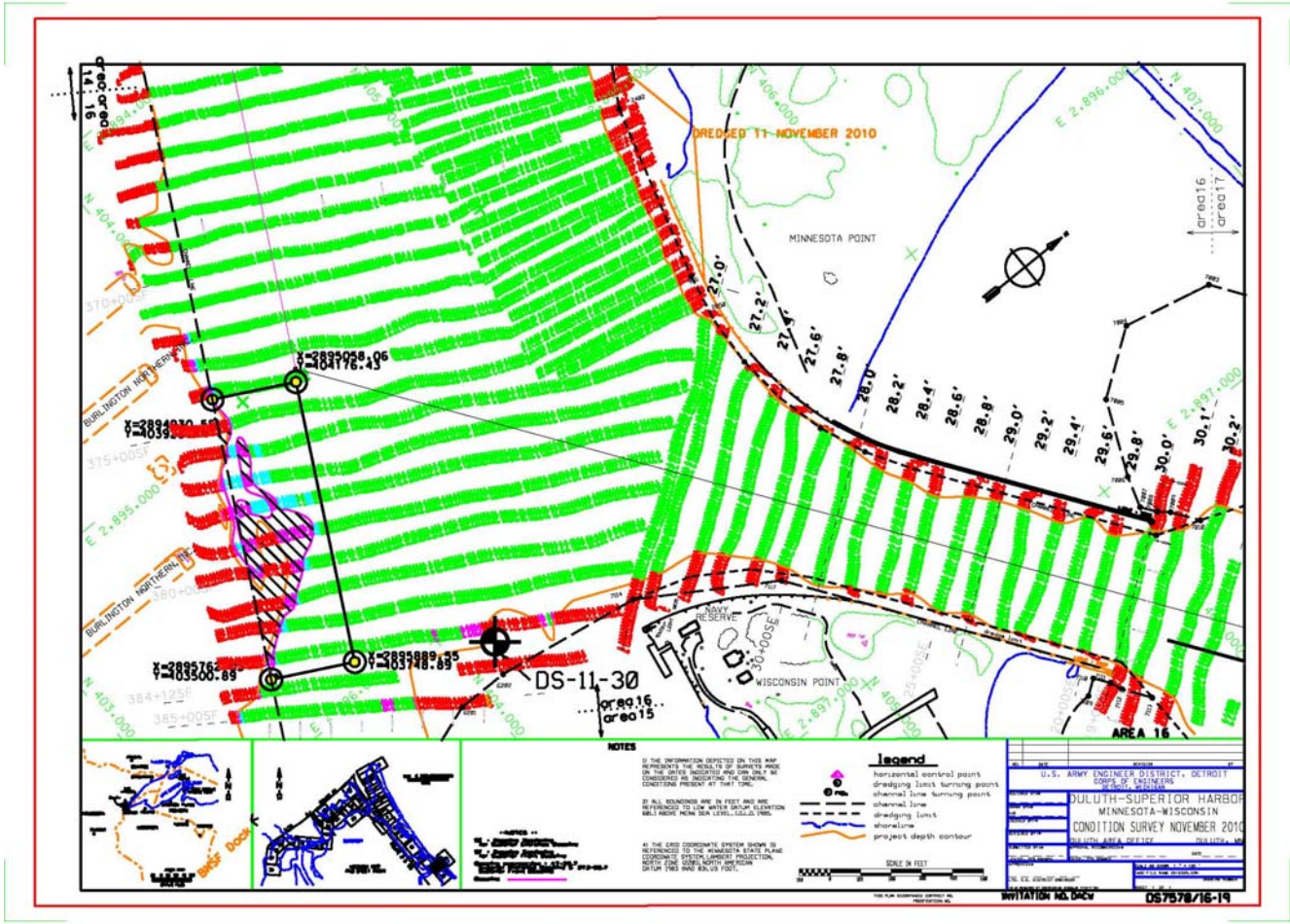
Figure 28: Management Unit Six (MU-6) Sample Locations Map
Superior Harbor Basin (DS-11-26 to DS-11-29)



Shoaling map data from 2010, updated in August 2011

APPENDIX A

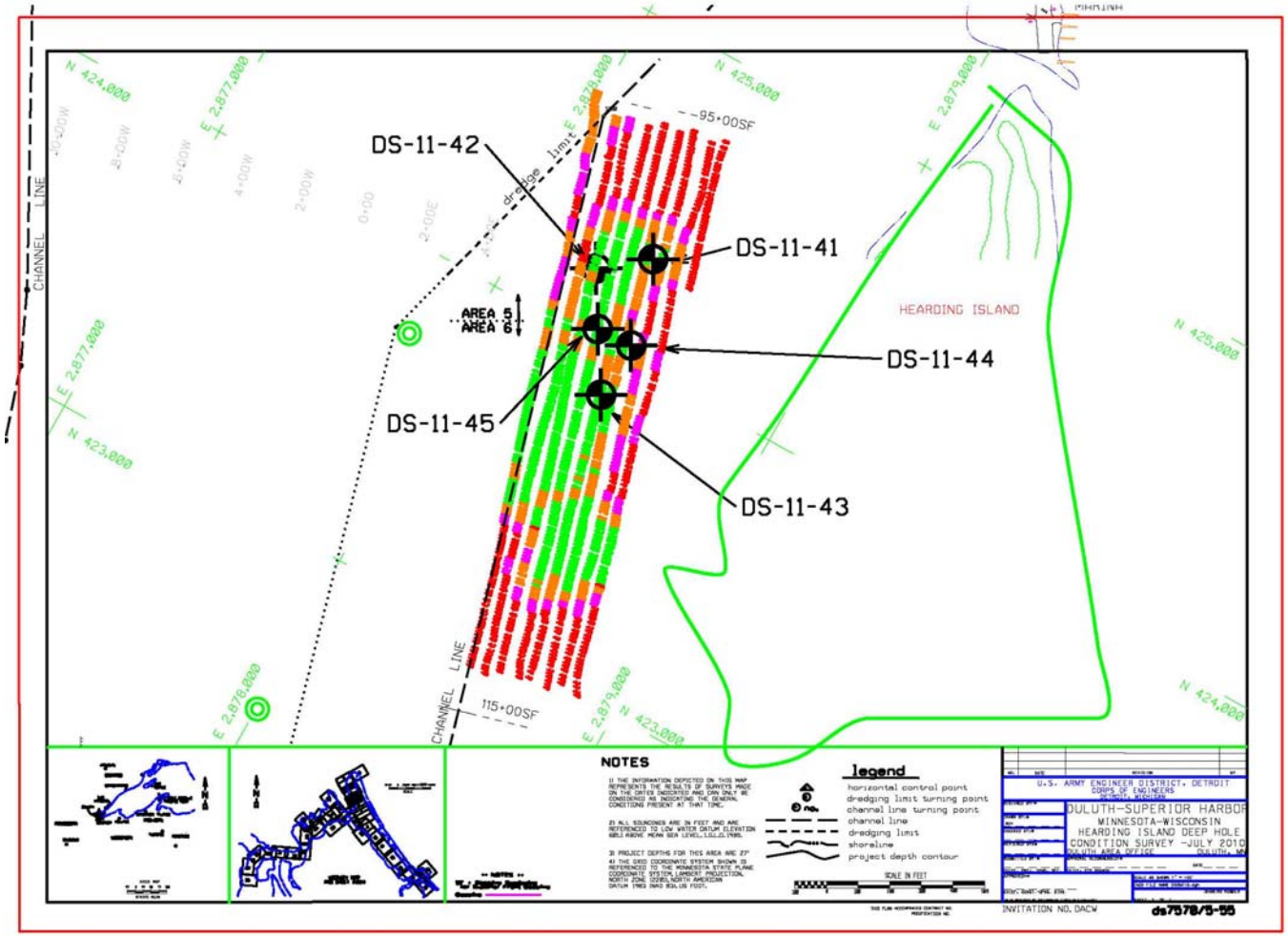
Figure 29: Management Unit Six (MU-6) Sample Locations Map
Superior Harbor Basin (DS-11-30)



Shoaling map data from 2010, updated in August 2011

APPENDIX A

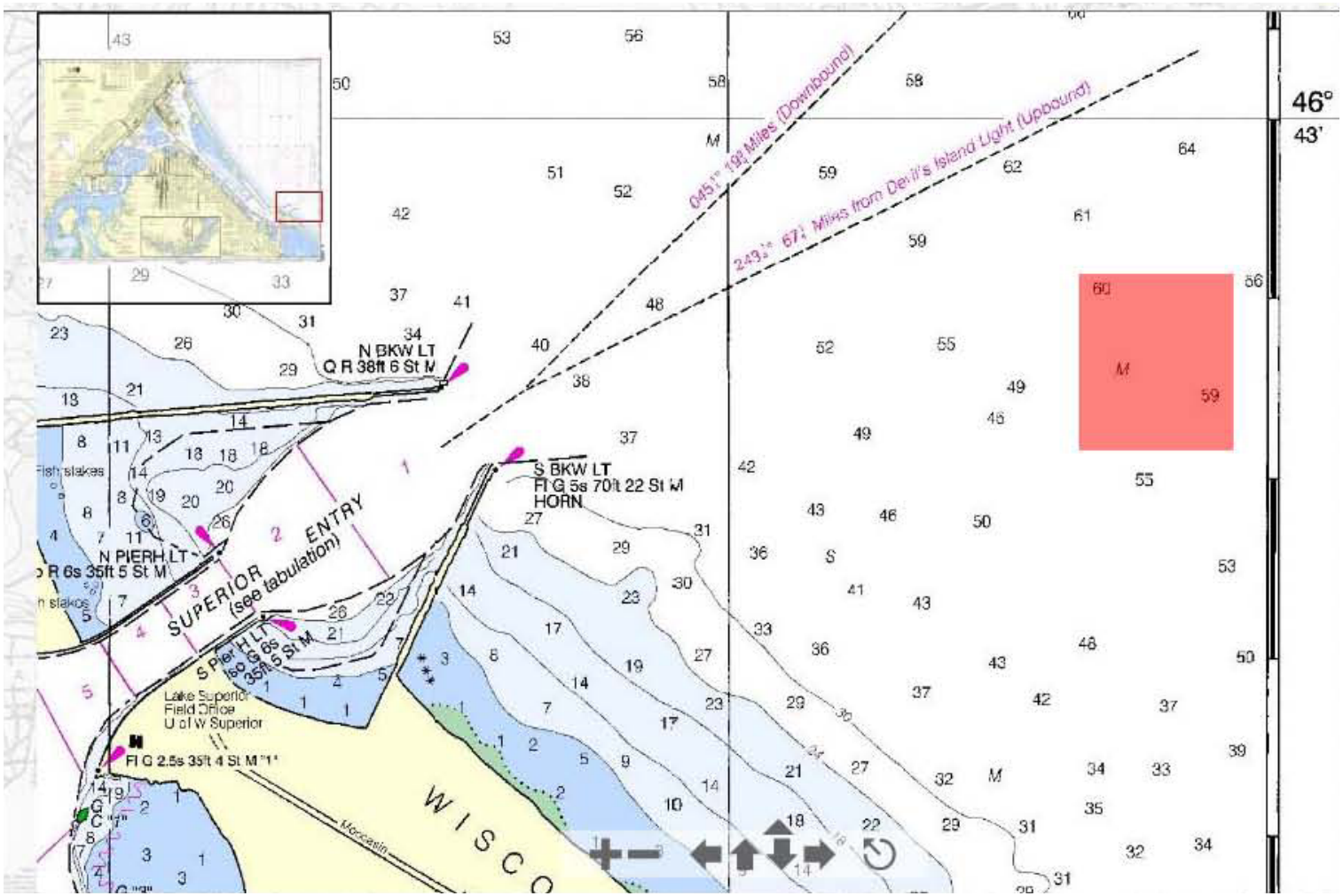
Figure 30: Hearding Island Placement Unit (HIPU) Sample Locations Map
Duluth Harbor Basin (Samples DS-11-41 to DS-11-45)



Shoaling map data from 2010

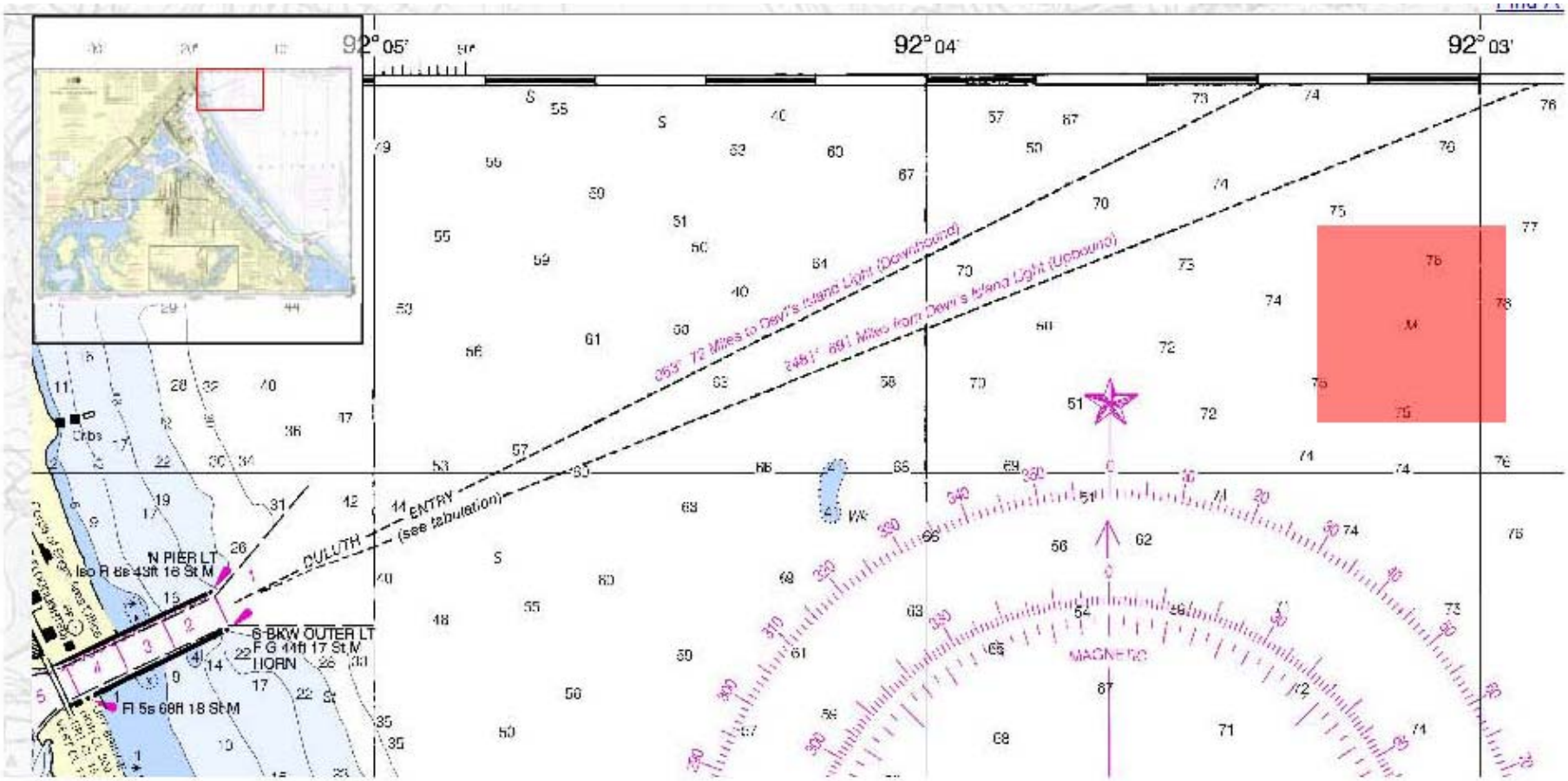
APPENDIX A

Figure 31: Wisconsin Open Water Placement Unit (WOPU) Location Map
Lake Superior (Samples DS-11-31 to DS-11-35)



APPENDIX A

Figure 32: Minnesota Open Water Placement Unit (MOPU) Sample Locations Map Lake Superior (Samples DS-11-36 to DS-11-40)



APPENDIX B

Sediment Analytical Results Summary Tables

Table 1: **Management Unit Bulk Sediment Chemical Analytical Results Summary Table**

Table 2: **Placement Unit Bulk Sediment Chemical Analytical Results Summary Table**

Table 3: **Composite Samples Nutrient Kit Analytical Results Summary Table**

Table 4: **Management Unit Elutriate Sediment Chemical Analytical Summary Table**

Table 5: **Duluth-Superior Harbor Sediment Grain Size Analysis Results Summary Table**

Table 6: **PCB Congener Analytical Results Summary Table**

APPENDIX B

Table 1: Management Unit Bulk Sediment Chemical Analytical Results Summary Table

Management Unit			MU-1				
Parameter	Sample ID		DS-11-01	DS-11-02	DS-11-03	DS-11-04	DS-11-05
	Lab ID		T11H197-61	T11H197-62	T11H197-63	T11H197-64	T11H197-65
	Date Collected		08/20/11	08/20/11	08/20/11	08/20/11	08/20/11
	Sample Thickness (ft)		0.5	0.5	0.5	0.5	0.5
Physical Kit	**Analysis Method**	**Units**					
% Solids	ASTM D2974-87	% by Wt.	**32**	**40**	**38**	**43**	**51**
Specific Gravity	ASTM D854-91		**2.3**	**2.7**	**2.3**	**2.2**	**2.4**
In-Place Density	USACE, In-Place Density	g/mL	**1.8**	**1.6**	**1.7**	**1.7**	**1.6**
Organic Kit	**Analysis Method**	**Units**					
Cyanide (total)	EPA 9012B	mg/kg dry	**0.24**	<0.20	<0.20	<0.20	<0.20
Oil & Grease (HEM)	EPA 9071B	mg/kg dry	<1,300	<1,000	<1,100	<980	<820
Chemical Oxygen Demand	PLUMB	mg/kg dry	**120,000**	**86,000**	**130,000**	**78,000**	**100,000**
Volatile Solids	PLUMB	% by Wt.	**10**	**10**	**12**	**8.4**	**7**
Total Organic Carbon	WALKLEY BLACK	mg/kg dry	**63,000**	**46,000**	**16,000**	**120,000**	**30,000**
Nutrient Kit	**Analysis Method**	**Units**					
Ammonia as N	EPA 350.1 Rev. 2.0	mg/kg dry	**33**	**46**	**26**	**31**	**25**
Total Kjeldahl Nitrogen	EPA 351.2 Rev. 2.0	mg/kg dry	**3,100**	**1,800**	**2,800**	**1,900**	**1,500**
Phosphorus	EPA 6010B	mg/kg dry	**870**	**800**	**760**	**650**	**580**
PCBs	**Analysis Method**	**Units**					
Aroclor-1016	EPA 8082	ug/kg dry	<210	<170	<170	<160	<130
Aroclor-1221	EPA 8082	ug/kg dry	<210	<170	<170	<160	<130
Aroclor-1232	EPA 8082	ug/kg dry	<210	<170	<170	<160	<130
Aroclor-1242	EPA 8082	ug/kg dry	<210	<170	<170	<160	<130
Aroclor-1248	EPA 8082	ug/kg dry	<210	<170	<170	<160	<130
Aroclor-1254	EPA 8082	ug/kg dry	<210	<170	<170	<160	<130
Aroclor-1260	EPA 8082	ug/kg dry	<210	<170	<170	<160	<130
PAHs	**Analysis Method**	**Units**					
2-Methylnaphthalene	EPA 8270C	ug/kg dry	<510	<410	<430	<380	<330
Acenaphthene	EPA 8270C	ug/kg dry	<510	<410	<430	<380	<330
Acenaphthylene	EPA 8270C	ug/kg dry	<510	<410	<430	<380	<330
Anthracene	EPA 8270C	ug/kg dry	<510	<410	<430	<380	<330
Benzo (a) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (b) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (g,h,i) perylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (k) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Chrysene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Dibenz (a,h) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluorene	EPA 8270C	ug/kg dry	<510	<410	<430	<380	<330
Indeno (1,2,3-cd) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Naphthalene	EPA 8270C	ug/kg dry	<510	<410	<430	<380	<330
Phenanthrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Pyrene	EPA 8270C	ug/kg dry	<510	<410	<430	<380	<330
Metals Kit	**Analysis Method**	**Units**					
Arsenic	EPA 6020	mg/kg dry	**4.4**	**4.3**	**3.9**	**3.1**	**2.7**
Barium	EPA 6020	mg/kg dry	**200**	**170**	**160**	**120**	**89**
Cadmium	EPA 6020	mg/kg dry	**0.37**	**0.39**	**0.41**	**0.29**	**0.22**
Chromium	EPA 6020	mg/kg dry	**39**	**39**	**34**	**29**	**25**
Copper	EPA 6020	mg/kg dry	**18**	**18**	**17**	**14**	**12**
Iron	EPA 6010B	mg/kg dry	**35,000**	**35,000**	**34,000**	**26,000**	**22,000**
Lead	EPA 6020	mg/kg dry	**19**	**20**	**22**	**16**	**13**
Manganese	EPA 6020	mg/kg dry	**2,400**	**1,900**	**1,800**	**1,100**	**810**
Mercury	EPA 7471A	mg/kg dry	**0.12**	**0.13**	**0.15**	**0.11**	**0.084**
Nickel	EPA 6020	mg/kg dry	**21**	**21**	**20**	**17**	**14**
Selenium	EPA 6020	mg/kg dry	<0.38	<0.38	<0.39	<0.39	<0.37
Silver	EPA 6020	mg/kg dry	**0.22**	**0.21**	**0.25**	**0.17**	**0.13**
Zinc	EPA 6020	mg/kg dry	**120**	**120**	**120**	**89**	**68**

Bold - Analysis is above detection limit
Italized - Analysis result is estimated

APPENDIX B

Table 1: Management Unit Bulk Sediment Chemical Analytical Results Summary Table

Management Unit			MU-2				
Parameter	Sample ID		DS-11-06	DS-11-07	DS-11-08	DS-11-09	DS-11-10
	Lab ID		T11H197-10	T11H197-11	T11H197-09	T11H197-08	T11H197-07
	Date Collected		08/16/11	08/16/11	08/15/11	08/15/11	08/15/11
	Sample Thickness (ft)		2	2	2	2.2	2.5
Physical Kit	**Analysis Method**	**Units**					
% Solids	ASTM D2974-87	% by Wt.	**61**	**63**	**41**	**47**	**54**
Specific Gravity	ASTM D854-91		**2.5**	**2.7**	**2.7**	**2.2**	**2.5**
In-Place Density	USACE, In-Place Density	g/mL	**1.7**	**2**	**1.8**	**1.4**	**1.5**
Organic Kit	**Analysis Method**	**Units**					
Cyanide (total)	EPA 9012B	mg/kg dry	**0.53**	<0.20	**0.26**	**0.25**	**0.23**
Oil & Grease (HEM)	EPA 9071B	mg/kg dry	<690	<660	<1,000	<890	<780
Chemical Oxygen Demand	PLUMB	mg/kg dry	***62,000***	**52,000**	**43,000**	**96,000**	**66,000**
Volatile Solids	PLUMB	% by Wt.	**4.1**	**5**	**4.5**	**16**	**7**
Total Organic Carbon	WALKLEY BLACK	mg/kg dry	***22,000***	**22,000**	**16,000**	**48,000**	<1,300
Nutrient Kit	**Analysis Method**	**Units**					
Ammonia as N	EPA 350.1 Rev. 2.0	mg/kg dry	***75***	**56**	**24**	**16**	**160**
Total Kjeldahl Nitrogen	EPA 351.2 Rev. 2.0	mg/kg dry	**490**	**680**	**550**	**1,900**	**1,300**
Phosphorus	EPA 6010B	mg/kg dry	**580**	**510**	**340**	**800**	**620**
PCBs	**Analysis Method**	**Units**					
Aroclor-1016	EPA 8082	ug/kg dry	<110	<110	<160	*<140*	<120
Aroclor-1221	EPA 8082	ug/kg dry	<110	<110	<160	*<140*	<120
Aroclor-1232	EPA 8082	ug/kg dry	<110	<110	<160	*<140*	<120
Aroclor-1242	EPA 8082	ug/kg dry	<110	<110	<160	*<140*	<120
Aroclor-1248	EPA 8082	ug/kg dry	<110	<110	<160	*<140*	<120
Aroclor-1254	EPA 8082	ug/kg dry	<110	<110	<160	*<140*	<120
Aroclor-1260	EPA 8082	ug/kg dry	<110	<110	<160	*<140*	<120
PAHs	**Analysis Method**	**Units**					
2-Methylnaphthalene	EPA 8270C	ug/kg dry	<330	<330	<410	<350	<330
Acenaphthene	EPA 8270C	ug/kg dry	<330	<330	<410	<350	<330
Acenaphthylene	EPA 8270C	ug/kg dry	<330	<330	<410	<350	<330
Anthracene	EPA 8270C	ug/kg dry	<330	<330	<410	<350	<330
Benzo (a) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (b) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (g,h,i) perylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (k) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Chrysene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Dibenz (a,h) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluorene	EPA 8270C	ug/kg dry	<330	<330	<410	<350	<330
Indeno (1,2,3-cd) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Naphthalene	EPA 8270C	ug/kg dry	<330	<330	<410	<350	<330
Phenanthrene	EPA 8270C	ug/kg dry	*<330*	<330	<330	<330	<330
Pyrene	EPA 8270C	ug/kg dry	<330	<330	<410	<350	<330
Metals Kit	**Analysis Method**	**Units**					
Arsenic	EPA 6020	mg/kg dry	**2.9**	**2.6**	**1.6**	**3.6**	**2.9**
Barium	EPA 6020	mg/kg dry	**100**	**100**	**30**	**140**	**88**
Cadmium	EPA 6020	mg/kg dry	**0.42**	**0.22**	<0.20	**0.53**	**0.3**
Chromium	EPA 6020	mg/kg dry	***26***	**22**	**11**	**35**	**22**
Copper	EPA 6020	mg/kg dry	***18***	**14**	**7.2**	**24**	**22**
Iron	EPA 6010B	mg/kg dry	**20,000**	**19,000**	**11,000**	**30,000**	**19,000**
Lead	EPA 6020	mg/kg dry	**28**	**14**	**5.3**	**29**	**31**
Manganese	EPA 6020	mg/kg dry	**500**	**1,000**	**350**	**550**	**660**
Mercury	EPA 7471A	mg/kg dry	***0.17***	**0.083**	<0.050	**0.21**	**0.13**
Nickel	EPA 6020	mg/kg dry	***17***	**15**	**8.9**	**23**	**17**
Selenium	EPA 6020	mg/kg dry	*<0.39*	<0.39	<0.37	<0.38	<0.37
Silver	EPA 6020	mg/kg dry	**0.36**	**0.18**	<0.10	**0.74**	**0.26**
Zinc	EPA 6020	mg/kg dry	**100**	**74**	**24**	**140**	**95**

Bold - Analysis is above detection limit
Italized - Analysis result is estimated

APPENDIX B

Table 1: Management Unit Bulk Sediment Chemical Analytical Results Summary Table

Management Unit			MU-3				
Parameter	Sample ID		DS-11-11	DS-11-12	DS-11-13	DS-11-14	DS-11-15
	Lab ID		T11H197-13	T11H197-14	T11H197-17	T11H197-18	T11H197-19
	Date Collected		08/16/11	08/16/11	08/17/11	08/17/11	08/17/11
	Sample Thickness (ft)		0.5	0.5	0.5	1.5	1.8
Physical Kit	**Analysis Method**	**Units**					
% Solids	ASTM D2974-87	% by Wt.	**73**	**63**	**61**	**71**	**73**
Specific Gravity	ASTM D854-91		**2.7**	**2.7**	**2.6**	**2.5**	**2.6**
In-Place Density	USACE, In-Place Density	g/mL	**1.9**	**2**	**1.8**	**1.6**	**1.9**
Organic Kit	**Analysis Method**	**Units**					
Cyanide (total)	EPA 9012B	mg/kg dry	<0.20	**0.39**	<0.20	<0.20	<0.20
Oil & Grease (HEM)	EPA 9071B	mg/kg dry	<580	<660	<690	<590	<580
Chemical Oxygen Demand	PLUMB	mg/kg dry	**20,000**	**23,000**	**29,000**	**33,000**	**34,000**
Volatile Solids	PLUMB	% by Wt.	**2.5**	**1.4**	**1.4**	**2.5**	**1.4**
Total Organic Carbon	WALKLEY BLACK	mg/kg dry	**6,100**	**8,500**	**5,400**	**12,000**	**8,800**
Nutrient Kit	**Analysis Method**	**Units**					
Ammonia as N	EPA 350.1 Rev. 2.0	mg/kg dry	<1.0	<1.0	**110**	<1.0	<1.0
Total Kjeldahl Nitrogen	EPA 351.2 Rev. 2.0	mg/kg dry	**260**	**360**	**360**	**610**	**510**
Phosphorus	EPA 6010B	mg/kg dry	**260**	**350**	**320**	**390**	**370**
PCBs	**Analysis Method**	**Units**					
Aroclor-1016	EPA 8082	ug/kg dry	<92	<100	<110	<94	<91
Aroclor-1221	EPA 8082	ug/kg dry	<92	<100	<110	<94	<91
Aroclor-1232	EPA 8082	ug/kg dry	<92	<100	<110	<94	<91
Aroclor-1242	EPA 8082	ug/kg dry	<92	<100	<110	<94	<91
Aroclor-1248	EPA 8082	ug/kg dry	<92	<100	<110	<94	<91
Aroclor-1254	EPA 8082	ug/kg dry	<92	<100	<110	<94	<91
Aroclor-1260	EPA 8082	ug/kg dry	<92	<100	<110	<94	<91
PAHs	**Analysis Method**	**Units**					
2-Methylnaphthalene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Acenaphthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Acenaphthylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (b) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (g,h,i) perylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (k) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Chrysene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Dibenz (a,h) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluorene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Indeno (1,2,3-cd) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Naphthalene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Phenanthrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Metals Kit	**Analysis Method**	**Units**					
Arsenic	EPA 6020	mg/kg dry	**1.5**	**1.8**	**1.5**	**1.8**	**1.6**
Barium	EPA 6020	mg/kg dry	**19**	**25**	**23**	**40**	**24**
Cadmium	EPA 6020	mg/kg dry	<0.20	<0.20	<0.20	<0.20	<0.20
Chromium	EPA 6020	mg/kg dry	**9.7**	**12**	**12**	**16**	**12**
Copper	EPA 6020	mg/kg dry	**5.9**	**7.6**	**6.8**	**11**	**6.9**
Iron	EPA 6010B	mg/kg dry	**8,700**	**11,000**	**11,000**	**15,000**	**12,000**
Lead	EPA 6020	mg/kg dry	**5.2**	**6.5**	**6.1**	**11**	**5.7**
Manganese	EPA 6020	mg/kg dry	**290**	**370**	**320**	**310**	**380**
Mercury	EPA 7471A	mg/kg dry	<0.050	<0.050	<0.050	**0.068**	<0.050
Nickel	EPA 6020	mg/kg dry	**7.1**	**8**	**8.3**	**11**	**8.7**
Selenium	EPA 6020	mg/kg dry	<0.39	<0.38	<0.37	<0.40	<0.39
Silver	EPA 6020	mg/kg dry	<0.10	<0.10	<0.10	**0.15**	<0.10
Zinc	EPA 6020	mg/kg dry	**42**	**24**	**23**	**40**	**24**

Bold - Analysis is above detection limit
Italized - Analysis result is estimated

APPENDIX B

Table 1: Management Unit Bulk Sediment Chemical Analytical Results Summary Table

Management Unit			MU-4				
Parameter	Sample ID		DS-11-16	DS-11-17	DS-11-18	DS-11-19	DS-11-20
	Lab ID		T11H197-01	T11H197-02	T11H197-03	T11H197-04	T11H197-05
	Date Collected		08/15/11	08/15/11	08/15/11	08/16/11	08/16/11
	Sample Thickness (ft)		1.5	1.5	1.5	0.5	0.5
Physical Kit	**Analysis Method**	**Units**					
% Solids	ASTM D2974-87	% by Wt.	**60**	**56**	**62**	**82**	**79**
Specific Gravity	ASTM D854-91		**2.6**	**2.5**	**2.6**	**2.7**	**2.6**
In-Place Density	USACE, In-Place Density	g/mL	**1.9**	**1.6**	**1.5**	**2.3**	**2.7**
Organic Kit	**Analysis Method**	**Units**					
Cyanide (total)	EPA 9012B	mg/kg dry	**0.31**	**0.27**	**0.28**	<0.20	<0.20
Oil & Grease (HEM)	EPA 9071B	mg/kg dry	<700	<750	<680	<510	<530
Chemical Oxygen Demand	PLUMB	mg/kg dry	**30,000**	**51,000**	**28,000**	**2,000**	**4,500**
Volatile Solids	PLUMB	% by Wt.	**3.8**	**5.8**	**3.5**	**0.55**	**0.69**
Total Organic Carbon	WALKLEY BLACK	mg/kg dry	**16,000**	**24,000**	**15,000**	**1,800**	**2,700**
Nutrient Kit	**Analysis Method**	**Units**					
Ammonia as N	EPA 350.1 Rev. 2.0	mg/kg dry	**39**	**100**	**40**	<1.0	<1.0
Total Kjeldahl Nitrogen	EPA 351.2 Rev. 2.0	mg/kg dry	**580**	**1,200**	**470**	**44**	**50**
Phosphorus	EPA 6010B	mg/kg dry	**480**	**500**	**450**	**250**	**230**
PCBs	**Analysis Method**	**Units**					
Aroclor-1016	EPA 8082	ug/kg dry	<110	<120	<110	<81	<85
Aroclor-1221	EPA 8082	ug/kg dry	<110	<120	<110	<81	<85
Aroclor-1232	EPA 8082	ug/kg dry	<110	<120	<110	<81	<85
Aroclor-1242	EPA 8082	ug/kg dry	<110	<120	<110	<81	<85
Aroclor-1248	EPA 8082	ug/kg dry	<110	<120	<110	<81	<85
Aroclor-1254	EPA 8082	ug/kg dry	<110	<120	<110	<81	<85
Aroclor-1260	EPA 8082	ug/kg dry	<110	<120	<110	<81	<85
PAHs	**Analysis Method**	**Units**					
2-Methylnaphthalene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Acenaphthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Acenaphthylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (b) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (g,h,i) perylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (k) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Chrysene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Dibenz (a,h) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluorene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Indeno (1,2,3-cd) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Naphthalene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Phenanthrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Metals Kit	**Analysis Method**	**Units**					
Arsenic	EPA 6020	mg/kg dry	**2.1**	**2.6**	**1.9**	**1.1**	**1.1**
Barium	EPA 6020	mg/kg dry	**45**	**67**	**34**	**12**	**10**
Cadmium	EPA 6020	mg/kg dry	<0.20	**0.2**	<0.20	<0.20	<0.20
Chromium	EPA 6020	mg/kg dry	**18**	**20**	**16**	**9.7**	**8.2**
Copper	EPA 6020	mg/kg dry	**9.4**	**15**	**7.8**	**16**	**4**
Iron	EPA 6010B	mg/kg dry	**17,000**	**18,000**	**17,000**	**8,400**	**9,000**
Lead	EPA 6020	mg/kg dry	**9.1**	**15**	**6.5**	**2.6**	**2.6**
Manganese	EPA 6020	mg/kg dry	**540**	**750**	**450**	**120**	**140**
Mercury	EPA 7471A	mg/kg dry	<0.050	**0.091**	<0.050	<0.050	<0.050
Nickel	EPA 6020	mg/kg dry	**11**	**14**	**9.4**	**8.8**	**6**
Selenium	EPA 6020	mg/kg dry	<0.36	<0.37	<0.37	<0.38	<0.38
Silver	EPA 6020	mg/kg dry	**0.14**	**0.25**	**0.11**	<0.10	<0.10
Zinc	EPA 6020	mg/kg dry	**37**	**60**	**30**	**14**	**12**

Bold - Analysis is above detection limit
Italized - Analysis result is estimated

APPENDIX B

Table 1: Management Unit Bulk Sediment Chemical Analytical Results Summary Table

Management Unit			MU-5				
Parameter	Sample ID		DS-11-21	DS-11-22	DS-11-23	DS-11-24	DS-11-25
	Lab ID		T11H197-31	T11H197-32	T11H197-53	T11H197-54	T11H197-55
	Date Collected		08/17/11	08/17/11	08/20/11	08/20/11	08/20/11
	Sample Thickness (ft)		2	2	0.5	0.5	0.5
Physical Kit	**Analysis Method**	**Units**					
% Solids	ASTM D2974-87	% by Wt.	**44**	**52**	**31**	**38**	**28**
Specific Gravity	ASTM D854-91		**2.4**	**2.6**	**2.4**	**2.7**	**2.7**
In-Place Density	USACE, In-Place Density	g/mL	**1.7**	**1.7**	**1.5**	**1.6**	**1.5**
Organic Kit	**Analysis Method**	**Units**					
Cyanide (total)	EPA 9012B	mg/kg dry	<0.20	<0.20	<0.20	<0.20	<0.20
Oil & Grease (HEM)	EPA 9071B	mg/kg dry	<950	<800	<1400	<1100	<1500
Chemical Oxygen Demand	PLUMB	mg/kg dry	**33,000**	**61,000**	**110,000**	**81,000**	**89,000**
Volatile Solids	PLUMB	% by Wt.	**5.4**	**4.3**	**7.2**	**9.6**	**9.7**
Total Organic Carbon	WALKLEY BLACK	mg/kg dry	**20,000**	**23,000**	**45,000**	**28,000**	**59,000**
Nutrient Kit	**Analysis Method**	**Units**					
Ammonia as N	EPA 350.1 Rev. 2.0	mg/kg dry	**83**	**170**	**47**	**72**	**40**
Total Kjeldahl Nitrogen	EPA 351.2 Rev. 2.0	mg/kg dry	**1,100**	**1,100**	**2,400**	**2,000**	**2,300**
Phosphorus	EPA 6010B	mg/kg dry	**510**	**500**	**840**	**1,000**	**810**
PCBs	**Analysis Method**	**Units**					
Aroclor-1016	EPA 8082	ug/kg dry	<150	<130	<220	<180	<240
Aroclor-1221	EPA 8082	ug/kg dry	<150	<130	<220	<180	<240
Aroclor-1232	EPA 8082	ug/kg dry	<150	<130	<220	<180	<240
Aroclor-1242	EPA 8082	ug/kg dry	<150	<130	<220	<180	<240
Aroclor-1248	EPA 8082	ug/kg dry	<150	<130	<220	<180	<240
Aroclor-1254	EPA 8082	ug/kg dry	<150	<130	<220	<180	<240
Aroclor-1260	EPA 8082	ug/kg dry	<150	<130	<220	<180	<240
PAHs	**Analysis Method**	**Units**					
2-Methylnaphthalene	EPA 8270C	ug/kg dry	<370	<330	<540	<440	<590
Acenaphthene	EPA 8270C	ug/kg dry	<370	<330	<540	<440	<590
Acenaphthylene	EPA 8270C	ug/kg dry	<370	<330	<540	<440	<590
Anthracene	EPA 8270C	ug/kg dry	<370	<330	<540	<440	<590
Benzo (a) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (b) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (g,h,i) perylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (k) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Chrysene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Dibenz (a,h) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluorene	EPA 8270C	ug/kg dry	<370	<330	<540	<440	<590
Indeno (1,2,3-cd) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Naphthalene	EPA 8270C	ug/kg dry	<370	<330	<540	<440	<590
Phenanthrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Pyrene	EPA 8270C	ug/kg dry	<370	<330	<540	<440	<590
Metals Kit	**Analysis Method**	**Units**					
Arsenic	EPA 6020	mg/kg dry	**2.6**	**2.8**	**4.1**	**4.9**	**4.1**
Barium	EPA 6020	mg/kg dry	**82**	**77**	**140**	**190**	**140**
Cadmium	EPA 6020	mg/kg dry	**0.23**	<0.20	**0.32**	**0.37**	**0.26**
Chromium	EPA 6020	mg/kg dry	**23**	**23**	**29**	**42**	**35**
Copper	EPA 6020	mg/kg dry	**14**	**14**	**18**	**23**	**18**
Iron	EPA 6010B	mg/kg dry	**21,000**	**21,000**	**31,000**	**43,000**	**35,000**
Lead	EPA 6020	mg/kg dry	**15**	**14**	**23**	**27**	**20**
Manganese	EPA 6020	mg/kg dry	**670**	**830**	**1,400**	**1,600**	**1,500**
Mercury	EPA 7471A	mg/kg dry	**0.1**	**0.1**	**0.16**	**0.17**	**0.13**
Nickel	EPA 6020	mg/kg dry	**16**	**16**	**19**	**25**	**20**
Selenium	EPA 6020	mg/kg dry	<0.40	<0.37	<0.37	<0.39	<0.37
Silver	EPA 6020	mg/kg dry	**0.29**	**0.29**	**0.36**	**0.51**	**0.34**
Zinc	EPA 6020	mg/kg dry	**78**	**65**	**110**	**130**	**89**

Bold - Analysis is above detection limit
Italized - Analysis result is estimated

APPENDIX B

Table 1: Management Unit Bulk Sediment Chemical Analytical Results Summary Table

Management Unit			MU-6				
Parameter	Sample ID		DS-11-26	DS-11-27	DS-11-28	DS-11-29	DS-11-30
	Lab ID		T11H197-56	T11H197-57	T11H197-47	T11H197-46	T11H197-45
	Date Collected		08/20/11	08/20/11	08/18/11	08/18/11	08/18/11
	Sample Thickness (ft)		0.5	0.5	2	2	0.5
Physical Kit	**Analysis Method**	**Units**					
% Solids	ASTM D2974-87	% by Wt.	**52**	**61**	**60**	**75**	**69**
Specific Gravity	ASTM D854-91		**2.5**	**2.4**	**3**	**2.7**	**2.6**
In-Place Density	USACE, In-Place Density	g/mL	**1.5**	**1.7**	**1.5**	**1.6**	**1.8**
Organic Kit	**Analysis Method**	**Units**					
Cyanide (total)	EPA 9012B	mg/kg dry	**1.3**	<0.20	**0.2**	<0.20	<0.20
Oil & Grease (HEM)	EPA 9071B	mg/kg dry	<810	<690	<690	<560	<610
Chemical Oxygen Demand	PLUMB	mg/kg dry	**43,000**	***63,000***	**32,000**	**6,100**	**9,500**
Volatile Solids	PLUMB	% by Wt.	**5.8**	**3.4**	**6.2**	**1**	**4**
Total Organic Carbon	WALKLEY BLACK	mg/kg dry	**2,100**	**16,000**	**32,000**	**6,200**	**9,700**
Nutrient Kit	**Analysis Method**	**Units**					
Ammonia as N	EPA 350.1 Rev. 2.0	mg/kg dry	**50**	**13**	**87**	**2.4**	**20**
Total Kjeldahl Nitrogen	EPA 351.2 Rev. 2.0	mg/kg dry	**490**	***800***	**1,000**	**120**	**450**
Phosphorus	EPA 6010B	mg/kg dry	**570**	**400**	**570**	**220**	**330**
PCBs	**Analysis Method**	**Units**					
Aroclor-1016	EPA 8082	ug/kg dry	<130	<110	*<110*	<89	<97
Aroclor-1221	EPA 8082	ug/kg dry	<130	<110	*<110*	<89	<97
Aroclor-1232	EPA 8082	ug/kg dry	<130	<110	*<110*	<89	<97
Aroclor-1242	EPA 8082	ug/kg dry	<130	<110	***1,100***	<89	<97
Aroclor-1248	EPA 8082	ug/kg dry	<130	<110	*<110*	<89	<97
Aroclor-1254	EPA 8082	ug/kg dry	<130	<110	*<110*	<89	<97
Aroclor-1260	EPA 8082	ug/kg dry	<130	<110	***610***	<89	<97
PAHs	**Analysis Method**	**Units**					
2-Methylnaphthalene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Acenaphthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Acenaphthylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (b) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (g,h,i) perylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (k) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Chrysene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Dibenz (a,h) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluorene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Indeno (1,2,3-cd) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Naphthalene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Phenanthrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Metals Kit	**Analysis Method**	**Units**					
Arsenic	EPA 6020	mg/kg dry	**4.1**	**2.9**	**3.8**	**1.9**	**2**
Barium	EPA 6020	mg/kg dry	**150**	**91**	**120**	**26**	**62**
Cadmium	EPA 6020	mg/kg dry	<0.20	<0.20	**0.23**	<0.20	<0.20
Chromium	EPA 6020	mg/kg dry	**28**	**20**	**25**	**9.2**	**17**
Copper	EPA 6020	mg/kg dry	**20**	***16***	**21**	**5.7**	**12**
Iron	EPA 6010B	mg/kg dry	**28,000**	**18,000**	**27,000**	**11,000**	**17,000**
Lead	EPA 6020	mg/kg dry	**9.5**	**6.9**	**13**	**3**	**5.1**
Manganese	EPA 6020	mg/kg dry	**770**	**400**	**740**	**130**	**370**
Mercury	EPA 7471A	mg/kg dry	<0.050	<0.050	**0.067**	<0.050	<0.050
Nickel	EPA 6020	mg/kg dry	**20**	***15***	**20**	**6.5**	**12**
Selenium	EPA 6020	mg/kg dry	<0.39	<0.39	<0.37	<0.37	<0.40
Silver	EPA 6020	mg/kg dry	**0.18**	**0.12**	**0.23**	<0.10	<0.10
Zinc	EPA 6020	mg/kg dry	**65**	**36**	**70**	**15**	**29**

Bold - Analysis is above detection limit
Italized - Analysis result is estimated

APPENDIX B

Table 2: Placement Units Bulk Sediment Chemical Analytical Results Summary Table

Placement Unit			Superior Wisconsin Open Water (WOPU)				
Parameter	Sample ID		DS-11-31	DS-11-32	DS-11-33	DS-11-34	DS-11-35
	Lab ID		T11H197-39	T11H197-40	T11H197-41	T11H197-42	T11H197-43
	Date Collected		08/18/11	08/18/11	08/18/11	08/18/11	08/18/11
	Sample Thickness (ft)		0.5	0.5	0.5	0.5	0.5
Physical Kit	**Analysis Method**	**Units**					
% Solids	ASTM D2974-87	% by Wt.	**67**	**64**	**81**	**74**	**65**
Specific Gravity	ASTM D854-91		**2.2**	**2**	**2.2**	**2.5**	**2.5**
In-Place Density	USACE, In-Place Density	g/mL	**1.4**	**1.4**	**1.9**	**1.9**	**1.9**
Organic Kit	**Analysis Method**	**Units**					
Cyanide (total)	EPA 9012B	mg/kg dry	<0.20	**0.24**	<0.20	<0.20	<0.20
Oil & Grease (HEM)	EPA 9071B	mg/kg dry	<630	<650	<520	<560	<640
Chemical Oxygen Demand	PLUMB	mg/kg dry	<430	**7,800**	**2,600**	<380	**2,900**
Volatile Solids	PLUMB	% by Wt.	**2.2**	**4.5**	**0.31**	**0.34**	**1.3**
Total Organic Carbon	WALKLEY BLACK	mg/kg dry	**5,600**	**6,800**	<1,000	**11,000**	**9,600**
Nutrient Kit	**Analysis Method**	**Units**					
Ammonia as N	EPA 350.1 Rev. 2.0	mg/kg dry	**3.9**	**23**	<1.0	<1.0	**1.6**
Total Kjeldahl Nitrogen	EPA 351.2 Rev. 2.0	mg/kg dry	**200**	**610**	**33**	**40**	**210**
Phosphorus	EPA 6010B	mg/kg dry	**340**	**420**	**140**	**130**	**130**
PCBs	**Analysis Method**	**Units**					
Aroclor-1016	EPA 8082	ug/kg dry	<100	<100	<83	<90	<100
Aroclor-1221	EPA 8082	ug/kg dry	<100	<100	<83	<90	<100
Aroclor-1232	EPA 8082	ug/kg dry	<100	<100	<83	<90	<100
Aroclor-1242	EPA 8082	ug/kg dry	<100	<100	<83	<90	<100
Aroclor-1248	EPA 8082	ug/kg dry	<100	<100	<83	<90	<100
Aroclor-1254	EPA 8082	ug/kg dry	<100	<100	<83	<90	<100
Aroclor-1260	EPA 8082	ug/kg dry	<100	<100	<83	<90	<100
PAHs	**Analysis Method**	**Units**					
2-Methylnaphthalene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Acenaphthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Acenaphthylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (b) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (g,h,i) perylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (k) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Chrysene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Dibenz (a,h) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluorene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Indeno (1,2,3-cd) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Naphthalene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Phenanthrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Metals Kit	**Analysis Method**	**Units**					
Arsenic	EPA 6020	mg/kg dry	**1.8**	**2.5**	**0.87**	**0.89**	**1.0**
Barium	EPA 6020	mg/kg dry	**43**	**65**	**8.7**	**9.2**	**12**
Cadmium	EPA 6020	mg/kg dry	<0.20	**0.23**	<0.20	<0.20	<0.20
Chromium	EPA 6020	mg/kg dry	**16**	**20**	**4.2**	**4.4**	**6.8**
Copper	EPA 6020	mg/kg dry	**11**	**15**	**2.4**	**2.4**	**3**
Iron	EPA 6010B	mg/kg dry	**15,000**	**20,000**	**5,500**	**5,100**	**6,700**
Lead	EPA 6020	mg/kg dry	**6.1**	**9.1**	**1.5**	**1.7**	**2.0**
Manganese	EPA 6020	mg/kg dry	**230**	**290**	**72**	**81**	**91**
Mercury	EPA 7471A	mg/kg dry	<0.050	<0.050	<0.050	<0.050	<0.050
Nickel	EPA 6020	mg/kg dry	**10**	**13**	**3.1**	**3.2**	**3.8**
Selenium	EPA 6020	mg/kg dry	<0.38	<0.39	<0.38	<0.39	<0.38
Silver	EPA 6020	mg/kg dry	<0.10	**0.13**	<0.10	<0.10	<0.10
Zinc	EPA 6020	mg/kg dry	**27**	**37**	**7.1**	**7.5**	**8.4**

Bold - Analysis is above detection limit
Italized - Analysis result is estimated

APPENDIX B

Table 2: Placement Units Bulk Sediment Chemical Analytical Results Summary Table

Placement Unit			Duluth Minnesota Open Water (MOPU)				
Parameter	Sample ID		DS-11-36	DS-11-37	DS-11-38	DS-11-39	DS-11-40
	Lab ID		T11H197-33	T11H197-34	T11H197-35	T11H197-36	T11H197-37
	Date Collected		08/18/11	08/18/11	08/18/11	08/18/11	08/18/11
	Sample Thickness (ft)		0.5	0.5	0.5	0.5	0.5
Physical Kit	**Analysis Method**	**Units**					
% Solids	ASTM D2974-87	% by Wt.	**66**	**68**	**66**	**49**	**58**
Specific Gravity	ASTM D854-91		**2.5**	**2.4**	**2.2**	**2**	**2.1**
In-Place Density	USACE, In-Place Density	g/mL	**1.1**	**1.2**	**1.4**	**1.4**	**1.5**
Organic Kit	**Analysis Method**	**Units**					
Cyanide (total)	EPA 9012B	mg/kg dry	<0.20	<0.20	<0.20	<0.20	<0.20
Oil & Grease (HEM)	EPA 9071B	mg/kg dry	<630	<620	<630	<850	<720
Chemical Oxygen Demand	PLUMB	mg/kg dry	**22,000**	**10,000**	**27,000**	**13,000**	**34,000**
Volatile Solids	PLUMB	% by Wt.	**2.2**	**1.5**	**2.8**	**1.6**	**3.4**
Total Organic Carbon	WALKLEY BLACK	mg/kg dry	**19,000**	**9,100**	**15,000**	**4,500**	**17,000**
Nutrient Kit	**Analysis Method**	**Units**					
Ammonia as N	EPA 350.1 Rev. 2.0	mg/kg dry	**8.3**	**1.9**	**6.4**	<1.0	<1.0
Total Kjeldahl Nitrogen	EPA 351.2 Rev. 2.0	mg/kg dry	**720**	**170**	**340**	**300**	**460**
Phosphorus	EPA 6010B	mg/kg dry	**480**	**430**	**400**	**420**	**450**
PCBs	**Analysis Method**	**Units**					
Aroclor-1016	EPA 8082	ug/kg dry	<100	<99	<100	<140	<120
Aroclor-1221	EPA 8082	ug/kg dry	<100	<99	<100	<140	<120
Aroclor-1232	EPA 8082	ug/kg dry	<100	<99	<100	<140	<120
Aroclor-1242	EPA 8082	ug/kg dry	<100	<99	<100	<140	<120
Aroclor-1248	EPA 8082	ug/kg dry	<100	<99	<100	<140	<120
Aroclor-1254	EPA 8082	ug/kg dry	<100	<99	<100	<140	<120
Aroclor-1260	EPA 8082	ug/kg dry	<100	<99	<100	<140	<120
PAHs	**Analysis Method**	**Units**					
2-Methylnaphthalene	EPA 8270C	ug/kg dry	<330	<330	<330	<340	<330
Acenaphthene	EPA 8270C	ug/kg dry	<330	<330	<330	<340	<330
Acenaphthylene	EPA 8270C	ug/kg dry	<330	<330	<330	<340	<330
Anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<340	<330
Benzo (a) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (b) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (g,h,i) perylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (k) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Chrysene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Dibenz (a,h) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluorene	EPA 8270C	ug/kg dry	<330	<330	<330	<340	<330
Indeno (1,2,3-cd) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Naphthalene	EPA 8270C	ug/kg dry	<330	<330	<330	<340	<330
Phenanthrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<340	<330
Metals Kit	**Analysis Method**	**Units**					
Arsenic	EPA 6020	mg/kg dry	**2.6**	**2.0**	**2.1**	**2.1**	**2.0**
Barium	EPA 6020	mg/kg dry	**54**	**34**	**38**	**30**	**40**
Cadmium	EPA 6020	mg/kg dry	**0.29**	<0.20	**0.27**	<0.20	**0.23**
Chromium	EPA 6020	mg/kg dry	**18**	**15**	**15**	**14**	**16**
Copper	EPA 6020	mg/kg dry	**17**	**11**	**14**	**9**	**13**
Iron	EPA 6010B	mg/kg dry	**17,000**	**14,000**	**14,000**	**14,000**	**16,000**
Lead	EPA 6020	mg/kg dry	**9.3**	**7.1**	**9.4**	**5.7**	**9.2**
Manganese	EPA 6020	mg/kg dry	**300**	**240**	**250**	**330**	**240**
Mercury	EPA 7471A	mg/kg dry	<0.050	<0.050	<0.050	<0.050	<0.050
Nickel	EPA 6020	mg/kg dry	**13**	**10**	**11**	**9.4**	**12**
Selenium	EPA 6020	mg/kg dry	<0.37	<0.37	<0.36	<0.38	<0.37
Silver	EPA 6020	mg/kg dry	**0.12**	**0.14**	**0.1**	<0.10	**0.11**
Zinc	EPA 6020	mg/kg dry	**39**	**29**	**33**	**25**	**32**

Bold - Analysis is above detection limit
Italized - Analysis result is estimated

APPENDIX B

Table 2: Placement Units Bulk Sediment Chemical Analytical Results Summary Table

Placement Unit			Hearding Island (HIPU)				
Parameter	Sample ID		DS-11-41	DS-11-42	DS-11-43	DS-11-44	DS-11-45
	Lab ID		T11H197-22	T11H197-23	T11H197-24	T11H197-25	T11H197-26
	Date Collected		08/17/11	08/17/11	08/17/11	08/17/11	08/17/11
	Sample Thickness (ft)		0.5	0.5	0.5	0.5	0.5
Physical Kit	**Analysis Method**	**Units**					
% Solids	ASTM D2974-87	% by Wt.	**36**	**35**	**39**	**34**	**36**
Specific Gravity	ASTM D854-91		**2.1**	**2.2**	**2**	**2.4**	**2.5**
In-Place Density	USACE, In-Place Density	g/mL	**1.3**	**1.3**	**1.6**	**1.3**	**1.7**
Organic Kit	**Analysis Method**	**Units**					
Cyanide (total)	EPA 9012B	mg/kg dry	**2.1**	**0.34**	**0.37**	**0.33**	**0.28**
Oil & Grease (HEM)	EPA 9071B	mg/kg dry	<1,200	<1,200	<1,100	<1,200	<1,200
Chemical Oxygen Demand	PLUMB	mg/kg dry	**210,000**	**140,000**	**96,000**	**92,000**	**72,000**
Volatile Solids	PLUMB	% by Wt.	**12**	**9.7**	**9**	**5.4**	**11**
Total Organic Carbon	WALKLEY BLACK	mg/kg dry	**61,000**	**40,000**	**27,000**	**37,000**	**37,000**
Nutrient Kit	**Analysis Method**	**Units**					
Ammonia as N	EPA 350.1 Rev. 2.0	mg/kg dry	**15**	**37**	**32**	**13**	**57**
Total Kjeldahl Nitrogen	EPA 351.2 Rev. 2.0	mg/kg dry	**2,300**	**2,300**	**1,200**	**1,200**	**2,600**
Phosphorus	EPA 6010B	mg/kg dry	**660**	**890**	**830**	**880**	**1,100**
PCBs	**Analysis Method**	**Units**					
Aroclor-1016	EPA 8082	ug/kg dry	<190	*<190*	<170	<200	*<180*
Aroclor-1221	EPA 8082	ug/kg dry	<190	*<190*	<170	<200	*<180*
Aroclor-1232	EPA 8082	ug/kg dry	<190	*<190*	<170	<200	*<180*
Aroclor-1242	EPA 8082	ug/kg dry	<190	*<190*	<170	<200	*<180*
Aroclor-1248	EPA 8082	ug/kg dry	<190	*<190*	<170	<200	*<180*
Aroclor-1254	EPA 8082	ug/kg dry	<190	*<190*	<170	<200	*<180*
Aroclor-1260	EPA 8082	ug/kg dry	<190	*<190*	<170	<200	*<180*
PAHs	**Analysis Method**	**Units**					
2-Methylnaphthalene	EPA 8270C	ug/kg dry	<460	<480	<430	<490	<450
Acenaphthene	EPA 8270C	ug/kg dry	<460	<480	<430	<490	<450
Acenaphthylene	EPA 8270C	ug/kg dry	<460	<480	<430	<490	<450
Anthracene	EPA 8270C	ug/kg dry	<460	<480	<430	<490	<450
Benzo (a) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (b) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (g,h,i) perylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (k) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Chrysene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Dibenz (a,h) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluorene	EPA 8270C	ug/kg dry	<460	<480	<430	<490	<450
Indeno (1,2,3-cd) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Naphthalene	EPA 8270C	ug/kg dry	<460	<480	<430	<490	<450
Phenanthrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Pyrene	EPA 8270C	ug/kg dry	<460	<480	<430	<490	<450
Metals Kit	**Analysis Method**	**Units**					
Arsenic	EPA 6020	mg/kg dry	**3.6**	**5.0**	**4.3**	**5.2**	**6.0**
Barium	EPA 6020	mg/kg dry	**100**	**190**	**180**	**180**	**180**
Cadmium	EPA 6020	mg/kg dry	**0.33**	**0.48**	**0.39**	**0.5**	**0.44**
Chromium	EPA 6020	mg/kg dry	**29**	**40**	**38**	**38**	**38**
Copper	EPA 6020	mg/kg dry	**19**	**23**	**21**	**24**	***23***
Iron	EPA 6010B	mg/kg dry	**25,000**	**35,000**	**37,000**	**35,000**	**41,000**
Lead	EPA 6020	mg/kg dry	**22**	**30**	**26**	**32**	**29**
Manganese	EPA 6020	mg/kg dry	**1,100**	**1,900**	**1,400**	**1,800**	**2,300**
Mercury	EPA 7471A	mg/kg dry	**0.15**	**0.22**	**0.16**	**0.2**	**0.19**
Nickel	EPA 6020	mg/kg dry	**18**	**24**	**23**	**25**	***24***
Selenium	EPA 6020	mg/kg dry	<0.39	<0.37	<0.36	**0.37**	**0.42**
Silver	EPA 6020	mg/kg dry	**0.29**	**0.43**	**0.37**	**0.42**	**0.32**
Zinc	EPA 6020	mg/kg dry	**92**	**150**	**130**	**150**	**140**

Bold - Analysis is above detection limit
Italized - Analysis result is estimated

APPENDIX B

Table 2: Placement Units Bulk Sediment Chemical Analytical Results Summary Table

Placement Unit			Interstate Island (IIPU)				
Parameter	Sample ID		DS-11-46	DS-11-47	DS-11-48	DS-11-49	DS-11-50
	Lab ID		T11H197-28	T11H197-29	T11H197-30	T11H197-48	T11H197-49
	Date Collected		08/17/11	08/17/11	08/17/11	08/18/11	08/18/11
	Sample Thickness (ft)		0.5	0.5	0.5	0.5	0.5
Physical Kit	**Analysis Method**	**Units**					
% Solids	ASTM D2974-87	% by Wt.	**46**	**38**	**40**	**43**	**39**
Specific Gravity	ASTM D854-91		**2**	**2.7**	**2.2**	**1.9**	**2.8**
In-Place Density	USACE, In-Place Density	g/mL	**1.7**	**1.6**	**1.7**	**1.4**	**1.3**
Organic Kit	**Analysis Method**	**Units**					
Cyanide (total)	EPA 9012B	mg/kg dry	**0.21**	**0.24**	**0.22**	<0.20	<0.20
Oil & Grease (HEM)	EPA 9071B	mg/kg dry	<910	<1,100	<1,000	<980	<1,100
Chemical Oxygen Demand	PLUMB	mg/kg dry	**58,000**	**77,000**	**78,000**	**70,000**	**83,000**
Volatile Solids	PLUMB	% by Wt.	**10**	**8.5**	**8.6**	**6.7**	**7.8**
Total Organic Carbon	WALKLEY BLACK	mg/kg dry	**30,000**	**44,000**	**32,000**	**28,000**	**29,000**
Nutrient Kit	**Analysis Method**	**Units**					
Ammonia as N	EPA 350.1 Rev. 2.0	mg/kg dry	**53**	**52**	**44**	**53**	**90**
Total Kjeldahl Nitrogen	EPA 351.2 Rev. 2.0	mg/kg dry	**800**	**1,100**	**2,600**	**1,900**	**1,300**
Phosphorus	EPA 6010B	mg/kg dry	**690**	**780**	**730**	**780**	**740**
PCBs	**Analysis Method**	**Units**					
Aroclor-1016	EPA 8082	ug/kg dry	<140	<180	<170	<160	<170
Aroclor-1221	EPA 8082	ug/kg dry	<140	<180	<170	<160	<170
Aroclor-1232	EPA 8082	ug/kg dry	<140	<180	<170	<160	<170
Aroclor-1242	EPA 8082	ug/kg dry	<140	<180	<170	<160	<170
Aroclor-1248	EPA 8082	ug/kg dry	<140	<180	<170	<160	<170
Aroclor-1254	EPA 8082	ug/kg dry	<140	<180	<170	<160	<170
Aroclor-1260	EPA 8082	ug/kg dry	<140	<180	<170	<160	<170
PAHs	**Analysis Method**	**Units**					
2-Methylnaphthalene	EPA 8270C	ug/kg dry	<360	<430	<410	<380	<420
Acenaphthene	EPA 8270C	ug/kg dry	<360	<430	<410	<380	<420
Acenaphthylene	EPA 8270C	ug/kg dry	<360	<430	<410	<380	<420
Anthracene	EPA 8270C	ug/kg dry	<360	<430	<410	<380	<420
Benzo (a) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (a) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (b) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (g,h,i) perylene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Benzo (k) fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Chrysene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Dibenz (a,h) anthracene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluoranthene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Fluorene	EPA 8270C	ug/kg dry	<360	<430	<410	<380	<420
Indeno (1,2,3-cd) pyrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Naphthalene	EPA 8270C	ug/kg dry	<360	<430	<410	<380	<420
Phenanthrene	EPA 8270C	ug/kg dry	<330	<330	<330	<330	<330
Pyrene	EPA 8270C	ug/kg dry	<360	<430	<410	<380	<420
Metals Kit	**Analysis Method**	**Units**					
Arsenic	EPA 6020	mg/kg dry	**3.0**	**3.2**	**3.1**	**3.3**	**2.9**
Barium	EPA 6020	mg/kg dry	**130**	**140**	**130**	**130**	**110**
Cadmium	EPA 6020	mg/kg dry	**0.31**	**0.34**	**0.35**	**0.32**	**0.3**
Chromium	EPA 6020	mg/kg dry	**31**	**34**	**34**	**33**	**28**
Copper	EPA 6020	mg/kg dry	**18**	**19**	**19**	**18**	**17**
Iron	EPA 6010B	mg/kg dry	**27,000**	**31,000**	**28,000**	**34,000**	**27,000**
Lead	EPA 6020	mg/kg dry	**18**	**19**	**20**	**18**	**17**
Manganese	EPA 6020	mg/kg dry	**860**	**820**	**800**	**880**	**690**
Mercury	EPA 7471A	mg/kg dry	**0.12**	**0.14**	**0.14**	**0.15**	**0.11**
Nickel	EPA 6020	mg/kg dry	**21**	**21**	**21**	**21**	**18**
Selenium	EPA 6020	mg/kg dry	<0.38	<0.38	<0.39	<0.37	<0.39
Silver	EPA 6020	mg/kg dry	**0.27**	**0.29**	**0.27**	**0.25**	**0.21**
Zinc	EPA 6020	mg/kg dry	**100**	**110**	**110**	**110**	**96**

Bold - Analysis is above detection limit
Italized - Analysis result is estimated

APPENDIX B

Table 3: Composite Samples Nutrient Kit Analytical Results Summary Table

Management Unit or Placement Unit			Placement Unit				Management Unit					
Parameter	Sample ID		DS-11-MO PU	DS-11-WO PU	DS-11-HI PU	DS-11-II PU	DS-11-MU1	DS-11-MU2	DS-11-MU3	DS-11-MU4	DS-11-MU5	DS-11-MU6
	Lab ID		T11H197-38	T11H197-44	T11H197-27	T11H197-50	T11H197-66	T11H197-12	T11H197-20	T11H197-06	T11H197-58	T11H197-60
	Date Collected		08/18/11	08/18/11	08/17/11	08/18/11	08/20/11	08/15/11	08/17/11	08/16/11	08/20/11	08/20/11
	Sample Thickness (ft)		**0.5**	**0.5**	**0.5**	**0.5**	**0.5**	**2.0 - 2.5**	**0.5 - 1.8**	**0.5 - 1.5**	**0.5 - 2.0**	**0.5**
Composite Sample Nutrient Kit	**Analysis Method**	**Units**										
Ammonia as N	EPA 350.1	mg/kg dry	**3.7**	<1.0	**13**	**91**	**24**	**59**	**30**	**44**	**120**	**67**
Total Kjeldahl Nitrogen	EPA 351.2	mg/kg dry	**170**	**18**	**2,200**	**1,900**	**1,700**	**850**	**560**	**350**	**2,300**	**1,100**
Phosphorus	EPA 365.2	mg/kg dry	**480**	**160**	**950**	**750**	**730**	**370**	**370**	**390**	**760**	**430**
Average Bulk Nutrient Kit	**Analysis Method**	**Units**										
Ammonia as N	EPA 350.1	mg/kg dry	**3.3**	**5.7**	**31**	**58**	**32**	**66**	**22**	**36**	**82**	**34**
Total Kjeldahl Nitrogen	EPA 351.2	mg/kg dry	**398**	**219**	**1,920**	**1,540**	**2,220**	**984**	**420**	**469**	**1,780**	**572**
Phosphorus	EPA 365.2	mg/kg dry	**436**	**232**	**872**	**744**	**732**	**570**	**338**	**382**	**732**	**418**

Bold - Analysis is above detection limit

APPENDIX B

Table 4: Managment Unit Elutriate Sediment Chemical Analytical Results Summary Table

Parameter	Sample ID		MU-11-01	MU-11-02	MU-11-03	MU-11-04	MU-11-05	MU-11-06
	Lab ID		T11H197-52	T11H197-16	T11H197-21	T11H197-15	T11H197-59	T11H197-51
	Date Collected		8/19/2011	8/16/2011	8/17/2011	8/16/2011	8/20/2011	8/18/2011
	Sample Thickness (ft)		0.5	2.0 - 2.5	0.5 - 1.8	0.5 - 1.5	0.5 - 2.0	0.5
Nutrient Kit	**Analysis Method**	**Units**						
Ammonia as N	EPA 350.1	mg/L	**0.6**	**1.2**	**1.5**	***1.6***	**0.71**	**0.63**
Total Kjeldahl Nitrogen	EPA 351.2	mg/L	**1.9**	**2.3**	**2.9**	**2.2**	**2**	**1.5**
Phosphorus	EPA 365.2	mg/L	**0.062**	**0.2**	**0.11**	**0.13**	**0.11**	**0.12**
Metals Kit	**Analysis Method**	**Units**						
Arsenic	EPA 6020	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Barium	EPA 6020	ug/L	<100	<100	<100	<100	<100	<100
Cadmium	EPA 6020	ug/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
Chromium	EPA 6020	ug/L	<10	**10**	<10	<10	<10	<10
Copper	EPA 6020	ug/L	**5.3**	**14**	**5.2**	**10**	**4.4**	**7.2**
Iron	EPA 6010B	ug/L	**2,900**	**7,600**	**3,200**	**4,800**	**3,600**	**5,600**
Lead	EPA 6020	ug/L	<3.0	**11**	**3.6**	**5.8**	**3.4**	**4.2**
Manganese	EPA 6020	ug/L	**1,100**	**1,400**	**2,900**	**2,400**	**2,500**	**2,700**
Mercury	EPA 7470	ug/L	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
Nickel	EPA 6020	ug/L	<20	<20	<20	<20	<20	<20
Selenium	EPA 6020	ug/L	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Silver	EPA 6020	ug/L	<0.20	**0.3**	<0.20	**0.2**	<0.20	<0.20
Zinc	EPA 6020	ug/L	<150	<150	<150	<150	<150	<150

Bold - Analysis is above detection limit

Italized - Analysis result is estimated

This analysis was only performed on the Management Units and not on the Placement Units

APPENDIX B

Table 5: Duluth-Superior Harbor Sediment Grain Size Analysis Summary Table

Location	Sample ID	Lab ID	Date Collected	Analysis Method	% Moisture	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines
MU-1	DS-11-01	T11H197-61	08/20/11	ASTM D-421, D-422 and D2216	67.5	0.0	28.7	54.9	16.4
	DS-11-02	T11H197-62	08/20/11	ASTM D-421, D-422 and D2216	59.8	0.0	25.7	30.2	44.1
	DS-11-03	T11H197-63	08/20/11	ASTM D-421, D-422 and D2216	61.8	0.0	25.8	31.4	42.8
	DS-11-04	T11H197-64	08/20/11	ASTM D-421, D-422 and D2216	57.2	0.0	19.1	36.7	44.2
	DS-11-05	T11H197-65	08/20/11	ASTM D-421, D-422 and D2216	49.3	0.0	12.4	42.7	44.9
MU-2	DS-11-06	T11H197-10	08/16/11	ASTM D-421, D-422 and D2216	39.2	0.0	36.3	57.6	6.1
	DS-11-07	T11H197-11	08/16/11	ASTM D-421, D-422 and D2216	37	0.0	33.4	29.3	37.3
	DS-11-08	T11H197-09	08/15/11	ASTM D-421, D-422 and D2216	59.4	0.0	7.7	74.1	18.2
	DS-11-09	T11H197-08	08/15/11	ASTM D-421, D-422 and D2216	53.1	0.0	26.7	47.5	25.8
	DS-11-10	T11H197-07	08/15/11	ASTM D-421, D-422 and D2216	46.3	0.0	28.0	37.7	34.3
MU-3	DS-11-11	T11H197-13	08/16/11	ASTM D-421, D-422 and D2216	27.5	0.0	6.0	80.2	13.8
	DS-11-12	T11H197-14	08/16/11	ASTM D-421, D-422 and D2216	36.5	0.0	5.5	81.1	13.4
	DS-11-13	T11H197-17	08/17/11	ASTM D-421, D-422 and D2216	38.8	0.0	9.5	83.9	6.6
	DS-11-14	T11H197-18	08/17/11	ASTM D-421, D-422 and D2216	29.5	0.0	12.5	72.3	15.2
	DS-11-15	T11H197-19	08/17/11	ASTM D-421, D-422 and D2216	27.2	0	20.3	55.6	24.1

APPENDIX B

Table 5: Duluth-Superior Harbor Sediment Grain Size Analysis Summary Table

Location	Sample ID	Lab ID	Date Collected	Analysis Method	% Moisture	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines
MU-4	DS-11-16	T11H197-01	08/15/11	ASTM D-421, D-422 and D2216	40.3	0	5.7	76.6	17.7
	DS-11-17	T11H197-02	08/15/11	ASTM D-421, D-422 and D2216	44.3	0	11.3	58.7	30
	DS-11-18	T11H197-03	08/15/11	ASTM D-421, D-422 and D2216	38.5	0	7.1	62	30.9
	DS-11-19	T11H197-04	08/16/11	ASTM D-421, D-422 and D2216	17.7	0	16.2	83.2	0.6
	DS-11-20	T11H197-05	08/16/11	ASTM D-421, D-422 and D2216	21.4	0	2.5	96	1.5
MU-5	DS-11-21	T11H197-31	08/17/11	ASTM D-421, D-422 and D2216	55.9	0	43.3	47.7	9
	DS-11-22	T11H197-32	08/17/11	ASTM D-421, D-422 and D2216	47.7	0	31.2	62.2	6.6
	DS-11-23	T11H197-53	08/20/11	ASTM D-421, D-422 and D2216	69.3	0	31.2	40.1	28.7
	DS-11-24	T11H197-54	08/20/11	ASTM D-421, D-422 and D2216	62.1	0	39.5	36.9	23.6
	DS-11-25	T11H197-55	08/20/11	ASTM D-421, D-422 and D2216	72.1	0	44.3	29.1	26.6
MU-6	DS-11-26	T11H197-56	08/20/11	ASTM D-421, D-422 and D2216	48.3	0	32.2	36.2	31.6
	DS-11-27	T11H197-57	08/20/11	ASTM D-421, D-422 and D2216	39.3	0	15.5	59.8	24.7
	DS-11-28	T11H197-47	08/18/11	ASTM D-421, D-422 and D2216	39.7	0.3	44.3	25.2	30.2
	DS-11-29	T11H197-46	08/18/11	ASTM D-421, D-422 and D2216	24.7	0	8.3	87.7	4
	DS-11-30	T11H197-45	08/18/11	ASTM D-421, D-422 and D2216	31.4	0	8.1	80.3	11.6

APPENDIX B

Table 5: Duluth-Superior Harbor Sediment Grain Size Analysis Summary Table

Location	Sample ID	Lab ID	Date Collected	Analysis Method	% Moisture	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines
Superior Wisconsin Open Water	DS-11-31	T11H197-39	08/18/11	ASTM D-421, D-422 and D2216	33.1	0	11.2	85.6	3.2
	DS-11-32	T11H197-40	08/18/11	ASTM D-421, D-422 and D2216	35.6	0	16.2	54.6	29.2
	DS-11-33	T11H197-41	08/18/11	ASTM D-421, D-422 and D2216	19.2	0	13.9	79.6	6.5
	DS-11-34	T11H197-42	08/18/11	ASTM D-421, D-422 and D2216	25.6	0	6.1	92.9	1
	DS-11-35	T11H197-43	08/18/11	ASTM D-421, D-422 and D2216	34.6	0	6.8	85.1	8.1
Duluth Minnesota Open Water	DS-11-36	T11H197-33	08/18/11	ASTM D-421, D-422 and D2216	33.5	0	2.1	45.7	52.2
	DS-11-37	T11H197-34	08/18/11	ASTM D-421, D-422 and D2216	32.1	2.6	13.5	63.6	20.3
	DS-11-38	T11H197-35	08/18/11	ASTM D-421, D-422 and D2216	33.9	0	14.3	63.1	22.6
	DS-11-39	T11H197-36	08/18/11	ASTM D-421, D-422 and D2216	51	0	10.6	59.3	30.1
	DS-11-40	T11H197-37	08/18/11	ASTM D-421, D-422 and D2216	42.2	0	2	54.9	43.1
Hearding Island	DS-11-41	T11H197-22	08/17/11	ASTM D-421, D-422 and D2216	63.9	0	36.6	38.7	24.7
	DS-11-42	T11H197-23	08/17/11	ASTM D-421, D-422 and D2216	65.4	0	23.5	48.6	27.9
	DS-11-43	T11H197-24	08/17/11	ASTM D-421, D-422 and D2216	61.4	0	26.6	52.9	20.5
	DS-11-44	T11H197-25	08/17/11	ASTM D-421, D-422 and D2216	66.2	0	29.1	48.6	22.3
	DS-11-45	T11H197-26	08/17/11	ASTM D-421, D-422 and D2216	63.8	0	41.3	35.3	23.4

APPENDIX B

Table 5: Duluth-Superior Harbor Sediment Grain Size Analysis Summary Table

Location	Sample ID	Lab ID	Date Collected	Analysis Method	% Moisture	% Coarse Sand	% Medium Sand	% Fine Sand	% Fines
Interstate Island	DS-11-46	T11H197-28	08/17/11	ASTM D-421, D-422 and D2216	53.9	0	38.7	33.5	27.8
	DS-11-47	T11H197-29	08/17/11	ASTM D-421, D-422 and D2216	62.1	0	43	37.1	19.9
	DS-11-48	T11H197-30	08/17/11	ASTM D-421, D-422 and D2216	60	1.2	36.3	37.6	24.9
	DS-11-49	T11H197-48	08/18/11	ASTM D-421, D-422 and D2216	57.3	1.2	43.2	20.6	35
	DS-11-50	T11H197-49	08/18/11	ASTM D-421, D-422 and D2216	60.6	0	17.8	47.6	34.6

APPENDIX B

Table 6: Bulk Sediments PCB Congener Analytical Results Summary Table

Management Unit or Placement Unit					Placement Units			
Parameter	Sample ID				DS-11-MOPU	DS-11-WOPU	DS-11-HIPU	DS-11-IIPU
	Lab ID				T11H197-38	T11H197-44	T11H197-27	T11H197-50
	Date Collected				08/18/11	08/18/11	08/17/11	08/18/11
	Sample Thickness (ft)				**0.5**	**0.5**	**0.5**	**0.5**
Percent Moisture			D2216	wt%	**26**	**20**	**70**	**61**
PCB Congener	**Congener Number**	**CAS Number**	**Analysis Method**	**Units**				
Total PCBs (ND=MDL)				ppb	2.93	2.71	7.32	5.68
Total PCBs (ND=0)				ppb	0.00	0.00	0.00	0.00
2,4´-DiCB	**8**	**34883-43-7**	SW8082CON	µg/Kg-dry	<0.21 U	<0.19 U	<0.52 U	<0.41 U
2,2´,5-TrCB	**18**	**37680-65-2**	SW8082CON	µg/Kg-dry	<0.15 U	<0.14 U	<0.38 U	<0.30 U
2,4,4´-TrCB	**28**	**7012-37-5**	SW8082CON	µg/Kg-dry	<0.066 U	<0.061 U	<0.16 U	<0.13 U
2,2´,3,5´-TeCB	**44**	**41464-39-5**	SW8082CON	µg/Kg-dry	<0.13 U	<0.12 U	<0.33 U	<0.25 U
2,2´,4,5´-TeCB	**49**	**41464-40-8**	SW8082CON	µg/Kg-dry	<0.14 U	<0.13 U	<0.36 U	<0.28 U
2,2´,5,5´-TeCB	**52**	**35693-99-3**	SW8082CON	µg/Kg-dry	<0.17 U	<0.16 U	<0.43 U	<0.33 U
2,3´,4,4´-TeCB	**66**	**32598-10-0**	SW8082CON	µg/Kg-dry	<0.11 U	<0.098 U	<0.26 U	<0.20 U
3,3´,4,4´-TeCB	**77**	**32598-13-3**	SW8082CON	µg/Kg-dry	<0.18 U	<0.16 U	<0.44 U	<0.34 U
2,2´,3,4,5´-PeCB	**87**	**38380-02-8**	SW8082CON	µg/Kg-dry	<0.078 U	<0.072 U	<0.19 U	<0.15 U
2,2´,4,5,5´-PeCB	**101**	**37680-73-2**	SW8082CON	µg/Kg-dry	<0.15 U	<0.14 U	<0.37 U	<0.29 U
2,3,3´,4,4´-PeCB	**105**	**32598-14-4**	SW8082CON	µg/Kg-dry	<0.083 U	<0.077 U	<0.21 U	<0.16 U
2,3´,4,4´,5-PeCB	**118**	**31508-00-6**	SW8082CON	µg/Kg-dry	<0.12 U	<0.12 U	<0.31 U	<0.24 U
3,3´,4,4´,5-PeCB	**126**	**57465-28-8**	SW8082CON	µg/Kg-dry	<0.12 U	<0.11 U	<0.30 U	<0.24 U
2,2´,3,3´,4,4´-HxCB	**128**	**38380-07-3**	SW8082CON	µg/Kg-dry	<0.068 U	<0.063 U	<0.17 U	<0.13 U
2,2´,3,4,4´,5´-HxCB	**138**	**35065-28-2**	SW8082CON	µg/Kg-dry	<0.083 U	<0.077 U	<0.21 U	<0.16 U
2,2´,4,4´,5,5´-HxCB	**153**	**35065-27-1**	SW8082CON	µg/Kg-dry	<0.13 U	<0.12 U	<0.33 U	<0.25 U
3,3´,4,4´,5,5´-HxCB	**169**	**32774-16-6**	SW8082CON	µg/Kg-dry	<0.15 U	<0.14 U	<0.37 U	<0.28 U
2,2´,3,3´,4,4´,5-HpCB	**170**	**35065-30-6**	SW8082CON	µg/Kg-dry	<0.074 U	<0.068 U	<0.18 U	<0.14 U
2,2´,3,4,4´,5,5´-HpCB	**180**	**35065-29-3**	SW8082CON	µg/Kg-dry	<0.086 U	<0.079 U	<0.21 U	<0.17 U
2,2´,3,4,4´,5´,6-HpCB	**183**	**52663-69-1**	SW8082CON	µg/Kg-dry	<0.13 U	<0.12 U	<0.32 U	<0.25 U
2,2´,3,4,4´,6,6´-HpCB	**184**	**74472-48-3**	SW8082CON	µg/Kg-dry	<0.11 U	<0.10 U	<0.28 U	<0.21 U
2,2´,3,4´,5,5´,6-HpCB	**187**	**52663-68-0**	SW8082CON	µg/Kg-dry	<0.13 U	<0.12 U	<0.32 U	<0.25 U
2,2´,3,3´,4,4´,5,6-OcCB	**195**	**52663-78-2**	SW8082CON	µg/Kg-dry	<0.091 U	<0.084 U	<0.23 U	<0.18 U
2,2',3,3',4,4',5,5',6-NoCB	**206**	**40186-72-9**	SW8082CON	µg/Kg-dry	<0.080 U	<0.074 U	<0.20 U	<0.16 U
DeCB	**209**	**2051-24-3**	SW8082CON	µg/Kg-dry	<0.095 U	<0.088 U	<0.24 U	<0.18 U

Bold - Analysis is above machine detection limit (MDL)

J - estimated concentration above MDL and reporting limit (RL)

m - manual intergration used to determine area response

Total PCBs calculated using ND=MDL or ND=0

APPENDIX B

Table 6: Bulk Sediments PCB Congener Analytical Results Summary Table

Management Unit or Placement Unit					Management Units							
Parameter	Sample ID				DS-11-MU1		DS-11-MU2		DS-11-MU3		DS-11-MU4	
	Lab ID				T11H197-66		T11H197-12		T11H197-20		T11H197-06	
	Date Collected				08/20/11		08/15/11		08/17/11		08/16/11	
	Sample Thickness (ft)				**0.5**		**2.0 - 2.5**		**0.5 - 1.8**		**0.5 - 1.5**	
Percent Moisture			D2216	wt%	**50**		**47**		**23**		**21**	
PCB Congener	**Congener Number**	**CAS Number**	**Analysis Method**	**Units**								
Total PCBs (ND=MDL)				ppb	4.39		**6.39**		2.82		2.76	
Total PCBs (ND=0)				ppb	0.00		**3.00**		0.00		0.00	
2,4´-DiCB	**8**	**34883-43-7**	SW8082CON	µg/Kg-dry	<0.31	U	<0.29	U	<0.20	U	<0.20	U
2,2´,5-TrCB	**18**	**37680-65-2**	SW8082CON	µg/Kg-dry	<0.23	U	<0.22	U	<0.15	U	<0.15	U
2,4,4´-TrCB	**28**	**7012-37-5**	SW8082CON	µg/Kg-dry	<0.098	U	<0.092	U	<0.063	U	<0.062	U
2,2´,3,5´-TeCB	**44**	**41464-39-5**	SW8082CON	µg/Kg-dry	<0.20	U	<0.18	U	<0.13	U	<0.12	U
2,2´,4,5´-TeCB	**49**	**41464-40-8**	SW8082CON	µg/Kg-dry	<0.21	U	<0.20	U	<0.14	U	<0.13	U
2,2´,5,5´-TeCB	**52**	**35693-99-3**	SW8082CON	µg/Kg-dry	<0.26	U	<0.24	U	<0.16	U	<0.16	U
2,3´,4,4´-TeCB	**66**	**32598-10-0**	SW8082CON	µg/Kg-dry	<0.16	U	<0.15	U	<0.10	U	<0.10	U
3,3´,4,4´-TeCB	**77**	**32598-13-3**	SW8082CON	µg/Kg-dry	<0.26	U	<0.25	U	<0.17	U	<0.17	U
2,2´,3,4,5´-PeCB	**87**	**38380-02-8**	SW8082CON	µg/Kg-dry	<0.12	U	<0.11	U	<0.074	U	<0.073	U
2,2´,4,5,5´-PeCB	**101**	**37680-73-2**	SW8082CON	µg/Kg-dry	<0.22	U	**0.51**	**J**	<0.14	U	<0.14	U
2,3,3´,4,4´-PeCB	**105**	**32598-14-4**	SW8082CON	µg/Kg-dry	<0.12	U	<0.12	U	<0.079	U	<0.078	U
2,3´,4,4´,5-PeCB	**118**	**31508-00-6**	SW8082CON	µg/Kg-dry	<0.19	U	<0.17	U	<0.12	U	<0.12	U
3,3´,4,4´,5-PeCB	**126**	**57465-28-8**	SW8082CON	µg/Kg-dry	<0.18	U	<0.17	U	<0.12	U	<0.11	U
2,2´,3,3´,4,4´-HxCB	**128**	**38380-07-3**	SW8082CON	µg/Kg-dry	<0.10	U	<0.096	U	<0.065	U	<0.064	U
2,2´,3,4,4´,5´-HxCB	**138**	**35065-28-2**	SW8082CON	µg/Kg-dry	<0.12	U	**0.79**	**J m**	<0.079	U	<0.078	U
2,2´,4,4´,5,5´-HxCB	**153**	**35065-27-1**	SW8082CON	µg/Kg-dry	<0.20	U	**0.68**	**J**	<0.13	U	<0.12	U
3,3´,4,4´,5,5´-HxCB	**169**	**32774-16-6**	SW8082CON	µg/Kg-dry	<0.22	U	<0.21	U	<0.14	U	<0.14	U
2,2´,3,3´,4,4´,5-HpCB	**170**	**35065-30-6**	SW8082CON	µg/Kg-dry	<0.11	U	**0.43**	**J**	<0.070	U	<0.069	U
2,2´,3,4,4´,5,5´-HpCB	**180**	**35065-29-3**	SW8082CON	µg/Kg-dry	<0.13	U	**0.59**	**J**	<0.082	U	<0.081	U
2,2´,3,4,4´,5´,6-HpCB	**183**	**52663-69-1**	SW8082CON	µg/Kg-dry	<0.19	U	<0.18	U	<0.12	U	<0.12	U
2,2´,3,4,4´,6,6´-HpCB	**184**	**74472-48-3**	SW8082CON	µg/Kg-dry	<0.17	U	<0.16	U	<0.11	U	<0.10	U
2,2´,3,4´,5,5´,6-HpCB	**187**	**52663-68-0**	SW8082CON	µg/Kg-dry	<0.19	U	<0.18	U	<0.12	U	<0.12	U
2,2´,3,3´,4,4´,5,6-OcCB	**195**	**52663-78-2**	SW8082CON	µg/Kg-dry	<0.14	U	<0.13	U	<0.087	U	<0.086	U
2,2',3,3',4,4',5,5',6-NoCB	**206**	**40186-72-9**	SW8082CON	µg/Kg-dry	<0.12	U	<0.11	U	<0.077	U	<0.076	U
DeCB	**209**	**2051-24-3**	SW8082CON	µg/Kg-dry	<0.14	U	<0.13	U	<0.091	U	<0.090	U

Bold - Analysis is above machine detection limit (MDL)

J - estimated concentration above MDL and reporting limit (RL)

m - manual intergration used to determine area response

Total PCBs calculated using ND=MDL or ND=0

APPENDIX B

Table 6: Bulk Sediments PCB Congener Analytical Results Summary Table

Management Unit or Placement Unit					Management Units			
Parameter	Sample ID				DS-11-MU5		DS-11-MU6	
	Lab ID				T11H197-58		T11H197-60	
	Date Collected				08/20/11		08/20/11	
	Sample Thickness (ft)				**0.5 - 2.0**		**0.5**	
Percent Moisture			D2216	wt%	**70**		**46**	
PCB Congener	**Congener Number**	**CAS Number**	**Analysis Method**	**Units**				
Total PCBs (ND=MDL)				ppb	**10.05**		4.04	
Total PCBs (ND=0)				ppb	**3.76**		0.00	
2,4´-DiCB	**8**	**34883-43-7**	SW8082CON	µg/Kg-dry	<0.52	U	<0.29	U
2,2´,5-TrCB	**18**	**37680-65-2**	SW8082CON	µg/Kg-dry	<0.38	U	<0.21	U
2,4,4´-TrCB	**28**	**7012-37-5**	SW8082CON	µg/Kg-dry	<0.16	U	<0.090	U
2,2´,3,5´-TeCB	**44**	**41464-39-5**	SW8082CON	µg/Kg-dry	<0.32	U	<0.18	U
2,2´,4,5´-TeCB	**49**	**41464-40-8**	SW8082CON	µg/Kg-dry	<0.35	U	<0.20	U
2,2´,5,5´-TeCB	**52**	**35693-99-3**	SW8082CON	µg/Kg-dry	<0.42	U	<0.24	U
2,3´,4,4´-TeCB	**66**	**32598-10-0**	SW8082CON	µg/Kg-dry	<0.26	U	<0.15	U
3,3´,4,4´-TeCB	**77**	**32598-13-3**	SW8082CON	µg/Kg-dry	<0.43	U	<0.24	U
2,2´,3,4,5´-PeCB	**87**	**38380-02-8**	SW8082CON	µg/Kg-dry	<0.19	U	<0.11	U
2,2´,4,5,5´-PeCB	**101**	**37680-73-2**	SW8082CON	µg/Kg-dry	<0.36	U	<0.20	U
2,3,3´,4,4´-PeCB	**105**	**32598-14-4**	SW8082CON	µg/Kg-dry	<0.20	U	<0.11	U
2,3´,4,4´,5-PeCB	**118**	**31508-00-6**	SW8082CON	µg/Kg-dry	<0.31	U	<0.17	U
3,3´,4,4´,5-PeCB	**126**	**57465-28-8**	SW8082CON	µg/Kg-dry	<0.30	U	<0.17	U
2,2´,3,3´,4,4´-HxCB	**128**	**38380-07-3**	SW8082CON	µg/Kg-dry	<0.17	U	<0.094	U
2,2´,3,4,4´,5´-HxCB	**138**	**35065-28-2**	SW8082CON	µg/Kg-dry	**0.51**	**J m**	<0.11	U
2,2´,4,4´,5,5´-HxCB	**153**	**35065-27-1**	SW8082CON	µg/Kg-dry	**0.65**	**J**	<0.18	U
3,3´,4,4´,5,5´-HxCB	**169**	**32774-16-6**	SW8082CON	µg/Kg-dry	<0.36	U	<0.20	U
2,2´,3,3´,4,4´,5-HpCB	**170**	**35065-30-6**	SW8082CON	µg/Kg-dry	**1.0**	**J m**	<0.10	U
2,2´,3,4,4´,5,5´-HpCB	**180**	**35065-29-3**	SW8082CON	µg/Kg-dry	**1.6**	**J**	<0.12	U
2,2´,3,4,4´,5´,6-HpCB	**183**	**52663-69-1**	SW8082CON	µg/Kg-dry	<0.32	U	<0.18	U
2,2´,3,4,4´,6,6´-HpCB	**184**	**74472-48-3**	SW8082CON	µg/Kg-dry	<0.27	U	<0.15	U
2,2´,3,4´,5,5´,6-HpCB	**187**	**52663-68-0**	SW8082CON	µg/Kg-dry	<0.32	U	<0.18	U
2,2´,3,3´,4,4´,5,6-OcCB	**195**	**52663-78-2**	SW8082CON	µg/Kg-dry	<0.22	U	<0.13	U
2,2',3,3',4,4',5,5',6-NoCB	**206**	**40186-72-9**	SW8082CON	µg/Kg-dry	<0.20	U	<0.11	U
DeCB	**209**	**2051-24-3**	SW8082CON	µg/Kg-dry	<0.23	U	<0.13	U

Bold - Analysis is above machine detection limit (MDL)

J - estimated concentration above MDL and reporting limit (RL)

m - manual intergration used to determine area response

Total PCBs calculated using ND=MDL or ND=0

APPENDIX C

Tissue PCBs Analytical Results Summary Tables

Table 7: **Management Unit PCB Congener Lumbriculus Tissue Analysis Summary Table**

Table 8: **Placement Unit PCB Congener Lumbriculus Tissue Analysis Summary Table**

Table 9: **209 PCB Congener Analyses of Lumbriculus Tissue Samples**

Table 10: **209 PCB Congener Comparison**

Table 11: **PCB Congener Results Comparison Table, Soil and Tissue**

APPENDIX C

Table 7: Management Unit PCB Congeners Lumbriculus Tissue Analysis Results

Management Unit				Management Unit 1									
Parameter	Sample Name			DS-11-MU1-1		DS-11-MU1-2		DS-11-MU1-3		DS-11-MU1-4		DS-11-MU1-5	
	Sample Number			1111275-017		1111275-018		1111275-019		1111275-020		1111275-021	
Total Lipids			**%**	**3.6**		**3.7**		**3.7**		**4.6**		**3.9**	
Total PCBs ND = MDL			**µg/Kg**	**10.0**		**10.8**		**10.4**		**11.7**		**10.6**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**555.6**		**583.8**		**560.0**		**507.8**		**542.6**	
Total PCBs ND = 0			**µg/Kg**	**4.9**		**5.5**		**5.3**		**6.6**		**5.5**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**269.4**		**299.5**		**288.1**		**286.5**		**280.0**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**										
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.47	U	<0.48	U	<0.46	U	<0.46	U	<0.46	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.34	U	<0.35	U	<0.33	U	<0.34	U	<0.34	U
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.14	U	<0.14	U	<0.14	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	<0.29	U	<0.30	U	<0.28	U	<0.29	U	<0.29	U
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	<0.32	U	<0.32	U	<0.31	U	<0.31	U	<0.32	U
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	<0.38	U	<0.39	U	<0.37	U	<0.38	U	<0.38	U
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.23	U	<0.24	U	<0.23	U	<0.23	U	<0.23	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.39	U	<0.40	U	<0.38	U	<0.39	U	<0.39	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	<0.17	U	<0.18	U	<0.17	U	<0.17	U	<0.17	U
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	**0.67**	**J**	**0.74**	**J**	**0.7**	**J**	**0.88**	**J**	**0.71**	**J**
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	<0.18	U	<0.19	U	<0.18	U	<0.18	U	<0.18	U
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	**0.44**	**J**	**0.47**	**J**	**0.46**	**J**	**0.57**	**J**	**0.45**	**J**
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	**0.29**	**J**	**0.43**	**J**	**0.38**	**J**	**0.44**	**J**	**0.4**	**J**
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.27	U	<0.28	U	<0.26	U	<0.27	U	<0.27	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	**0.83**	**J**	**0.9**	**J**	**0.89**	**J**	**1.2**	**J**	**0.9**	**J**
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	**1.7**	**J**	**2**	**J**	**1.9**	**J**	**2.3**		**2**	
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.33	U	<0.33	U	<0.32	U	<0.32	U	<0.32	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	<0.16	U	<0.17	U	<0.16	U	<0.16	U	<0.16	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.19	U	<0.19	U	<0.19	U	<0.19	U	<0.19	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.28	U	<0.28	U	<0.29	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.25	U	<0.25	U	<0.24	U	<0.24	U	<0.25	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	**0.92**	**J**	**1**	**J**	**1**	**J**	**1.2**	**J**	**1**	**J**
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.20	U	<0.21	U	<0.20	U	<0.20	U	<0.20	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.17	U	<0.18	U	<0.18	U
DeCB	209	SW8082CON	µg/Kg	<0.21	U	<0.21	U	<0.21	U	<0.21	U	<0.21	U

APPENDIX C

Table 7: Management Unit PCB Congeners Lumbriculus Tissue Analysis Results

Management Unit				Management Unit 2									
Parameter	Sample Name			DS-11-MU2 - 1		DS-11-MU2 - 2		DS-11-MU2 - 3		DS-11-MU2 - 4		DS-11-MU2 - 5	
	Sample Number			1110760-006		1110760-007		1110760-008		1110760-009		1110760-010	
Total Lipids			**%**	**3.7**		**3.3**		**3.5**		**4.0**		**3.7**	
Total PCBs ND = MDL			**µg/Kg**	**28.9**		**25.4**		**22.8**		**35.2**		**25.8**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**1,561.6**		**1,541.8**		**1,303.4**		**1,757.5**		**1,394.1**	
Total PCBs ND = 0			**µg/Kg**	**25.3**		**21.6**		**19.0**		**31.9**		**22.0**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**1,365.4**		**1,310.3**		**1,084.6**		**1,596.0**		**1,187.6**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**										
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.46	U	<0.47	U	<0.47	U	**6.6**		<0.47	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.34	U	<0.34	U	<0.34	U	<0.35	U	<0.34	U
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.14	U	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	**0.47**	J	**0.42**	J	**0.4**	J	**0.53**	J	**0.41**	J
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	**0.69**	J	**0.6**	J	**0.49**	J	**0.69**	J	**0.56**	J
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	**1.4**	J	**1.2**	J	**1**	J	**1.4**	J	**1.2**	J
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.23	U	<0.24	U	<0.24	U	<0.24	U	<0.24	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.39	U	<0.39	U	<0.40	U	<0.40	U	<0.39	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	**2.2**		**1.9**	J	**1.7**	J	**2.2**		**1.9**	J
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	**3.7**		**3.3**		**2.9**		**3.7**		**3.3**	
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	**1.2**	J	**1.1**	J	**0.99**	J	**1.2**	J	**1.1**	J
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	**2.9**		**2.7**		**2.3**		**3**		**2.7**	
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	**2**		**1.8**	J	**1.6**	J	**2**	J	**1.8**	J
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.27	U	<0.27	U	<0.27	U	<0.28	U	<0.27	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	**4.4**		**3.9**		**3.4**		**4.4**		**4.1**	
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	**3.7**		**3.3**		**2.9**		**3.7**		**3.5**	
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.33	U	<0.33	U	<0.33	U	<0.33	U	<0.33	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	**1.1**	J	<0.16	U	<0.16	U	**1**	Jm	<0.16	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.19	U	<0.19	U	<0.19	U	<0.19	U	<0.19	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.29	U	<0.29	U	<0.29	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.25	U	<0.25	U	<0.25	U	<0.25	U	<0.25	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	**1.5**	J	**1.4**	J	**1.3**	J	**1.5**	J	**1.4**	J
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.20	U	<0.20	U	<0.20	U	<0.21	U	<0.20	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.18	U	<0.18	U	<0.18	U
DeCB	209	SW8082CON	µg/Kg	<0.21	U	<0.21	U	<0.21	U	<0.21	U	<0.21	U

APPENDIX C

Table 7: Management Unit PCB Congeners Lumbriculus Tissue Analysis Results

Management Unit				Management Unit 3									
Parameter	Sample Name			DS-11-MU3 - 1		DS-11-MU3 - 2		DS-11-MU3 - 3		DS-11-MU3 - 4		DS-11-MU3 - 5	
	Sample Number			1110760-016		1110760-017		1110760-018		1110760-019		1110760-020	
Total Lipids			**%**	**2.8**		**3.8**		**4.1**		**3.8**		**2.7**	
Total PCBs ND = MDL			**µg/Kg**	**25.3**		**27.7**		**24.4**		**22.0**		**22.5**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**1,808.6**		**1,458.9**		**1,188.3**		**1,155.8**		**1,666.7**	
Total PCBs ND = 0			**µg/Kg**	**21.3**		**23.8**		**20.4**		**17.9**		**17.9**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**1,522.9**		**1,252.1**		**993.7**		**941.6**		**1,325.9**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**										
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.47	U	<0.46	U	<0.47	U	**1.4**	J	<0.47	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.34	U	<0.34	U	<0.34	U	<0.34	U	<0.34	U
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.15	U	<0.14	U	<0.15	U	<0.14	U	<0.15	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	**0.55**	J	**0.59**	J	**0.48**	J	<0.29	U	<0.29	U
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	**0.77**	J	**0.9**	J	**0.69**	J	<0.31	U	<0.32	U
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	**1.3**	J	**1.4**	J	**1.1**	J	**0.99**	J	**1.2**	J
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.24	U	<0.23	U	<0.24	U	<0.23	U	<0.24	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.40	U	<0.39	U	<0.39	U	<0.39	U	<0.39	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	<0.17	U	<0.17	U	<0.17	U	<0.17	U	<0.17	U
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	**3.7**		**4**		**3.6**		**3.2**		**3.3**	
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	**1.4**	J	**1.6**	J	**1.1**	J	**1.3**	J	**1**	J
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	**2.7**		**3.1**		**2.7**		**2.4**		**2.5**	
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	**2.1**		**2.3**		**2**		**1.8**	J	**1.9**	J
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.27	U	<0.27	U	<0.27	U	<0.27	U	<0.27	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	**4**		**4.5**		**4**		**2.6**		**3.7**	
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	**3.6**		**4.1**		**3.5**		**3.2**		**3.2**	
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.33	U	<0.32	U	<0.33	U	<0.32	U	<0.33	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	<0.16	U	<0.16	U	<0.16	U	<0.16	U	<0.16	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.19	U	<0.19	U	<0.19	U	<0.19	U	<0.19	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.29	U	<0.28	U	<0.29	U	<0.28	U	<0.29	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.25	U	<0.24	U	<0.25	U	<0.24	U	<0.25	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	**1.2**	J	**1.3**	J	**1.2**	J	**1**	J	**1.1**	J
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.20	U	<0.20	U	<0.20	U	<0.20	U	<0.20	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.18	U	<0.18	U	<0.18	U
DeCB	209	SW8082CON	µg/Kg	<0.21	U	<0.21	U	<0.21	U	<0.21	U	<0.21	U

APPENDIX C

Table 7: Management Unit PCB Congeners Lumbriculus Tissue Analysis Results

Management Unit				Management Unit 4									
Parameter	Sample Name			DS-11-MU4 - 1		DS-11-MU4 - 2		DS-11-MU4 - 3		DS-11-MU4 - 4		DS-11-MU4 - 5	
	Sample Number			1110760-011		1110760-012		1110760-013		1110760-014		1110760-015	
Total Lipids			**%**	**4.0**		**2.8**		**3.9**		**3.6**		**4.5**	
Total PCBs ND = MDL			**µg/Kg**	**13.4**		**15.2**		**27.2**		**25.6**		**42.9**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**667.5**		**1,084.3**		**1,395.4**		**1,424.4**		**1,906.2**	
Total PCBs ND = 0			**µg/Kg**	**8.8**		**11.0**		**23.7**		**21.6**		**23.7**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**440.0**		**782.1**		**1,215.4**		**1,202.2**		**1,052.9**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**										
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.46	U	<0.46	U	<0.46	U	<0.47	U	<0.47	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.34	U	<0.34	U	<0.33	U	<0.34	U	**1.6**	J
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.14	U	<0.14	U	<0.14	U	<0.15	U	<0.15	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	<0.29	U	<0.29	U	**0.75**	J	**0.74**	J	**0.84**	J
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	<0.32	U	**0.4**	J	**0.85**	J	**0.8**	J	**0.97**	J
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	**0.49**	J	**0.63**	J	**1.4**	J	**1.4**	J	**1.6**	J
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.23	U	<0.23	U	<0.23	U	<0.24	U	<0.24	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.39	U	<0.39	U	**1.5**	J	<0.40	U	<0.39	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	<0.17	U	<0.17	U	<0.17	U	<0.17	U	**0.28**	J
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	**1.5**	J	**1.8**	J	**3.6**		**3.5**		**4**	
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	**0.59**	J	**0.65**	J	**1.5**	J	**1.4**	J	**1.8**	J
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	**1.3**	J	**1.4**	J	**2.7**		**2.6**		**2.9**	
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	**0.85**	J	**0.98**	J	**2.1**		**2**		**2.3**	
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.27	U	<0.27	U	<0.26	U	<0.27	U	<0.27	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	**1.6**	Jm	**2.3**		**4.2**		**4.2**		**1.7**	J
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	**1.8**	J	**2.1**		**3.8**		**3.7**		**4.2**	
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.32	U	<0.32	U	<0.32	U	<0.33	U	<0.33	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	<0.16	U	<0.16	U	<0.16	U	<0.16	U	<0.16	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.19	U	<0.19	U	<0.19	U	<0.19	U	<0.19	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.28	U	<0.29	U	<0.29	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.24	U	<0.24	U	<0.24	U	<0.25	U	<0.25	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	**0.67**	J	**0.69**	J	**1.3**	J	**1.3**	J	**1.5**	J
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.20	U	<0.20	U	<0.20	U	<0.20	U	<0.20	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.17	U	<0.18	U	<0.18	U
DeCB	209	SW8082CON	µg/Kg	<0.21	U	<0.21	U	<0.21	U	<0.21	U	<0.21	U

APPENDIX C

Table 7: Management Unit PCB Congeners Lumbriculus Tissue Analysis Results

Management Unit				Management Unit 5									
Parameter	Sample Name			DS-11-MU5-1		DS-11-MU5-2		DS-11-MU5-4		DS-11-MU5-5		DS-11-MU6-1	
	Sample Number			1111275-022		1111275-023		1111275-024		1111275-025		1111275-026	
Total Lipids			**%**	**5.3**		**3.2**		**3.4**		**3.5**		**3.3**	
Total PCBs ND = MDL			**µg/Kg**	**21.2**		**20.3**		**19.0**		**18.8**		**6.6**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**798.9**		**1,268.8**		**1,117.1**		**1,073.7**		**402.4**	
Total PCBs ND = 0			**µg/Kg**	**16.2**		**15.4**		**14.0**		**13.8**		**0.0**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**611.3**		**962.5**		**823.5**		**786.9**		**0.0**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**										
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.46	U	<0.46	U	<0.47	U	<0.47	U	<0.46	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.34	U	<0.33	U	<0.34	U	<0.34	U	<0.34	U
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.14	U	<0.14	U	<0.15	U	<0.15	U	<0.14	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.29	U	<0.29	U	<0.29	U
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	<0.32	U	<0.31	U	<0.32	U	<0.32	U	<0.32	U
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	<0.38	U	<0.38	U	<0.38	U	<0.39	U	<0.38	U
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.23	U	<0.23	U	<0.23	U	<0.24	U	<0.23	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.39	U	<0.38	U	<0.39	U	<0.39	U	<0.39	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	<0.17	U	<0.17	U	<0.17	U	<0.17	U	<0.17	U
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	**2.9**		**2.8**		**2.5**		**2.4**		<0.33	U
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.18	U	<0.19	U	<0.18	U
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	**2.4**		**2.3**		**2**		**1.9**	**J**	<0.17	U
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	**1.6**	**J**	**1.5**	**J**	**1.4**	**J**	**1.4**	**J**	<0.27	U
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.27	U	<0.27	U	<0.27	U	<0.27	U	<0.27	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	**2.9**		**2.7**		**2.5**		**2.4**		<0.18	U
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	**3.7**		**3.5**		**3.2**		**3.3**		<0.29	U
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.33	U	<0.32	U	<0.33	U	<0.33	U	<0.32	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	**1.1**	**J**	**1.1**	**J**	**1**	**J**	**0.97**	**J**	<0.16	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.19	U	<0.19	U	<0.19	U	<0.19	U	<0.19	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.29	U	<0.28	U	<0.29	U	<0.29	U	<0.29	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.25	U	<0.24	U	<0.25	U	<0.25	U	<0.24	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	**1.6**	**J**	**1.5**	**J**	**1.4**	**J**	**1.4**	**J**	<0.29	U
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.20	U	<0.20	U	<0.20	U	<0.20	U	<0.20	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.18	U	<0.17	U	<0.18	U	<0.18	U	<0.18	U
DeCB	209	SW8082CON	µg/Kg	<0.21	U	<0.21	U	<0.21	U	<0.21	U	<0.21	U

APPENDIX C

Table 7: Management Unit PCB Congeners Lumbriculus Tissue Analysis Results

Management Unit				Management Unit 6							
Parameter	Sample Name			DS-11-MU6-2		DS-11-MU6-3		DS-11-MU6-4		DS-11-MU6-5	
	Sample Number			1111275-027		1111275-028		1111275-029		1111275-030	
Total Lipids			**%**	**2.7**		**3.0**		**3.5**		**3.6**	
Total PCBs ND = MDL			**µg/Kg**	**6.8**		**6.7**		**6.7**		**6.4**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**500.0**		**443.3**		**382.3**		**357.8**	
Total PCBs ND = 0			**µg/Kg**	**0.0**		**0.0**		**0.0**		**0.0**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**0.0**		**0.0**		**0.0**		**0.0**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**								
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.47	U	<0.46	U	<0.47	U	<0.45	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.34	U	<0.34	U	<0.34	U	<0.33	U
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.15	U	<0.14	U	<0.15	U	<0.14	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.29	U	<0.28	U
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	<0.32	U	<0.32	U	<0.32	U	<0.30	U
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	<0.39	U	<0.38	U	<0.38	U	<0.37	U
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.24	U	<0.23	U	<0.23	U	<0.22	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.40	U	<0.39	U	<0.39	U	<0.38	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	<0.17	U	<0.17	U	<0.17	U	<0.16	U
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	<0.33	U	<0.33	U	<0.33	U	<0.32	U
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	<0.19	U	<0.18	U	<0.18	U	<0.18	U
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	<0.18	U	<0.17	U	<0.17	U	<0.17	U
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	<0.28	U	<0.27	U	<0.28	U	<0.26	U
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.27	U	<0.27	U	<0.27	U	<0.26	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	<0.19	U	<0.18	U	<0.18	U	<0.18	U
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.29	U	<0.28	U
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.33	U	<0.32	U	<0.33	U	<0.31	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	<0.16	U	<0.16	U	<0.16	U	<0.16	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.19	U	<0.19	U	<0.19	U	<0.18	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.29	U	<0.28	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.25	U	<0.25	U	<0.25	U	<0.24	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.29	U	<0.28	U
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.20	U	<0.20	U	<0.20	U	<0.19	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.18	U	<0.17	U
DeCB	209	SW8082CON	µg/Kg	<0.21	U	<0.21	U	<0.21	U	<0.20	U

APPENDIX C

Table 8: Placement Unit PCB Congeners Lumbriculus Tissue Analysis Results

Placement Unit				Minnesota Open Water Placement Unit							
Parameter	Sample Name			DS-11-MOPU - 2		DS-11-MOPU - 3		DS-11-MOPU - 4		DS-11-MOPU - 5	
	Sample Number			1110760-026		1110760-027		1110760-028		1110760-029	
Total Lipids			**%**	**3.2**		**3.1**		**3.6**		**3.9**	
Total PCBs ND = MDL			**µg/Kg**	**15.81**		**13.25**		**13.61**		**13.32**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**988.1**		**854.8**		**756.1**		**683.1**	
Total PCBs ND = 0			**µg/Kg**	**10.8**		**8.1**		**8.5**		**7.8**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**677.5**		**520.0**		**470.0**		**398.5**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**								
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.47	U	<0.47	U	<0.47	U	<0.48	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.34	U	<0.34	U	<0.34	U	<0.35	U
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.29	U	<0.30	U
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	<0.32	U	<0.32	U	<0.32	U	<0.32	U
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	<0.38	U	<0.39	U	<0.38	U	<0.39	U
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.23	U	<0.24	U	<0.23	U	<0.24	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.39	U	<0.40	U	<0.39	U	<0.40	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	<0.17	U	<0.17	U	<0.17	U	<0.18	U
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	**2.1**		**1.7**	J	**1.7**	J	**1.7**	J
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	**0.77**	J	<0.19	U	<0.18	U	<0.19	U
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	**1.7**	J	**1.4**	J	**1.4**	J	**1.3**	J
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	**1.2**	J	**1**	J	**1**	J	**0.97**	J
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.27	U	<0.27	U	<0.27	U	<0.28	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	**1.8**	J	**1.4**	J	**1.5**	J	**2**	J
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	**2.4**		**1.9**	J	**2.2**		**1.8**	J
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.33	U	<0.33	U	<0.33	U	<0.33	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	<0.16	U	<0.16	U	<0.16	U	<0.17	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.19	U	<0.19	U	<0.19	U	<0.19	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.29	U	<0.29	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.25	U	<0.25	U	<0.25	U	<0.25	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	**0.87**	J	**0.66**	J	**0.66**	J	<0.29	U
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.20	U	<0.20	U	<0.20	U	<0.21	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.18	U	<0.18	U
DeCB	209	SW8082CON	µg/Kg	<0.21	U	<0.21	U	<0.21	U	<0.21	U

APPENDIX C

Table 8: Placement Unit PCB Congeners Lumbriculus Tissue Analysis Results

Placement Unit				Wisconsin Open Water Placement Unit									
Parameter	Sample Name			DS-11-WOPU-1		DS-11-WOPU-2		DS-11-WOPU-3		DS-11-WOPU-4		DS-11-WOPU-5	
	Sample Number			1111275-007		1111275-008		1111275-009		1111275-010		1111275-011	
Total Lipids			**%**	**3.6**		**4.1**		**3.3**		**3.5**		**4**	
Total PCBs ND = MDL			**µg/Kg**	**6.64**		**6.61**		**6.68**		**6.84**		**6.77**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**368.9**		**322.4**		**404.8**		**390.9**		**338.5**	
Total PCBs ND = 0			**µg/Kg**	**0.0**		**0.0**		**0.0**		**0.0**		**0.0**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**0.0**		**0.0**		**0.0**		**0.0**		**0.0**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**										
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.46	U	<0.46	U	<0.46	U	<0.48	U	<0.47	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.34	U	<0.34	U	<0.34	U	<0.35	U	<0.35	U
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.14	U	<0.14	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.29	U	<0.30	U	<0.29	U
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	<0.32	U	<0.31	U	<0.32	U	<0.32	U	<0.32	U
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	<0.38	U	<0.38	U	<0.38	U	<0.39	U	<0.39	U
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.23	U	<0.23	U	<0.23	U	<0.24	U	<0.24	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.39	U	<0.39	U	<0.39	U	<0.40	U	<0.40	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	<0.17	U	<0.17	U	<0.17	U	<0.18	U	<0.17	U
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	<0.33	U	<0.33	U	<0.33	U	<0.34	U	<0.33	U
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.18	U	<0.19	U	<0.19	U
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	<0.17	U	<0.17	U	<0.17	U	<0.18	U	<0.18	U
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	<0.27	U	<0.27	U	<0.28	U	<0.28	U	<0.28	U
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.27	U	<0.27	U	<0.27	U	<0.28	U	<0.27	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.18	U	<0.19	U	<0.19	U
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.29	U	<0.30	U	<0.29	U
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.32	U	<0.32	U	<0.33	U	<0.33	U	<0.33	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	<0.16	U	<0.16	U	<0.16	U	<0.17	U	<0.17	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.19	U	<0.19	U	<0.19	U	<0.19	U	<0.19	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.29	U	<0.28	U	<0.29	U	<0.29	U	<0.29	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.24	U	<0.24	U	<0.25	U	<0.25	U	<0.25	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	<0.29	U	<0.28	U	<0.29	U	<0.29	U	<0.29	U
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.20	U	<0.20	U	<0.20	U	<0.21	U	<0.20	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.18	U	<0.18	U	<0.18	U
DeCB	209	SW8082CON	µg/Kg	<0.21	U	<0.21	U	<0.21	U	<0.21	U	<0.21	U

APPENDIX C

Table 8: Placement Unit PCB Congeners Lumbriculus Tissue Analysis Results

Placement Unit				Hearding Island Placement Unit									
Parameter	Sample Name			DS-11-HIPU - 1		DS-11-HIPU - 2		DS-11-HIPU - 3		DS-11-HIPU - 4		DS-11-HIPU - 5	
	Sample Number			1110760-021		1110760-022		1110760-023		1110760-024		1110760-025	
Total Lipids			**%**	**3**		**2.9**		**2.6**		**2.8**		**2.8**	
Total PCBs ND = MDL			**µg/Kg**	**20.99**		**23.66**		**20.48**		**20.06**		**19.93**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**1,399.3**		**1,631.7**		**1,575.4**		**1,432.9**		**1,423.6**	
Total PCBs ND = 0			**µg/Kg**	**16.7**		**19.4**		**16.3**		**15.6**		**15.6**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**1,114.7**		**1,340.0**		**1,256.2**		**1,111.4**		**1,113.6**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**										
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.47	U	<0.46	U	<0.45	U	<0.46	U	<0.47	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.34	U	<0.34	U	<0.33	U	<0.34	U	<0.35	U
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.15	U	<0.14	U	<0.14	U	<0.14	U	<0.15	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.28	U	<0.29	U	<0.30	U
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	**0.49**	J	**0.59**	J	**0.45**	J	**0.55**	J	**0.45**	J
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	**0.73**	J	**0.84**	J	**0.58**	J	**0.81**	J	**0.64**	J
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.23	U	<0.23	U	<0.23	U	<0.23	U	<0.24	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.39	U	<0.39	U	<0.38	U	<0.39	U	<0.40	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	<0.17	U	<0.17	U	<0.17	U	<0.17	U	<0.18	U
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	**2.8**		**3.2**		**2.7**		**2.8**		**2.6**	
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	**1.4**	J	**1.8**	J	**1.5**	J	<0.18	U	**1.4**	J
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	**2.2**		**2.5**		**2.1**		**2.2**		**2**	
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	**1.4**	J	**1.7**	J	**1.4**	J	**1.5**	J	**1.3**	J
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.27	U	<0.27	U	<0.26	U	<0.27	U	<0.27	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	**2.7**		**3**		**2.6**		**2.7**		**2.4**	
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	**3.6**		**4.2**		**3.5**		**3.6**		**3.4**	
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.33	U	<0.32	U	<0.32	U	<0.32	U	<0.33	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	<0.16	U	<0.16	U	<0.16	U	<0.16	U	<0.17	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.19	U	<0.19	U	<0.18	U	<0.19	U	<0.19	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.28	U	<0.28	U	<0.29	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.25	U	<0.24	U	<0.24	U	<0.24	U	<0.25	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	**1.4**	J	**1.6**	J	**1.5**	J	**1.4**	J	**1.4**	J
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.20	U	<0.20	U	<0.20	U	<0.20	U	<0.21	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.17	U	<0.18	U	<0.18	U
DeCB	209	SW8082CON	µg/Kg	<0.21	U	<0.21	U	<0.21	U	<0.21	U	<0.21	U

APPENDIX C

Table 8: Placement Unit PCB Congeners Lumbriculus Tissue Analysis Results

Placement Unit				Interstate Island Placement Unit									
Parameter	Sample Name			DS-11-IIPU-1		DS-11-IIPU-2		DS-11-IIPU-3		DS-11-IIPU-4		DS-11-IIPU-5	
	Sample Number			1111275-012		1111275-013		1111275-014		1111275-015		1111275-016	
Total Lipids			**%**	**4.3**		**3.2**		**3.9**		**3.6**		**4.7**	
Total PCBs ND = MDL			**µg/Kg**	**11.72**		**12.28**		**12.9**		**14.07**		**13.21**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**545.1**		**767.5**		**661.5**		**781.7**		**562.1**	
Total PCBs ND = 0			**µg/Kg**	**6.6**		**7.2**		**7.7**		**9.1**		**8.1**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**308.4**		**446.9**		**392.8**		**503.3**		**344.7**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**										
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.46	U	<0.46	U	<0.47	U	<0.45	U	<0.46	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.34	U	<0.34	U	<0.35	U	<0.33	U	<0.34	U
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.14	U	<0.14	U	<0.15	U	<0.14	U	<0.14	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	<0.29	U	<0.29	U	<0.30	U	<0.28	U	<0.29	U
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	<0.31	U	<0.32	U	<0.32	U	<0.31	U	<0.32	U
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	<0.38	U	<0.38	U	<0.39	U	<0.37	U	<0.38	U
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.23	U	<0.23	U	<0.24	U	<0.23	U	<0.23	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.39	U	<0.39	U	<0.40	U	<0.38	U	<0.39	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	<0.17	U	<0.17	U	<0.18	U	<0.17	U	<0.17	U
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	**1.1**	**J**	**1.2**	**J**	**1.3**	**J**	**1.5**	**J**	**1.3**	**J**
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.19	U	<0.18	U	<0.18	U
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	**1**	**J**	**1.1**	**J**	**1.2**	**J**	**1.3**	**J**	**1.2**	**J**
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	**0.58**	**J**	**0.65**	**J**	**0.66**	**J**	**0.86**	**J**	**0.8**	**J**
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.27	U	<0.27	U	<0.27	U	<0.26	U	<0.27	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	**1.3**	**J**	**1.4**	**J**	**1.5**	**J**	**1.6**	**J**	**1.4**	**J**
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	**1.7**	**J**	**1.8**	**J**	**2**		**2.6**		**2.3**	
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.32	U	<0.33	U	<0.33	U	<0.32	U	<0.32	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	<0.16	U	<0.16	U	<0.17	U	<0.16	U	<0.16	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.19	U	<0.19	U	<0.19	U	<0.18	U	<0.19	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.28	U	<0.29	U	<0.29	U	<0.28	U	<0.29	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.24	U	<0.25	U	<0.25	U	<0.24	U	<0.24	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	**0.95**	**J**	**1**	**J**	**1**	**J**	**1.2**	**J**	**1.1**	**J**
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.20	U	<0.20	U	<0.21	U	<0.20	U	<0.20	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.18	U	<0.17	U	<0.18	U
DeCB	209	SW8082CON	µg/Kg	<0.21	U	<0.21	U	<0.21	U	<0.21	U	<0.21	U

APPENDIX C

Table 8: Placement Unit PCB Congeners Lumbriculus Tissue Analysis Results

Placement Unit				Laboratory Control - 10-21-11									
Parameter	Sample Name			Lab Control 1		Lab Control 2		Lab Control 3		Lab Control 4		Day 0, Background	
	Sample Number			1110760-001		1110760-002		1110760-003		1110760-004		1110760-005	
Total Lipids			**%**	**3.6**		**3.2**		**3.5**		**3.8**		**3.4**	
Total PCBs ND = MDL			**µg/Kg**	**6.58**		**6.79**		**6.6**		**6.68**		**10.34**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**365.6**		**424.4**		**377.1**		**351.6**		**608.2**	
Total PCBs ND = 0			**µg/Kg**	**0.0**		**0.0**		**0.0**		**0.0**		**5.2**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**0.0**		**0.0**		**0.0**		**0.0**		**305.3**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**										
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.46	U	<0.47	U	<0.46	U	<0.46	U	<0.45	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.34	U	<0.35	U	<0.34	U	<0.34	U	<0.33	U
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.14	U	<0.15	U	<0.14	U	<0.15	U	<0.14	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	<0.29	U	<0.30	U	<0.29	U	<0.29	U	<0.28	U
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	<0.31	U	<0.32	U	<0.31	U	<0.32	U	0.31	U
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	<0.38	U	<0.39	U	<0.38	U	<0.38	U	<0.37	U
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.23	U	<0.24	U	<0.23	U	<0.23	U	<0.23	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.38	U	<0.40	U	<0.39	U	<0.39	U	<0.38	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	<0.17	U	<0.17	U	<0.17	U	<0.17	U	<0.17	U
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	<0.32	U	<0.33	U	<0.32	U	<0.33	U	**1.8**	J
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	<0.18	U	<0.19	U	<0.18	U	<0.18	U	<0.18	U
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	<0.17	U	<0.18	U	<0.17	U	<0.17	U	**0.91**	J
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	<0.27	U	<0.28	U	<0.27	U	<0.28	U	**0.97**	J
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.27	U	<0.27	U	<0.27	U	<0.27	U	<0.26	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.15	U	<0.15	U	<0.15	U	<0.15	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	<0.18	U	<0.19	U	<0.18	U	<0.18	U	<0.18	U
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	<0.29	U	<0.30	U	<0.29	U	<0.29	U	**1.2**	J
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.32	U	<0.33	U	<0.32	U	<0.33	U	<0.32	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	<0.16	U	<0.17	U	<0.16	U	<0.16	U	<0.16	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.19	U	<0.19	U	<0.19	U	<0.19	U	<0.18	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.28	U	<0.29	U	<0.28	U	<0.29	U	<0.28	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.24	U	<0.25	U	<0.24	U	<0.25	U	<0.24	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	<0.28	U	<0.29	U	<0.28	U	<0.29	U	<0.28	U
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.20	U	<0.20	U	<0.20	U	<0.20	U	<0.20	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.17	U	<0.18	U	<0.18	U	<0.18	U	<0.17	U
DeCB	209	SW8082CON	µg/Kg	<0.21	U	<0.21	U	<0.21	U	<0.21	U	<0.20	U

APPENDIX C

Table 8: Placement Unit PCB Congeners Lumbriculus Tissue Analysis Results

Placement Unit				Laboratory Control - 11-4-11									
Parameter	Sample Name			Lab Control 1		Lab Control 3		Lab Control 4		Lab Control 5		Background	
	Sample Number			1111275-001		1111275-003		1111275-004		1111275-005		1111275-006	
Total Lipids			**%**	**3.9**		**3.1**		**3.4**		**3.7**		**4.5**	
Total PCBs ND = MDL			**µg/Kg**	**6.37**		**6.7**		**6.48**		**6.38**		**6.64**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL			**µg/Kg**	**326.7**		**432.3**		**381.2**		**344.9**		**295.1**	
Total PCBs ND = 0			**µg/Kg**	**0.0**		**0.0**		**0.0**		**0.0**		**0.0**	
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0			**µg/Kg**	**0.0**		**0.0**		**0.0**		**0.0**		**0.0**	
PCB CONGENERS	**Congener Number**	**Method**	**Units**										
2,4´-DiCB	8	SW8082CON	µg/Kg	<0.44	U	<0.47	U	<0.45	U	<0.44	U	<0.46	U
2,2´,5-TrCB	18	SW8082CON	µg/Kg	<0.33	U	<0.34	U	<0.33	U	<0.33	U	<0.34	U
2,4,4´-TrCB	28	SW8082CON	µg/Kg	<0.14	U	<0.15	U	<0.14	U	<0.14	U	<0.14	U
2,2´,3,5´-TeCB	44	SW8082CON	µg/Kg	<0.28	U	<0.29	U	<0.28	U	<0.28	U	<0.29	U
2,2´,4,5´-TeCB	49	SW8082CON	µg/Kg	<0.30	U	<0.32	U	<0.31	U	<0.30	U	<0.32	U
2,2´,5,5´-TeCB	52	SW8082CON	µg/Kg	<0.37	U	<0.38	U	<0.37	U	<0.37	U	<0.38	U
2,3´,4,4´-TeCB	66	SW8082CON	µg/Kg	<0.22	U	<0.23	U	<0.23	U	<0.22	U	<0.23	U
3,3´,4,4´-TeCB	77	SW8082CON	µg/Kg	<0.37	U	<0.39	U	<0.38	U	<0.37	U	<0.39	U
2,2´,3,4,5´-PeCB	87	SW8082CON	µg/Kg	<0.16	U	<0.17	U	<0.17	U	<0.16	U	<0.17	U
2,2´,4,5,5´-PeCB	101	SW8082CON	µg/Kg	<0.31	U	<0.33	U	<0.32	U	<0.31	U	<0.33	U
2,3,3´,4,4´-PeCB	105	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.18	U	<0.18	U	<0.18	U
2,3,3´,4´,6-PeCB	110	SW8082CON	µg/Kg	<0.17	U	<0.18	U	<0.17	U	<0.17	U	<0.17	U
2,3´,4,4´,5-PeCB	118	SW8082CON	µg/Kg	<0.26	U	<0.28	U	<0.27	U	<0.26	U	<0.27	U
3,3´,4,4´,5-PeCB	126	SW8082CON	µg/Kg	<0.26	U	<0.27	U	<0.26	U	<0.26	U	<0.27	U
2,2´,3,3´,4,4´-HxCB	128	SW8082CON	µg/Kg	<0.14	U	<0.15	U	<0.15	U	<0.14	U	<0.15	U
2,2´,3,4,4´,5´-HxCB	138	SW8082CON	µg/Kg	<0.18	U	<0.18	U	<0.18	U	<0.18	U	<0.18	U
2,2´,4,4´,5,5´-HxCB	153	SW8082CON	µg/Kg	<0.28	U	<0.29	U	<0.28	U	<0.28	U	<0.29	U
3,3´,4,4´,5,5´-HxCB	169	SW8082CON	µg/Kg	<0.31	U	<0.33	U	<0.31	U	<0.31	U	<0.32	U
2,2´,3,3´,4,4´,5-HpCB	170	SW8082CON	µg/Kg	<0.16	U	<0.16	U	<0.16	U	<0.16	U	<0.16	U
2,2´,3,4,4´,5,5´-HpCB	180	SW8082CON	µg/Kg	<0.18	U	<0.19	U	<0.18	U	<0.18	U	<0.19	U
2,2´,3,4,4´,5´,6-HpCB	183	SW8082CON	µg/Kg	<0.27	U	<0.29	U	<0.28	U	<0.27	U	<0.29	U
2,2´,3,4,4´,6,6´-HpCB	184	SW8082CON	µg/Kg	<0.23	U	<0.25	U	<0.24	U	<0.24	U	<0.24	U
2,2´,3,4´,5,5´,6-HpCB	187	SW8082CON	µg/Kg	<0.27	U	<0.29	U	<0.28	U	<0.27	U	<0.29	U
2,2´,3,3´,4,4´,5,6-OcCB	195	SW8082CON	µg/Kg	<0.19	U	<0.20	U	<0.19	U	<0.19	U	<0.20	U
2,2',3,3',4,4',5,5',6-NoCB	206	SW8082CON	µg/Kg	<0.17	U	<0.18	U	<0.17	U	<0.17	U	<0.18	U
DeCB	209	SW8082CON	µg/Kg	<0.20	U	<0.21	U	<0.20	U	<0.20	U	<0.21	U

APPENDIX C

Table 9: 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Parameter		Sample ID		Placement Unit		Management Unit		Placement Unit QA/QC				Management Unit QA/QC			
				MOPU Lake Superior		DS-11-MU5		GLEC Control Sample (MOPU)		INTRA-LAB BLANK (MOPU)		GLEC Control Sample (MU5)		INTRA-LAB BLANK (MU5)	
		GLEC Sample ID		9052-Rep 1		9056-Rep3		Control-Rep 5				Control Rep - 2			
		TA Lab ID		G1J250505-002		G1K090434		G1J250505-001				G1K090434			
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	ootnote	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 1 (BZ)	2051607	1668A	pg/g	10	J	3.8	J	4.1	J	<0.3	U	2.7	J	<0.39	U
PCB 2 (BZ)	2051618	1668A	pg/g	<0.53	U	1.1	J	1.1	J Q	<0.24	U	1.2	J Q	<0.26	U
PCB 3 (BZ)	2051629	1668A	pg/g	5.5	J Q	3.6	J	3	J Q	<0.18	U	4.5	J	<0.66	U
PCB 4 (BZ)	13029088	1668A	pg/g	62	J	**30**		25	J	<2.1	U	**32**		<1.6	U
PCB 5 (BZ)	16605917	1668A	pg/g	<5.3	U	<2	U	<2.6	U	<1.6	U	<1.2	U	<1.3	U
PCB 6 (BZ)	25569806	1668A	pg/g	33	J	20	J	13	J Q	<1.6	U	**20**		<1.4	U
PCB 7 (BZ)	33284503	1668A	pg/g	11	J	<3.3	U	<2.5	U	<1.6	U	<1.8	U	<1.3	U
PCB 8 (BZ)	34883437	1668A	pg/g	**180**	U	**100**		**66**		<1.6	U	**110**		<1.4	U
PCB 9 (BZ)	34883391	1668A	pg/g	6.5	J Q	<3.2	U	<2.8	U	<1.8	U	6.8	J Q	<1.5	U
PCB 10 (BZ)	33146451	1668A	pg/g	<5.0	U	<1.7	U	<3.1	U	<1.2	U	<1.3	U	<0.79	U
PCB 11 (BZ)	2050671	1668A	pg/g	70	J	**44**	**B**	31	J Q	<1.7	U	**44**	**B**	12	J
PCB 12 (BZ)	2974927	1668A	pg/g	8.8	C J Q	<3.6	U	<2.7	U	<1.7	U	3.9	C J	<1.4	U
PCB 13 (BZ)	2974905	1668A	pg/g	8.8	C J Q	<3.6	U	<2.7	U	<1.7	U	3.9	C J	<1.4	U
PCB 14 (BZ)	34883415	1668A	pg/g	<4.6	U	<1.7	U	<2.3	U	<1.4	U	<1.1	U	<1.2	U
PCB 15 (BZ)	2050682	1668A	pg/g	48	J	**25**		15	J Q	<1.3	U	**24**		<0.96	U
PCB 16 (BZ)	38444789	1668A	pg/g	44	J	**40**		16	J	<0.26	U	**25**		<0.97	U
PCB 17 (BZ)	37680663	1668A	pg/g	50	J	**46**		16	J	<0.21	U	**25**		<0.56	U
PCB 18 (BZ)	37680652	1668A	pg/g	93	C J B	**88**	**C B**	**25**	C J B	0.82	C J Q	**49**	**C B**	1.1	C J
PCB 19 (BZ)	38444734	1668A	pg/g	15	J	11	J	4.6	J	<0.26	U	6.3	J	<0.3	U
PCB 20 (BZ)	38444847	1668A	pg/g	**170**	**C B**	**160**	**C B**	**42**	C B	2.1	C J	**65**	**C B**	1.9	C J
PCB 21 (BZ)	55702460	1668A	pg/g	71	C J B	**63**	**C B**	21	C J B	0.68	C J Q	**35**	**C B**	1	C J Q
PCB 22 (BZ)	38444858	1668A	pg/g	56	J B	**48**	**B**	16	J B	0.61	J	**25**	**B**	0.81	J Q
PCB 23 (BZ)	55720440	1668A	pg/g	<1.1	U	<0.6	U	<0.24	U	<0.24	U	<0.3	U	<0.26	U
PCB 24 (BZ)	55702459	1668A	pg/g	0.42	J Q	0.65	J Q	0.33	J	<0.16	U	0.68	J	<0.2	U
PCB 25 (BZ)	55712373	1668A	pg/g	15	J	16	J	3.3	J	<0.25	U	5.5	J	<0.27	U
PCB 26 (BZ)	38444814	1668A	pg/g	32	C J	**30**	**C**	7.5	C J	<0.24	U	12	C J	<0.26	U
PCB 27 (BZ)	38444767	1668A	pg/g	7.8	J	7.2	J	2.3	J	<0.16	U	3.8	J	<0.19	U
PCB 28 (BZ)	7012375	1668A	pg/g	**170**	**C B**	**160**	**C B**	**42**	C B	2.1	C J	**65**	**C B**	1.9	C J
PCB 29 (BZ)	15862074	1668A	pg/g	32	C J	**30**	**C**	7.5	C J	<0.24	U	12	C J	<0.26	U

APPENDIX C

Table 9: 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Parameter		Sample ID		Placement Unit		Management Unit		Placement Unit QA/QC				Management Unit QA/QC			
				MOPU Lake Superior		DS-11-MU5		GLEC Control Sample (MOPU)		INTRA-LAB BLANK (MOPU)		GLEC Control Sample (MU5)		INTRA-LAB BLANK (MU5)	
		GLEC Sample ID		9052-Rep 1		9056-Rep3		Control-Rep 5				Control Rep - 2			
		TA Lab ID		G1J250505-002		G1K090434		G1J250505-001				G1K090434			
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	ootnote	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 30 (BZ)	35693926	1668A	pg/g	93	C J B	88	C B	25	C J B	0.82	C J Q	49	C B	1.1	C J
PCB 31 (BZ)	16606023	1668A	pg/g	140	B	130	B	33	J B	1.6	J Q	56	B	2	J
PCB 32 (BZ)	38444778	1668A	pg/g	34	J B	38		9.1	J B	0.51	J	15	J	<0.52	U
PCB 33 (BZ)	38444869	1668A	pg/g	71	C J B	63	C B	21	C J B	0.68	C J Q	35	C B	1	C J Q
PCB 34 (BZ)	37680685	1668A	pg/g	<1.1	U	2.3	J	<0.25	U	<0.25	U	<0.33	U	<0.27	U
PCB 35 (BZ)	37680696	1668A	pg/g	<1.1	U	2.9	J	0.37	J	<0.26	U	<0.41	U	<0.28	U
PCB 36 (BZ)	38444870	1668A	pg/g	5.1	J Q	<0.58	U	<0.23	U	<0.23	U	<0.3	U	<0.25	U
PCB 37 (BZ)	38444905	1668A	pg/g	15	J	20	J B	3.8	J	<0.23	U	5.2	J B	0.52	J Q
PCB 38 (BZ)	53555661	1668A	pg/g	<1.1	U	<0.66	U	<0.26	U	<0.26	U	<0.43	U	0.28	U
PCB 39 (BZ)	38444881	1668A	pg/g	<1	U	1	J Q	<0.24	U	<0.23	U	<0.29	U	<0.25	U
PCB 40 (BZ)	38444938	1668A	pg/g	94	C J	170	C B	6	C J	<0.23	U	9.5	C J B	0.27	C J
PCB 41 (BZ)	52663599	1668A	pg/g	16	J	17	J	2.2	J	<0.33	U	2.8	J	<0.23	U
PCB 42 (BZ)	36559225	1668A	pg/g	68	J	110	B	4	J	<0.26	U	6.2	J B	0.32	J
PCB 43 (BZ)	70362468	1668A	pg/g	8.8	J	15	J	0.71	J	<0.29	U	1.1	J Q	<0.21	U
PCB 44 (BZ)	41464395	1668A	pg/g	350	C B	510	C B	19	C J B	2.5	C J	36	C B	5.3	C J
PCB 45 (BZ)	70362457	1668A	pg/g	31	J Q	43		3.1	J	<0.3	U	5.1	J	<0.21	U
PCB 46 (BZ)	41464475	1668A	pg/g	13	J	19	J	1.5	J	<0.29	U	2.1	J	<0.21	U
PCB 47 (BZ)	2437798	1668A	pg/g	350	C B	510	C B	19	C J B	2.5	C J	36	C B	5.3	C J
PCB 48 (BZ)	70362479	1668A	pg/g	39	J	58	B	3.9	J	<0.25	U	5	J Q B	0.41	J
PCB 49 (BZ)	41464408	1668A	pg/g	240	C B	370	C B	9.4	C J B	0.65	C J Q	15	C J B	0.8	C J
PCB 50 (BZ)	62796650	1668A	pg/g	39	C J	73	C B	2.7	C J	<0.24	U	4.6	C J B	0.33	C J Q
PCB 51 (BZ)	68194047	1668A	pg/g	13	J	41	B	1	J	<0.22	U	2.9	J B	1.1	J
PCB 52 (BZ)	35693993	1668A	pg/g	600	B	910	B	26	J B	1.8	J Q	41	B	1.8	J
PCB 53 (BZ)	41464419	1668A	pg/g	39	C J	73	C B	2.7	C J	<0.24	U	4.6	C J B	0.33	C J Q
PCB 54 (BZ)	15968055	1668A	pg/g	<0.32	U	4.3	J	<0.11	U	<0.097	U	0.28	J	<0.1	U
PCB 55 (BZ)	74338242	1668A	pg/g	<1.4	U	<0.80	U	<0.21	U	<0.24	U	<0.26	U	<0.2	U
PCB 56 (BZ)	41464431	1668A	pg/g	120		170	B	5.1	J	<0.24	U	7.1	J B	0.38	J
PCB 57 (BZ)	70424678	1668A	pg/g	<1.4	U	<0.77	U	<0.20	U	<0.23	U	<0.25	U	<0.2	U
PCB 58 (BZ)	41464497	1668A	pg/g	<1.3	U	<0.76	U	<0.20	U	<0.22	U	<0.25	U	<0.19	U

APPENDIX C

Table 9: 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Parameter		Sample ID		Placement Unit		Management Unit		Placement Unit QA/QC				Management Unit QA/QC			
				MOPU Lake Superior		DS-11-MU5		GLEC Control Sample (MOPU)		INTRA-LAB BLANK (MOPU)		GLEC Control Sample (MU5)		INTRA-LAB BLANK (MU5)	
		GLEC Sample ID		9052-Rep 1		9056-Rep3		Control-Rep 5				Control Rep - 2			
		TA Lab ID		G1J250505-002		G1K090434		G1J250505-001				G1K090434			
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	ootnote	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 59 (BZ)	74472336	1668A	pg/g	27	C J	40	C	1.5	C J	<0.18	U	2.1	C J	<0.13	U
PCB 60 (BZ)	33025411	1668A	pg/g	70	J	46		3.7	J	<0.23	U	4.9	J	<0.2	U
PCB 61 (BZ)	33284536	1668A	pg/g	670	C B	780	C B	28	C J B	1.6	C J	39	C B	1.9	C J Q
PCB 62 (BZ)	54230227	1668A	pg/g	27	C J	40	C	1.5	C J	<0.18	U	2.1	C J	<0.13	U
PCB 63 (BZ)	74472347	1668A	pg/g	15	J Q	22		0.54	J Q	<0.20	U	0.89	J Q	<0.18	U
PCB 64 (BZ)	52663588	1668A	pg/g	140	B	180	B	7.2	J B	0.44	J	11	J B	0.41	J
PCB 65 (BZ)	33284547	1668A	pg/g	350	C B	510	C B	19	C J B	2.5	C J	36	C B	5.3	C J
PCB 66 (BZ)	32598100	1668A	pg/g	350	B	400	B	13	J B	0.77	J	18	J B	0.88	J
PCB 67 (BZ)	73575538	1668A	pg/g	9.3	J	13	J	0.58	J	<0.22	U	0.31	J Q	<0.19	U
PCB 68 (BZ)	73575527	1668A	pg/g	12	J	9.8	J Q B	0.38	J Q	<0.21	U	1.5	J B	0.64	J
PCB 69 (BZ)	60233241	1668A	pg/g	240	C B	370	C B	9.4	C J B	0.65	C J Q	15	C J B	0.8	C J
PCB 70 (BZ)	32598111	1668A	pg/g	670	C B	780	C B	28	C J B	1.6	C J	39	C B	1.9	C J Q
PCB 71 (BZ)	41464464	1668A	pg/g	94	C J	170	C B	6	C J	<0.23	U	9.5	C J B	0.27	C J
PCB 72 (BZ)	41464420	1668A	pg/g	11	J	18	J	<0.19	U	<0.22	U	<0.24	U	<0.19	U
PCB 73 (BZ)	74338231	1668A	pg/g	<0.61	U	<0.19	U	<0.16	U	<0.19	U	<0.15	U	<0.13	U
PCB 74 (BZ)	32690930	1668A	pg/g	670	C B	780	C B	28	C J B	1.6	C J	39	C B	1.9	C J Q
PCB 75 (BZ)	32598122	1668A	pg/g	27	C J	40	C	1.5	C J	<0.18	U	2.1	C J	<0.13	U
PCB 76 (BZ)	70362480	1668A	pg/g	670	C B	780	C B	28	C J B	1.6	C J	39	C B	1.9	C J Q
PCB 77 (BZ)	32598133	1668A	pg/g	20		21		1.5	J Q	<0.23	U	2.4		<0.22	U
PCB 78 (BZ)	70362491	1668A	pg/g	<1.5	U	<0.83	U	<0.21	U	<0.25	U	<0.27	U	<0.21	U
PCB 79 (BZ)	41464486	1668A	pg/g	9.8	J Q	19	J	<0.18	U	<0.21	U	<0.23	U	<0.18	U
PCB 80 (BZ)	33284525	1668A	pg/g	<1.2	U	<0.69	U	<0.18	U	<0.2	U	<0.22	U	<0.18	U
PCB 81 (BZ)	70362504	1668A	pg/g	<1.3	U	<0.75	U	<0.18	U	<0.22	U	<0.25	U	<0.19	U
PCB 82 (BZ)	52663624	1668A	pg/g	140		240		2.4	J Q	<0.25	U	2.5	J	<0.37	U
PCB 83 (BZ)	60145202	1668A	pg/g	130		180		2.1	J Q	<0.2	U	2.7	J	<0.2	U
PCB 84 (BZ)	52663602	1668A	pg/g	300		460		5.1	J	<0.24	U	7.2	J	<0.49	U
PCB 85 (BZ)	65510454	1668A	pg/g	240	C	380	C	4.9	C J	<0.17	U	9.4	C J Q	<0.24	U
PCB 86 (BZ)	55312691	1668A	pg/g	770	C	1,300	C B	17	C J	<0.18	U	23	C B	0.92	C J
PCB 87 (BZ)	38380028	1668A	pg/g	770	C	1,300	C B	17	C J	<0.18	U	23	C B	0.92	C J

APPENDIX C

Table 9: 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Parameter		Sample ID		Placement Unit		Management Unit		Placement Unit QA/QC				Management Unit QA/QC			
				MOPU Lake Superior		DS-11-MU5		GLEC Control Sample (MOPU)		INTRA-LAB BLANK (MOPU)		GLEC Control Sample (MU5)		INTRA-LAB BLANK (MU5)	
		GLEC Sample ID		9052-Rep 1		9056-Rep3		Control-Rep 5				Control Rep - 2			
		TA Lab ID		G1J250505-002		G1K090434		G1J250505-001				G1K090434			
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	ootnote	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 88 (BZ)	55215173	1668A	pg/g	**200**	**C**	**300**	**C**	2.7	C J	<0.2	U	4.1	C J	<0.2	U
PCB 89 (BZ)	73575572	1668A	pg/g	10	J	19	J	<0.24	U	<0.22	U	<0.33	U	<0.22	U
PCB 90 (BZ)	68194070	1668A	pg/g	**1,500**	**C B**	**2,300**	**C B D**	28	C J B	0.92	C J	**39**	**C B**	1	C J Q
PCB 91 (BZ)	68194058	1668A	pg/g	**200**	**C**	**300**	**C**	2.7	C J	<0.20	U	4.1	C J	<0.2	U
PCB 92 (BZ)	52663613	1668A	pg/g	**340**		**580**		5.1	J	<0.21	U	7.7	J	<0.21	U
PCB 93 (BZ)	73575561	1668A	pg/g	16	C J	**43**	**C**	<0.21	U	<0.20	U	<0.29	U	<0.19	U
PCB 94 (BZ)	73575550	1668A	pg/g	6.1	J	17	J	<0.24	U	<0.22	U	<0.32	U	<0.22	U
PCB 95 (BZ)	38379996	1668A	pg/g	**1,200**	**B**	**1,700**	**B**	18	J B	1.1	J	**24**	**B**	0.94	J
PCB 96 (BZ)	73575549	1668A	pg/g	5.6	J	11	J	<0.074	U	<0.11	U	0.2	J	<0.11	U
PCB 97 (BZ)	41464511	1668A	pg/g	**770**	**C**	**1,300**	**C B**	17	C J	<0.18	U	**23**	**C B**	0.92	C J
PCB 98 (BZ)	60233252	1668A	pg/g	37	C J	**60**	**C**	0.42	C J	<0.21	U	<0.31	U	<0.21	U
PCB 99 (BZ)	38380017	1668A	pg/g	**710**		**950**	**B**	13	J	<0.18	U	**20**	**B**	0.18	J Q
PCB 100 (BZ)	39485831	1668A	pg/g	16	C J	**43**	**C**	<0.21	U	<0.20	U	<0.29	U	<0.19	U
PCB 101 (BZ)	37680732	1668A	pg/g	**1,500**	**C B**	**2,300**	**C D B**	28	C J B	0.92	C J	**39**	**C B**	1	C J Q
PCB 102 (BZ)	68194069	1668A	pg/g	37	C J	**60**	**C**	0.42	C J	<0.21	U	<0.31	U	<0.21	U
PCB 103 (BZ)	60145213	1668A	pg/g	20	J	**43**		<0.20	U	<0.19	U	<0.28	U	<0.19	U
PCB 104 (BZ)	56558168	1668A	pg/g	<0.27	U	2.3	J	<0.075	U	<0.14	U	0.2	J Q	<0.12	U
PCB 105 (BZ)	32598144	1668A	pg/g	**360**		**440**	**B**	13	U	<0.15	U	**17**	**B**	0.94	J Q
PCB 106 (BZ)	70424690	1668A	pg/g	<1.4	U	<0.75	U	<0.21	U	<0.19	U	<0.29	U	<0.19	U
PCB 107 (BZ) /109 (IUPAC)	70424689	1668A	pg/g	96	J	**120**		1.8	J Q	<0.13	U	3.2	J	<0.13	U
PCB 108 (BZ) /107 (IUPAC)	70362413	1668A	pg/g	39	C J	**60**	**C**	1.1	C J Q	<0.16	U	1.7	C J	<0.16	U
PCB 109 (BZ) /108 (IUPAC)	74472358	1668A	pg/g	**770**	**C**	**1,300**	**C B**	17	C J	>0.18	U	**23**	**C B**	0.92	C J
PCB 110 (BZ)	38380039	1668A	pg/g	**1,900**	**C B**	**2,800**	**C D B**	**35**	C B	0.93	C J	**45**	**C B**	1.5	C J Q
PCB 111 (BZ)	39635320	1668A	pg/g	3.7	J	5.2	J	<0.16	U	<0.15	U	<0.23	U	<0.15	U
PCB 112 (BZ)	74472369	1668A	pg/g	<1.4	U	<0.76	U	<0.21	U	<0.20	U	<0.29	U	<0.2	U
PCB 113 (BZ)	68194105	1668A	pg/g	**1,500**	**C B**	**2,300**	**C D B**	28	C J B	0.92	C J	**39**	**C B**	1	C J Q
PCB 114 (BZ)	74472370	1668A	pg/g	**22**		**27**		0.5	J	<0.14	U	0.7	J	<0.16	U

APPENDIX C

Table 9: 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Parameter		Sample ID		Placement Unit		Management Unit		Placement Unit QA/QC				Management Unit QA/QC			
				MOPU Lake Superior		DS-11-MU5		GLEC Control Sample (MOPU)		INTRA-LAB BLANK (MOPU)		GLEC Control Sample (MU5)		INTRA-LAB BLANK (MU5)	
		GLEC Sample ID		9052-Rep 1		9056-Rep3		Control-Rep 5				Control Rep - 2			
		TA Lab ID		G1J250505-002		G1K090434		G1J250505-001				G1K090434			
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	ootnote	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 115 (BZ)	74472381	1668A	pg/g	**1,900**	**C B**	**2,800**	**C D B**	**35**	C B	*0.93*	*C J*	**45**	**C B**	*1.5*	*C J Q*
PCB 116 (BZ)	18259057	1668A	pg/g	**240**	**C**	**380**	**C**	*4.9*	*C J*	<0.17	U	*9.4*	*C J Q*	<0.24	U
PCB 117 (BZ)	68194116	1668A	pg/g	**240**	**C**	**380**	**C**	*4.9*	*C J*	<0.17	U	*9.4*	*C J Q*	<0.24	U
PCB 118 (BZ)	31508006	1668A	pg/g	**1,100**	**B**	**1,300**	**B**	**28**	B	*0.51*	*J*	**38**	**B**	*1.3*	*J*
PCB 119 (BZ)	56558179	1668A	pg/g	**770**	**C**	**1,300**	**C B**	*17*	*C J*	<0.18	U	**23**	**C B**	*0.92*	*C J*
PCB 120 (BZ)	68194127	1668A	pg/g	*11*	*J*	*15*	*J*	<0.16	U	<0.15	U	<0.23	U	<0.15	U
PCB 121 (BZ)	56558180	1668A	pg/g	<1.1	U	*2*	*J Q*	<0.16	U	<0.15	U	<0.22	U	<0.15	U
PCB 122 (BZ)	76842074	1668A	pg/g	*15*	*J Q*	**22**		<0.17	U	<0.16	U	<0.24	U	<0.16	U
PCB 123 (BZ)	65510443	1668A	pg/g	**15**		**17**		*0.55*	*J Q*	<0.14	U	*0.65*	*J*	<0.13	U
PCB 124 (BZ)	70424703	1668A	pg/g	*39*	*C J*	**60**	**C**	*1.1*	*C J Q*	<0.16	U	*1.7*	*C J*	<0.16	U
PCB 125 (BZ)	74472392	1668A	pg/g	**770**	**C**	**1,300**	**C B**	*17*	*C J*	<0.18	U	**23**	**C B**	*0.92*	*C J*
PCB 126 (BZ)	57465288	1668A	pg/g	*4.9*	*J*	**4.4**		<0.20	U	<0.18	U	*0.44*	*J*	<0.17	U
PCB 127 (BZ)	39635331	1668A	pg/g	<1.1	U	<0.62	U	<0.17	U	<0.16	U	<0.24	U	<0.16	U
PCB 128 (BZ)	38380073	1668A	pg/g	**290**	**C**	**450**	**C B**	*5.6*	*C J*	<0.15	U	*8.7*	*C J B*	*0.27*	*C J*
PCB 129 (BZ)	55215184	1668A	pg/g	**1,900**	**C B**	**3,300**	**C D B**	**37**	C B	*0.48*	*C J Q*	**59**	**C B**	*1.3*	*C J Q*
PCB 130 (BZ)	52663668	1668A	pg/g	**120**		**220**		*2.3*	*J*	<0.20	U	*3.4*	*J*	<0.15	U
PCB 131 (BZ)	61798707	1668A	pg/g	*16*	*J*	**27**		<0.16	U	<0.19	U	<0.2	U	<0.15	U
PCB 132 (BZ)	38380051	1668A	pg/g	**530**		**980**	**B**	*6.5*	*J*	<0.19	U	*8.6*	*J B*	*0.41*	*J*
PCB 133 (BZ)	35694043	1668A	pg/g	*44*	*J*	**84**		*0.82*	*J Q*	<0.18	U	*0.94*	*J Q*	<0.14	U
PCB 134 (BZ)	52704708	1668A	pg/g	*68*	*C J*	**150**	**C**	*0.63*	*C J Q*	<0.20	U	*1.3*	*C J*	<0.15	U
PCB 135 (BZ)	52744135	1668A	pg/g	**780**	**C**	**1,600**	**C B**	*9.5*	*C J*	<0.17	U	*13*	*C J B*	*0.41*	*C J*
PCB 136 (BZ)	38411222	1668A	pg/g	**230**		**410**		*2.2*	*J*	<0.13	U	*3.5*	*J*	<0.1	U
PCB 137 (BZ)	35694065	1668A	pg/g	*19*	*J*	**32**		*0.24*	*J Q*	<0.14	U	*0.5*	*J*	<0.1	U
PCB 138 (BZ)	35065282	1668A	pg/g	**1,900**	**C B**	**3,300**	**C D B**	**37**	C B	*0.48*	*C J Q*	**59**	**C B**	*1.3*	*C J Q*
PCB 139 (BZ)	56030569	1668A	pg/g	*31*	*C J*	**65**	**C**	*0.52*	*C J*	<0.16	U	<0.17	U	<0.12	U
PCB 140 (BZ)	59291644	1668A	pg/g	*31*	*C J*	**65**	**C**	*0.52*	*C J*	<0.16	U	<0.17	U	<0.12	U
PCB 141 (BZ)	52712046	1668A	pg/g	*36*	*J*	**80**	**B**	*1.4*	*J*	<0.21	U	*1.4*	*J Q B*	*0.31*	*J*
PCB 142 (BZ)	41411614	1668A	pg/g	<1.5	U	<0.79	U	<0.19	U	<0.22	U	<0.23	U	<0.17	U
PCB 143 (BZ)	68194150	1668A	pg/g	*68*	*C J*	**150**	**C**	*0.63*	*C J Q*	<0.2	U	*1.3*	*C J*	<0.15	U

APPENDIX C

Table 9: 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Parameter		Sample ID		Placement Unit		Management Unit		Placement Unit QA/QC				Management Unit QA/QC			
				MOPU Lake Superior		DS-11-MU5		GLEC Control Sample (MOPU)		INTRA-LAB BLANK (MOPU)		GLEC Control Sample (MU5)		INTRA-LAB BLANK (MU5)	
		GLEC Sample ID		9052-Rep 1		9056-Rep3		Control-Rep 5				Control Rep - 2			
		TA Lab ID		G1J250505-002		G1K090434		G1J250505-001				G1K090434			
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	ootnote	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 144 (BZ)	68194149	1668A	pg/g	52	J	110		0.4	J Q	<0.17	U	0.73	J Q	<0.13	U
PCB 145 (BZ)	74472405	1668A	pg/g	<0.86	U	<0.73	U	<0.11	U	<0.13	U	<0.14	U	<0.1	U
PCB 146 (BZ)	51908168	1668A	pg/g	310		590		5.6	J	<0.14	U	8.2	J	<0.1	U
PCB 147 (BZ)	68194138	1668A	pg/g	1,700	C B	3,100	C D B	22	C J B	0.54	C J Q	32	C B	0.83	C J
PCB 148 (BZ)	74472416	1668A	pg/g	5.6	J Q	16	J	<0.14	U	<0.17	U	<0.17	U	<0.13	U
PCB 149 (BZ)	38380040	1668A	pg/g	1,700	C B	3,100	C D B	22	C J B	0.54	C J Q	32	C B	0.83	C J
PCB 150 (BZ)	68194081	1668A	pg/g	4.4	J Q	8.2	J	<0.11	U	<0.13	U	<0.13	U	<0.097	U
PCB 151 (BZ)	52663635	1668A	pg/g	780	C	1,600	C B	9.5	C J	<0.17	U	13	C J B	0.41	C J
PCB 152 (BZ)	68194092	1668A	pg/g	<0.8	U	3.3	J Q	<0.10	U	<0.12	U	<0.13	U	<0.093	U
PCB 153 (BZ)	35065271	1668A	pg/g	1,600	C B	2,900	C D B	33	C J B	0.39	C J Q	51	C B	1	C J
PCB 154 (BZ)	60145224	1668A	pg/g	45	J	83		0.55	J	<0.16	U	0.56	J	<0.12	U
PCB 155 (BZ)	33979032	1668A	pg/g	2.1	J Q	<0.44	U	<0.11	U	<0.16	U	<0.12	U	<0.087	U
PCB 156 (BZ)	38380084	1668A	pg/g	140	C	260	C B	3.8	C J Q	<0.19	U	5.4	C B	0.37	C J
PCB 157 (BZ)	69782907	1668A	pg/g	140	C	260	C B	3.8	C J Q	<0.19	U	5.4	C B	0.37	C J
PCB 158 (BZ)	74472427	1668A	pg/g	79	J	200		2	J Q	<0.13	U	3	J Q	<0.1	U
PCB 159 (BZ)	39635353	1668A	pg/g	5.7	J Q	16	J	<0.17	U	<0.17	U	<0.17	U	<0.13	U
PCB 160 (BZ)	41411625	1668A	pg/g	<1.1	U	<0.6	U	<0.14	U	<0.17	U	<0.17	U	<0.13	U
PCB 161 (BZ)	74472438	1668A	pg/g	<1.1	U	<0.6	U	<0.14	U	<0.17	U	<0.17	U	<0.13	U
PCB 162 (BZ)	39635342	1668A	pg/g	5.4	J Q	12	J B	0.35	J Q	<0.17	U	<0.17	U	0.5	J
PCB 163 (BZ)	74472449	1668A	pg/g	1,900	C B	3,300	C D B	37	C B	0.48	C J Q	59	C B	1.3	C J Q
PCB 164 (BZ)	74472450	1668A	pg/g	140		280		2.9	J	<0.17	U	4.6	J	<0.13	U
PCB 165 (BZ)	74472461	1668A	pg/g	1.2	J Q	2.7	J	<0.12	U	<0.14	U	<0.15	U	<0.11	U
PCB 166 (BZ)	41411636	1668A	pg/g	290	C	450	C B	5.6	C J	<0.15	U	8.7	C J B	0.27	C J
PCB 167 (BZ)	52663726	1668A	pg/g	46		91		1.3	J Q	<0.14	U	2.3		<0.12	U
PCB 168 (BZ)	59291655	1668A	pg/g	1,600	C B	2,900	C D B	33	C J B	0.39	C J Q	51	C B	1	C J
PCB 169 (BZ)	32774166	1668A	pg/g	<1.3	U	<0.82	U	<0.19	U	<0.19	U	0.45	J	<0.16	U
PCB 170 (BZ)	35065306	1668A	pg/g	230		580	B	6.4	J	<0.23	U	6.6	J Q B	0.75	J Q
PCB 171 (BZ)	52663715	1668A	pg/g	120	C	270	C	1.8	C J Q	<0.23	U	2.6	C J Q	<0.16	U
PCB 172 (BZ)	52663748	1668A	pg/g	32	J	98		0.94	J	<0.22	U	1.6	J	<0.15	U

APPENDIX C

Table 9: 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Parameter		Sample ID		Placement Unit		Management Unit		Placement Unit QA/QC				Management Unit QA/QC			
				MOPU Lake Superior		DS-11-MU5		GLEC Control Sample (MOPU)		INTRA-LAB BLANK (MOPU)		GLEC Control Sample (MU5)		INTRA-LAB BLANK (MU5)	
		GLEC Sample ID		9052-Rep 1		9056-Rep3		Control-Rep 5				Control Rep - 2			
		TA Lab ID		G1J250505-002		G1K090434		G1J250505-001				G1K090434			
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	ootnote	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 173 (BZ)	68194161	1668A	pg/g	**120**	**C**	**270**	**C**	*1.8*	*C J Q*	<0.23	U	*2.6*	*C J Q*	<0.16	U
PCB 174 (BZ)	38411255	1668A	pg/g	**290**		**740**		*6.2*	*J*	<0.27	U	*7.9*	*J*	<0.18	U
PCB 175 (BZ)	40186707	1668A	pg/g	*4*	*J Q*	**28**		<0.13	U	<0.12	U	<0.11	U	<0.092	U
PCB 176 (BZ)	52663657	1668A	pg/g	*59*	*J*	**140**		*0.75*	*J*	<0.09	U	*1.3*	*J*	<0.068	U
PCB 177 (BZ)	52663704	1668A	pg/g	**340**		**730**		*5.1*	*J Q*	<0.23	U	*7.4*	*J*	<0.15	U
PCB 178 (BZ)	52663679	1668A	pg/g	**140**		**280**		*2.8*	*J*	<0.13	U	*4.1*	*J*	<0.096	U
PCB 179 (BZ)	52663646	1668A	pg/g	**240**		**540**		*3*	*J Q*	<0.096	U	*5.2*	*J*	<0.073	U
PCB 180 (BZ)	35065293	1668A	pg/g	**140**	**C**	**300**	**C B**	*3.6*	*C J*	<0.18	U	*4*	*C J B*	*0.57*	*C J Q*
PCB 181 (BZ)	74472472	1668A	pg/g	*2.7*	*J*	<0.57	U	<0.16	U	<0.19	U	<0.17	U	<0.13	U
PCB 182 (BZ)	60145235	1668A	pg/g	<0.45	U	<0.19	U	<0.13	U	<0.12	U	<0.11	U	<0.093	U
PCB 183 (BZ)	52663691	1668A	pg/g	**120**		**330**		*2.4*	*J*	<0.14	U	*3.3*	*J*	<0.095	U
PCB 184 (BZ)	74472483	1668A	pg/g	<0.36	U	*1.7*	*J*	<0.11	U	<0.10	U	<0.09	U	<0.076	U
PCB 185 (BZ)	52712057	1668A	pg/g	*59*	*J*	**170**		*0.92*	*J Q*	<0.24	U	*1.5*	*J*	<0.16	U
PCB 186 (BZ)	74472494	1668A	pg/g	<0.33	U	<0.15	U	<0.10	U	<0.093	U	<0.083	U	<0.07	U
PCB 187 (BZ)	52663680	1668A	pg/g	**990**		**2,200**	**D B**	*19*	J	<0.11	U	*29*	*B J D*	*0.41*	*J*
PCB 188 (BZ)	74487857	1668A	pg/g	*1.9*	*J Q*	*3*	*J*	<0.12	U	<0.12	U	<0.085	U	<0.08	U
PCB 189 (BZ)	39635319	1668A	pg/g	**14**		**24**		*0.36*	J Q	<0.15	U	*0.84*	*J*	<0.12	U
PCB 190 (BZ)	41411647	1668A	pg/g	*86*	*J*	**170**		*1.6*	J	<0.15	U	*1.8*	*J Q*	<0.1	U
PCB 191 (BZ)	74472507	1668A	pg/g	*3*	*J Q*	*12*	*J*	<0.14	U	<0.17	U	<0.16	U	<0.11	U
PCB 192 (BZ)	74472518	1668A	pg/g	<0.90	U	<0.53	U	<0.15	U	<0.17	U	<0.16	U	<0.12	U
PCB 193 (BZ)	69782918	1668A	pg/g	**140**	**C**	**300**	**C B**	*3.6*	C J	<0.18	U	*4*	*C J B*	*0.57*	*C J Q*
PCB 194 (BZ)	35694087	1668A	pg/g	*50*	*J*	**120**		*1.5*	J	<0.18	U	*1.6*	*J Q*	<0.13	U
PCB 195 (BZ)	52663782	1668A	pg/g	*72*	*J*	**160**		*1.6*	J	<0.19	U	*2.3*	*J*	<0.13	U
PCB 196 (BZ)	42740501	1668A	pg/g	*32*	*J*	**83**		*0.48*	J Q	<0.12	U	*1.4*	*J*	<0.072	U
PCB 197 (BZ)	33091177	1668A	pg/g	*7.6*	*J*	*19*	*J*	*0.46*	J Q	<0.076	U	*0.46*	*J*	<0.048	U
PCB 198 (BZ)	68194172	1668A	pg/g	**250**	**C**	**630**	**C**	*10*	C J	<0.13	U	*17*	*C J*	<0.082	U
PCB 199 (BZ) /200 (IUPAC)	52663737	1668A	pg/g	*37*	*J*	**93**		*0.84*	J	<0.12	U	*1.6*	*J*	<0.077	U
PCB 200 (BZ) /201 (IUPAC)	40186718	1668A	pg/g	*40*	*J*	**81**		*0.82*	J	<0.091	U	*1.9*	*J*	<0.057	U

APPENDIX C

Table 9: 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Parameter		Sample ID		Placement Unit		Management Unit		Placement Unit QA/QC				Management Unit QA/QC			
				MOPU Lake Superior		DS-11-MU5		GLEC Control Sample (MOPU)		INTRA-LAB BLANK (MOPU)		GLEC Control Sample (MU5)		INTRA-LAB BLANK (MU5)	
		GLEC Sample ID		9052-Rep 1		9056-Rep3		Control-Rep 5				Control Rep - 2			
		TA Lab ID		G1J250505-002		G1K090434		G1J250505-001				G1K090434			
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	ootnote	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 201 (BZ) /199 (IUPAC)	52663759	1668A	pg/g	**250**	**C**	**630**	**C**	*10*	C J	<0.13	U	*17*	*C J*	<0.082	U
PCB 202 (BZ)	2136994	1668A	pg/g	*76*	*J*	**130**		*2.9*	J	<0.10	U	*4.1*	*J*	<0.057	U
PCB 203 (BZ)	52663760	1668A	pg/g	**160**		**380**		*5.8*	J	<0.13	U	*10*	*J*	<0.081	U
PCB 204 (BZ)	74472529	1668A	pg/g	<0.34	U	<0.16	U	<0.12	U	<0.092	U	<0.089	U	<0.058	U
PCB 205 (BZ)	74472530	1668A	pg/g	*10*	*J Q*	**21**		*0.52*	J Q	<0.14	U	*0.98*	*J*	<0.11	U
PCB 206 (BZ)	40186729	1668A	pg/g	*81*	*J Q*	**150**		*5.8*	J	<0.20	U	*8.5*	*J*	<0.21	U
PCB 207 (BZ)	52663793	1668A	pg/g	*14*	*J*	**23**		*1.2*	J	<0.12	U	*1.7*	*J Q*	<0.13	U
PCB 208 (BZ)	52663771	1668A	pg/g	*54*	*J*	**81**		*3.8*	J	<0.11	U	*4.7*	*J*	<0.084	U
PCB 209 (BZ)	2051243	1668A	pg/g	*74*	*J*	**120**	**B**	*7.1*	J	<0.14	U	*9.3*	*J B*	*0.66*	*J*

APPENDIX C

Table 10: Normalization of 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Normalized PCBs				Normalized PCBs ND = MDL				Normalized PCBs ND = 0			
				Placement Unit		Management Unit		Placement Unit		Management Unit	
Parameter		Sample ID		MOPU Lake Superior		DS-11-MU5		MOPU Lake Superior		DS-11-MU5	
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	Footnotes	Result	Footnotes
Total PCBs		1668A	**ppt**	**47,367**		**78,042**		**47,323**		**78,008**	
Total PCBs		1668A	**ppb**	**47.37**		**78.04**		**47.32**		**78.01**	
% Lipids				**0.017**		**0.015**		**0.017**		**0.015**	
Normalized PCBs		1668A	**ppb**	**2,786**		**5,203**		**2,784**		**5,201**	
PCB 1 (BZ)	2051607	1668A	pg/g	*10*	*J*	*3.8*	*J*	*10*	*J*	*3.8*	*J*
PCB 2 (BZ)	2051618	1668A	pg/g	0.53	U	*1.1*	*J*	0	U	*1.1*	*J*
PCB 3 (BZ)	2051629	1668A	pg/g	*5.5*	*J Q*	*3.6*	*J*	*5.5*	*J Q*	*3.6*	*J*
PCB 4 (BZ)	13029088	1668A	pg/g	*62*	*J*	**30**		*62*	*J*	**30**	
PCB 5 (BZ)	16605917	1668A	pg/g	5.3	U	2	U	0	U	0	U
PCB 6 (BZ)	25569806	1668A	pg/g	*33*	*J*	*20*	*J*	*33*	*J*	*20*	*J*
PCB 7 (BZ)	33284503	1668A	pg/g	*11*	*J*	3.3	U	*11*	*J*	0	U
PCB 8 (BZ)	34883437	1668A	pg/g	**180**		**100**		**180**		**100**	
PCB 9 (BZ)	34883391	1668A	pg/g	*6.5*	*J Q*	3.2	U	*6.5*	*J Q*	0	U
PCB 10 (BZ)	33146451	1668A	pg/g	5	U	1.7	U	0	U	0	U
PCB 11 (BZ)	2050671	1668A	pg/g	*70*	*J*	**44**	**B**	*70*	*J*	**44**	**B**
PCB 12 (BZ)	2974927	1668A	pg/g	*8.8*	*C J Q*	3.6	U	*8.8*	*C J Q*	0	U
PCB 13 (BZ)	2974905	1668A	pg/g	*8.8*	*C J Q*	3.6	U	*8.8*	*C J Q*	0	U
PCB 14 (BZ)	34883415	1668A	pg/g	4.6	U	1.7	U	0	U	0	U
PCB 15 (BZ)	2050682	1668A	pg/g	*48*	*J*	**25**		*48*	*J*	**25**	
PCB 16 (BZ)	38444789	1668A	pg/g	*44*	*J*	**40**		*44*	*J*	**40**	
PCB 17 (BZ)	37680663	1668A	pg/g	*50*	*J*	**46**		*50*	*J*	**46**	
PCB 18 (BZ)	37680652	1668A	pg/g	*93*	*C J B*	**88**	**C B**	*93*	*C J B*	**88**	**C B**
PCB 19 (BZ)	38444734	1668A	pg/g	*15*	*J*	*11*	*J*	*15*	*J*	*11*	*J*
PCB 20 (BZ)	38444847	1668A	pg/g	**170**	**C B**	**160**	**C B**	**170**	**C B**	**160**	**C B**
PCB 21 (BZ)	55702460	1668A	pg/g	*71*	*C J B*	**63**	**C B**	*71*	*C J B*	**63**	**C B**
PCB 22 (BZ)	38444858	1668A	pg/g	*56*	*J B*	**48**	**B**	*56*	*J B*	**48**	**B**
PCB 23 (BZ)	55720440	1668A	pg/g	1.1	U	0.6	U	0	U	0	U
PCB 24 (BZ)	55702459	1668A	pg/g	*0.42*	*J Q*	*0.65*	*J Q*	*0.42*	*J Q*	*0.65*	*J Q*
PCB 25 (BZ)	55712373	1668A	pg/g	*15*	*J*	*16*	*J*	*15*	*J*	*16*	*J*
PCB 26 (BZ)	38444814	1668A	pg/g	*32*	*C J*	**30**	**C**	*32*	*C J*	**30**	**C**
PCB 27 (BZ)	38444767	1668A	pg/g	*7.8*	*J*	*7.2*	*J*	*7.8*	*J*	*7.2*	*J*
PCB 28 (BZ)	7012375	1668A	pg/g	**170**	**C B**	**160**	**C B**	**170**	**C B**	**160**	**C B**
PCB 29 (BZ)	15862074	1668A	pg/g	*32*	*C J*	**30**	**C**	*32*	*C J*	**30**	**C**
PCB 30 (BZ)	35693926	1668A	pg/g	*93*	*C J B*	**88**	**C B**	*93*	*C J B*	**88**	**C B**
PCB 31 (BZ)	16606023	1668A	pg/g	**140**	**B**	**130**	**B**	**140**	**B**	**130**	**B**
PCB 32 (BZ)	38444778	1668A	pg/g	*34*	*J B*	**38**		*34*	*J B*	**38**	
PCB 33 (BZ)	38444869	1668A	pg/g	*71*	*C J B*	**63**	**C B**	*71*	*C J B*	**63**	**C B**
PCB 34 (BZ)	37680685	1668A	pg/g	1.1	U	*2.3*	*J*	0	U	*2.3*	*J*
PCB 35 (BZ)	37680696	1668A	pg/g	1.1	U	*2.9*	*J*	0	U	*2.9*	*J*
PCB 36 (BZ)	38444870	1668A	pg/g	*5.1*	*J Q*	0.58	U	*5.1*	*J Q*	0	U
PCB 37 (BZ)	38444905	1668A	pg/g	*15*	*J*	*20*	*J B*	*15*	*J*	*20*	*J B*
PCB 38 (BZ)	53555661	1668A	pg/g	1.1	U	0.66	U	0	U	0	U
PCB 39 (BZ)	38444881	1668A	pg/g	1	U	*1*	*J Q*	0	U	*1*	*J Q*

APPENDIX C

Table 10: Normalization of 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Normalized PCBs				Normalized PCBs ND = MDL				Normalized PCBs ND = 0			
				Placement Unit		Management Unit		Placement Unit		Management Unit	
Parameter		Sample ID		MOPU Lake Superior		DS-11-MU5		MOPU Lake Superior		DS-11-MU5	
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 40 (BZ)	38444938	1668A	pg/g	94	C J	170	C B	94	C J	170	C B
PCB 41 (BZ)	52663599	1668A	pg/g	16	J	17	J	16	J	17	J
PCB 42 (BZ)	36559225	1668A	pg/g	68	J	110	B	68	J	110	B
PCB 43 (BZ)	70362468	1668A	pg/g	8.8	J	15	J	8.8	J	15	J
PCB 44 (BZ)	41464395	1668A	pg/g	350	C B	510	C B	350	C B	510	C B
PCB 45 (BZ)	70362457	1668A	pg/g	31	J Q	43		31	J Q	43	
PCB 46 (BZ)	41464475	1668A	pg/g	13	J	19	J	13	J	19	J
PCB 47 (BZ)	2437798	1668A	pg/g	350	C B	510	C B	350	C B	510	C B
PCB 48 (BZ)	70362479	1668A	pg/g	39	J	58	B	39	J	58	B
PCB 49 (BZ)	41464408	1668A	pg/g	240	C B	370	C B	240	C B	370	C B
PCB 50 (BZ)	62796650	1668A	pg/g	39	C J	73	C B	39	C J	73	C B
PCB 51 (BZ)	68194047	1668A	pg/g	13	J	41	B	13	J	41	B
PCB 52 (BZ)	35693993	1668A	pg/g	600	B	910	B	600	B	910	B
PCB 53 (BZ)	41464419	1668A	pg/g	39	C J	73	C B	39	C J	73	C B
PCB 54 (BZ)	15968055	1668A	pg/g	0.32	U	4.3	J	0	U	4.3	J
PCB 55 (BZ)	74338242	1668A	pg/g	1.4	U	0.8	U	0	U	0	U
PCB 56 (BZ)	41464431	1668A	pg/g	120		170	B	120		170	B
PCB 57 (BZ)	70424678	1668A	pg/g	1.4	U	0.77	U	0	U	0	U
PCB 58 (BZ)	41464497	1668A	pg/g	1.3	U	0.76	U	0	U	0	U
PCB 59 (BZ)	74472336	1668A	pg/g	27	C J	40	C	27	C J	40	C
PCB 60 (BZ)	33025411	1668A	pg/g	70	J	46		70	J	46	
PCB 61 (BZ)	33284536	1668A	pg/g	670	C B	780	C B	670	C B	780	C B
PCB 62 (BZ)	54230227	1668A	pg/g	27	C J	40	C	27	C J	40	C
PCB 63 (BZ)	74472347	1668A	pg/g	15	J Q	22		15	J Q	22	
PCB 64 (BZ)	52663588	1668A	pg/g	140	B	180	B	140	B	180	B
PCB 65 (BZ)	33284547	1668A	pg/g	350	C B	510	C B	350	C B	510	C B
PCB 66 (BZ)	32598100	1668A	pg/g	350	B	400	B	350	B	400	B
PCB 67 (BZ)	73575538	1668A	pg/g	9.3	J	13	J	9.3	J	13	J
PCB 68 (BZ)	73575527	1668A	pg/g	12	J	9.8	J Q B	12	J	9.8	J Q B
PCB 69 (BZ)	60233241	1668A	pg/g	240	C B	370	C B	240	C B	370	C B
PCB 70 (BZ)	32598111	1668A	pg/g	670	C B	780	C B	670	C B	780	C B
PCB 71 (BZ)	41464464	1668A	pg/g	94	C J	170	C B	94	C J	170	C B
PCB 72 (BZ)	41464420	1668A	pg/g	11	J	18	J	11	J	18	J
PCB 73 (BZ)	74338231	1668A	pg/g	0.61	U	0.19	U	0	U	0	U
PCB 74 (BZ)	32690930	1668A	pg/g	670	C B	780	C B	670	C B	780	C B
PCB 75 (BZ)	32598122	1668A	pg/g	27	C J	40	C	27	C J	40	C
PCB 76 (BZ)	70362480	1668A	pg/g	670	C B	780	C B	670	C B	780	C B
PCB 77 (BZ)	32598133	1668A	pg/g	20		21		20		21	
PCB 78 (BZ)	70362491	1668A	pg/g	1.5	U	0.83	U	0	U	0	U
PCB 79 (BZ)	41464486	1668A	pg/g	9.8	J Q	19	J	9.8	J Q	19	J
PCB 80 (BZ)	33284525	1668A	pg/g	1.2	U	0.69	U	0	U	0	U
PCB 81 (BZ)	70362504	1668A	pg/g	1.3	U	0.75	U	0	U	0	U
PCB 82 (BZ)	52663624	1668A	pg/g	140		240		140		240	
PCB 83 (BZ)	60145202	1668A	pg/g	130		180		130		180	

APPENDIX C

Table 10: Normalization of 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Normalized PCBs				Normalized PCBs ND = MDL				Normalized PCBs ND = 0			
				Placement Unit		Management Unit		Placement Unit		Management Unit	
Parameter		Sample ID		MOPU Lake Superior		DS-11-MU5		MOPU Lake Superior		DS-11-MU5	
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 84 (BZ)	52663602	1668A	pg/g	**300**		**460**		**300**		**460**	
PCB 85 (BZ)	65510454	1668A	pg/g	**240**	**C**	**380**	**C**	**240**	**C**	**380**	**C**
PCB 86 (BZ)	55312691	1668A	pg/g	**770**	**C**	**1,300**	**C B**	**770**	**C**	**1,300**	**C B**
PCB 87 (BZ)	38380028	1668A	pg/g	**770**	**C**	**1,300**	**C B**	**770**	**C**	**1,300**	**C B**
PCB 88 (BZ)	55215173	1668A	pg/g	**200**	**C**	**300**	**C**	**200**	**C**	**300**	**C**
PCB 89 (BZ)	73575572	1668A	pg/g	*10*	*J*	*19*	*J*	*10*	*J*	*19*	*J*
PCB 90 (BZ)	68194070	1668A	pg/g	**1,500**	**C B**	**2,300**	**C B D**	**1,500**	**C B**	**2,300**	**C B D**
PCB 91 (BZ)	68194058	1668A	pg/g	**200**	**C**	**300**	**C**	**200**	**C**	**300**	**C**
PCB 92 (BZ)	52663613	1668A	pg/g	**340**		**580**		**340**		**580**	
PCB 93 (BZ)	73575561	1668A	pg/g	*16*	*C J*	**43**	**C**	*16*	*C J*	**43**	**C**
PCB 94 (BZ)	73575550	1668A	pg/g	*6.1*	*J*	*17*	*J*	*6.1*	*J*	*17*	*J*
PCB 95 (BZ)	38379996	1668A	pg/g	**1,200**	**B**	**1,700**	**B**	**1,200**	**B**	**1,700**	**B**
PCB 96 (BZ)	73575549	1668A	pg/g	*5.6*	*J*	*11*	*J*	*5.6*	*J*	*11*	*J*
PCB 97 (BZ)	41464511	1668A	pg/g	**770**	**C**	**1,300**	**C B**	**770**	**C**	**1,300**	**C B**
PCB 98 (BZ)	60233252	1668A	pg/g	*37*	*C J*	**60**	**C**	*37*	*C J*	**60**	**C**
PCB 99 (BZ)	38380017	1668A	pg/g	**710**		**950**	**B**	**710**		**950**	**B**
PCB 100 (BZ)	39485831	1668A	pg/g	*16*	*C J*	**43**	**C**	*16*	*C J*	**43**	**C**
PCB 101 (BZ)	37680732	1668A	pg/g	**1,500**	**C B**	**2,300**	**C D B**	**1,500**	**C B**	**2,300**	**C D B**
PCB 102 (BZ)	68194069	1668A	pg/g	*37*	*C J*	**60**	**C**	*37*	*C J*	**60**	**C**
PCB 103 (BZ)	60145213	1668A	pg/g	*20*	*J*	**43**		*20*	*J*	**43**	
PCB 104 (BZ)	56558168	1668A	pg/g	0.27	U	*2.3*	*J*	0	U	*2.3*	*J*
PCB 105 (BZ)	32598144	1668A	pg/g	**360**		**440**	**B**	**360**		**440**	**B**
PCB 106 (BZ)	70424690	1668A	pg/g	1.4	U	0.75	U	0	U	0	U
PCB 107 (BZ) /109 (IUPAC)	70424689	1668A	pg/g	*96*	*J*	**120**		*96*	*J*	**120**	
PCB 108 (BZ) /107 (IUPAC)	70362413	1668A	pg/g	*39*	*C J*	**60**	**C**	*39*	*C J*	**60**	**C**
PCB 109 (BZ) /108 (IUPAC)	74472358	1668A	pg/g	**770**	**C**	**1,300**	**C B**	**770**	**C**	**1,300**	**C B**
PCB 110 (BZ)	38380039	1668A	pg/g	**1,900**	**C B**	**2,800**	**C D B**	**1,900**	**C B**	**2,800**	**C D B**
PCB 111 (BZ)	39635320	1668A	pg/g	*3.7*	*J*	*5.2*	*J*	*3.7*	*J*	*5.2*	*J*
PCB 112 (BZ)	74472369	1668A	pg/g	1.4	U	0.76	U	0	U	0	U
PCB 113 (BZ)	68194105	1668A	pg/g	**1,500**	**C B**	**2,300**	**C D B**	**1,500**	**C B**	**2,300**	**C D B**
PCB 114 (BZ)	74472370	1668A	pg/g	**22**		**27**		**22**		**27**	
PCB 115 (BZ)	74472381	1668A	pg/g	**1,900**	**C B**	**2,800**	**C D B**	**1,900**	**C B**	**2,800**	**C D B**
PCB 116 (BZ)	18259057	1668A	pg/g	**240**	**C**	**380**	**C**	**240**	**C**	**380**	**C**
PCB 117 (BZ)	68194116	1668A	pg/g	**240**	**C**	**380**	**C**	**240**	**C**	**380**	**C**
PCB 118 (BZ)	31508006	1668A	pg/g	**1,100**	**B**	**1,300**	**B**	**1,100**	**B**	**1,300**	**B**
PCB 119 (BZ)	56558179	1668A	pg/g	**770**	**C**	**1,300**	**C B**	**770**	**C**	**1,300**	**C B**
PCB 120 (BZ)	68194127	1668A	pg/g	*11*	*J*	*15*	*J*	*11*	*J*	*15*	*J*
PCB 121 (BZ)	56558180	1668A	pg/g	1.1	U	*2*	*J Q*	0	U	*2*	*J Q*
PCB 122 (BZ)	76842074	1668A	pg/g	*15*	*J Q*	**22**		*15*	*J Q*	**22**	
PCB 123 (BZ)	65510443	1668A	pg/g	**15**		**17**		**15**		**17**	
PCB 124 (BZ)	70424703	1668A	pg/g	*39*	*C J*	**60**	**C**	*39*	*C J*	**60**	**C**
PCB 125 (BZ)	74472392	1668A	pg/g	**770**	**C**	**1,300**	**C B**	**770**	**C**	**1,300**	**C B**

APPENDIX C

Table 10: Normalization of 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Normalized PCBs				Normalized PCBs ND = MDL				Normalized PCBs ND = 0			
				Placement Unit		Management Unit		Placement Unit		Management Unit	
Parameter		Sample ID		MOPU Lake Superior		DS-11-MU5		MOPU Lake Superior		DS-11-MU5	
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 126 (BZ)	57465288	1668A	pg/g	*4.9*	*J*	**4.4**		*4.9*	*J*	**4.4**	
PCB 127 (BZ)	39635331	1668A	pg/g	1.1	U	0.62	U	0	U	0	U
PCB 128 (BZ)	38380073	1668A	pg/g	**290**	**C**	**450**	**C B**	**290**	**C**	**450**	**C B**
PCB 129 (BZ)	55215184	1668A	pg/g	**1,900**	**C B**	**3,300**	**C D B**	**1,900**	**C B**	**3,300**	**C D B**
PCB 130 (BZ)	52663668	1668A	pg/g	**120**		**220**		**120**		**220**	
PCB 131 (BZ)	61798707	1668A	pg/g	*16*	*J*	**27**		*16*	*J*	**27**	
PCB 132 (BZ)	38380051	1668A	pg/g	**530**		**980**	**B**	**530**		**980**	**B**
PCB 133 (BZ)	35694043	1668A	pg/g	*44*	*J*	**84**		*44*	*J*	**84**	
PCB 134 (BZ)	52704708	1668A	pg/g	*68*	*C J*	**150**	**C**	*68*	*C J*	**150**	**C**
PCB 135 (BZ)	52744135	1668A	pg/g	**780**	**C**	**1,600**	**C B**	**780**	**C**	**1,600**	**C B**
PCB 136 (BZ)	38411222	1668A	pg/g	**230**		**410**		**230**		**410**	
PCB 137 (BZ)	35694065	1668A	pg/g	*19*	*J*	**32**		*19*	*J*	**32**	
PCB 138 (BZ)	35065282	1668A	pg/g	**1,900**	**C B**	**3,300**	**C D B**	**1,900**	**C B**	**3,300**	**C D B**
PCB 139 (BZ)	56030569	1668A	pg/g	*31*	*C J*	**65**	**C**	*31*	*C J*	**65**	**C**
PCB 140 (BZ)	59291644	1668A	pg/g	*31*	*C J*	**65**	**C**	*31*	*C J*	**65**	**C**
PCB 141 (BZ)	52712046	1668A	pg/g	*36*	*J*	**80**	**B**	*36*	*J*	**80**	**B**
PCB 142 (BZ)	41411614	1668A	pg/g	1.5	U	0.79	U	0	U	0	U
PCB 143 (BZ)	68194150	1668A	pg/g	*68*	*C J*	**150**	**C**	*68*	*C J*	**150**	**C**
PCB 144 (BZ)	68194149	1668A	pg/g	*52*	*J*	**110**		*52*	*J*	**110**	
PCB 145 (BZ)	74472405	1668A	pg/g	0.86	U	0.73	U	0	U	0	U
PCB 146 (BZ)	51908168	1668A	pg/g	**310**		**590**		**310**		**590**	
PCB 147 (BZ)	68194138	1668A	pg/g	**1,700**	**C B**	**3,100**	**C D B**	**1,700**	**C B**	**3,100**	**C D B**
PCB 148 (BZ)	74472416	1668A	pg/g	*5.6*	*J Q*	*16*	*J*	*5.6*	*J Q*	*16*	*J*
PCB 149 (BZ)	38380040	1668A	pg/g	**1,700**	**C B**	**3,100**	**C D B**	**1,700**	**C B**	**3,100**	**C D B**
PCB 150 (BZ)	68194081	1668A	pg/g	*4.4*	*J Q*	*8.2*	*J*	*4.4*	*J Q*	*8.2*	*J*
PCB 151 (BZ)	52663635	1668A	pg/g	**780**	**C**	**1,600**	**C B**	**780**	**C**	**1,600**	**C B**
PCB 152 (BZ)	68194092	1668A	pg/g	0.8	U	*3.3*	*J Q*	0	U	*3.3*	*J Q*
PCB 153 (BZ)	35065271	1668A	pg/g	**1,600**	**C B**	**2,900**	**C D B**	**1,600**	**C B**	**2,900**	**C D B**
PCB 154 (BZ)	60145224	1668A	pg/g	*45*	*J*	**83**		*45*	*J*	**83**	
PCB 155 (BZ)	33979032	1668A	pg/g	*2.1*	*J Q*	0.44	U	*2.1*	*J Q*	0	U
PCB 156 (BZ)	38380084	1668A	pg/g	**140**	**C**	**260**	**C B**	**140**	**C**	**260**	**C B**
PCB 157 (BZ)	69782907	1668A	pg/g	**140**	**C**	**260**	**C B**	**140**	**C**	**260**	**C B**
PCB 158 (BZ)	74472427	1668A	pg/g	*79*	*J*	**200**		*79*	*J*	**200**	
PCB 159 (BZ)	39635353	1668A	pg/g	*5.7*	*J Q*	*16*	*J*	*5.7*	*J Q*	*16*	*J*
PCB 160 (BZ)	41411625	1668A	pg/g	1.1	U	0.6	U	0	U	0	U
PCB 161 (BZ)	74472438	1668A	pg/g	1.1	U	0.6	U	0	U	0	U
PCB 162 (BZ)	39635342	1668A	pg/g	*5.4*	*J Q*	*12*	*J B*	*5.4*	*J Q*	*12*	*J B*
PCB 163 (BZ)	74472449	1668A	pg/g	**1,900**	**C B**	**3,300**	**C D B**	**1,900**	**C B**	**3,300**	**C D B**
PCB 164 (BZ)	74472450	1668A	pg/g	**140**		**280**		**140**		**280**	
PCB 165 (BZ)	74472461	1668A	pg/g	*1.2*	*J Q*	*2.7*	*J*	*1.2*	*J Q*	*2.7*	*J*
PCB 166 (BZ)	41411636	1668A	pg/g	**290**	**C**	**450**	**C B**	**290**	**C**	**450**	**C B**
PCB 167 (BZ)	52663726	1668A	pg/g	**46**		**91**		**46**		**91**	
PCB 168 (BZ)	59291655	1668A	pg/g	**1,600**	**C B**	**2,900**	**C D B**	**1,600**	**C B**	**2,900**	**C D B**
PCB 169 (BZ)	32774166	1668A	pg/g	1.3	U	0.82	U	0	U	0	U

APPENDIX C

Table 10: Normalization of 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Normalized PCBs				Normalized PCBs ND = MDL				Normalized PCBs ND = 0			
				Placement Unit		Management Unit		Placement Unit		Management Unit	
Parameter		Sample ID		MOPU Lake Superior		DS-11-MU5		MOPU Lake Superior		DS-11-MU5	
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 170 (BZ)	35065306	1668A	pg/g	**230**		**580**	**B**	**230**		**580**	**B**
PCB 171 (BZ)	52663715	1668A	pg/g	**120**	**C**	**270**	**C**	**120**	**C**	**270**	**C**
PCB 172 (BZ)	52663748	1668A	pg/g	*32*	*J*	**98**		*32*	*J*	**98**	
PCB 173 (BZ)	68194161	1668A	pg/g	**120**	**C**	**270**	**C**	**120**	**C**	**270**	**C**
PCB 174 (BZ)	38411255	1668A	pg/g	**290**		**740**		**290**		**740**	
PCB 175 (BZ)	40186707	1668A	pg/g	*4*	*J Q*	**28**		*4*	*J Q*	**28**	
PCB 176 (BZ)	52663657	1668A	pg/g	*59*	*J*	**140**		*59*	*J*	**140**	
PCB 177 (BZ)	52663704	1668A	pg/g	**340**		**730**		**340**		**730**	
PCB 178 (BZ)	52663679	1668A	pg/g	**140**		**280**		**140**		**280**	
PCB 179 (BZ)	52663646	1668A	pg/g	**240**		**540**		**240**		**540**	
PCB 180 (BZ)	35065293	1668A	pg/g	**140**	**C**	**300**	**C B**	**140**	**C**	**300**	**C B**
PCB 181 (BZ)	74472472	1668A	pg/g	*2.7*	*J*	0.57	U	*2.7*	*J*	0	U
PCB 182 (BZ)	60145235	1668A	pg/g	0.45	U	0.19	U	0	U	0	U
PCB 183 (BZ)	52663691	1668A	pg/g	**120**		**330**		**120**		**330**	
PCB 184 (BZ)	74472483	1668A	pg/g	0.36	U	*1.7*	*J*	0	U	*1.7*	*J*
PCB 185 (BZ)	52712057	1668A	pg/g	*59*	*J*	**170**		*59*	*J*	**170**	
PCB 186 (BZ)	74472494	1668A	pg/g	0.33	U	0.15	U	0	U	0	U
PCB 187 (BZ)	52663680	1668A	pg/g	**990**		**2,200**	**D B**	**990**		**2,200**	**D B**
PCB 188 (BZ)	74487857	1668A	pg/g	*1.9*	*J Q*	*3*	*J*	*1.9*	*J Q*	*3*	*J*
PCB 189 (BZ)	39635319	1668A	pg/g	**14**		**24**		**14**		**24**	
PCB 190 (BZ)	41411647	1668A	pg/g	*86*	*J*	**170**		*86*	*J*	**170**	
PCB 191 (BZ)	74472507	1668A	pg/g	*3*	*J Q*	*12*	*J*	*3*	*J Q*	*12*	*J*
PCB 192 (BZ)	74472518	1668A	pg/g	0.9	U	0.53	U	0	U	0	U
PCB 193 (BZ)	69782918	1668A	pg/g	**140**	**C**	**300**	**C B**	**140**	**C**	**300**	**C B**
PCB 194 (BZ)	35694087	1668A	pg/g	*50*	*J*	**120**		*50*	*J*	**120**	
PCB 195 (BZ)	52663782	1668A	pg/g	*72*	*J*	**160**		*72*	*J*	**160**	
PCB 196 (BZ)	42740501	1668A	pg/g	*32*	*J*	**83**		*32*	*J*	**83**	
PCB 197 (BZ)	33091177	1668A	pg/g	*7.6*	*J*	*19*	*J*	*7.6*	*J*	*19*	*J*
PCB 198 (BZ)	68194172	1668A	pg/g	**250**	**C**	**630**	**C**	**250**	**C**	**630**	**C**
PCB 199 (BZ) /200 (IUPAC)	52663737	1668A	pg/g	*37*	*J*	**93**		*37*	*J*	**93**	
PCB 200 (BZ) /201 (IUPAC)	40186718	1668A	pg/g	*40*	*J*	**81**		*40*	*J*	**81**	
PCB 201 (BZ) /199 (IUPAC)	52663759	1668A	pg/g	**250**	**C**	**630**	**C**	**250**	**C**	**630**	**C**
PCB 202 (BZ)	2136994	1668A	pg/g	*76*	*J*	**130**		*76*	*J*	**130**	
PCB 203 (BZ)	52663760	1668A	pg/g	**160**		**380**		**160**		**380**	
PCB 204 (BZ)	74472529	1668A	pg/g	0.34	U	0.16	U	0	U	0	U
PCB 205 (BZ)	74472530	1668A	pg/g	*10*	*J Q*	**21**		*10*	*J Q*	**21**	
PCB 206 (BZ)	40186729	1668A	pg/g	*81*	*J Q*	**150**		*81*	*J Q*	**150**	
PCB 207 (BZ)	52663793	1668A	pg/g	*14*	*J*	**23**		*14*	*J*	**23**	
PCB 208 (BZ)	52663771	1668A	pg/g	*54*	*J*	**81**		*54*	*J*	**81**	
PCB 209 (BZ)	2051243	1668A	pg/g	*74*	*J*	**120**	**B**	*74*	*J*	**120**	**B**

APPENDIX C

Table 10: Normalization of 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Normalized PCBs				Normalized Coeluting PCBs ND = MDL				Normalized Coeluting PCBs ND = 0			
				Placement Unit		Management Unit		Placement Unit		Management Unit	
Parameter		Sample ID		MOPU Lake Superior		DS-11-MU5		MOPU Lake Superior		DS-11-MU5	
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	Footnotes	Result	Footnotes
Total PCBs		1668A	**ppt**	**25,414**		**42,196**		**25,370**		**42,166**	
Total PCBs		1668A	**ppb**	**25.41**		**42.20**		**25.37**		**42.17**	
% Lipids				**0.017**		**0.015**		**0.017**		**0.015**	
Normalized PCBs		1668A	**ppb**	**1,495**		**2,813**		**1,492**		**2,811**	
PCB 1 (BZ)	2051607	1668A	pg/g	*10*	*J*	*3.8*	*J*	*10*	*J*	*3.8*	*J*
PCB 2 (BZ)	2051618	1668A	pg/g	0.53	U	*1.1*	*J*	0	U	*1.1*	*J*
PCB 3 (BZ)	2051629	1668A	pg/g	*5.5*	*J Q*	*3.6*	*J*	*5.5*	*J Q*	*3.6*	*J*
PCB 4 (BZ)	13029088	1668A	pg/g	*62*	*J*	**30**		*62*	*J*	**30**	
PCB 5 (BZ)	16605917	1668A	pg/g	5.3	U	2	U	0	U	0	U
PCB 6 (BZ)	25569806	1668A	pg/g	*33*	*J*	*20*	*J*	*33*	*J*	*20*	*J*
PCB 7 (BZ)	33284503	1668A	pg/g	*11*	*J*	3.3	U	*11*	*J*	0	U
PCB 8 (BZ)	34883437	1668A	pg/g	**180**		**100**		**180**		**100**	
PCB 9 (BZ)	34883391	1668A	pg/g	*6.5*	*J Q*	3.2	U	*6.5*	*J Q*	0	U
PCB 10 (BZ)	33146451	1668A	pg/g	5	U	1.7	U	0	U	0	U
PCB 11 (BZ)	2050671	1668A	pg/g	*70*	*J*	**44**	**B**	*70*	*J*	**44**	**B**
PCB 12 (BZ)	2974927	1668A	pg/g	*8.8*	*C J Q*	3.6	U	*8.8*	*C J Q*	0	U
PCB 13 (BZ)	2974905	1668A	pg/g	0	*C J Q*	0	U	0	*C J Q*	0	U
PCB 14 (BZ)	34883415	1668A	pg/g	4.6	U	1.7	U	0	U	0	U
PCB 15 (BZ)	2050682	1668A	pg/g	*48*	*J*	**25**		*48*	*J*	**25**	
PCB 16 (BZ)	38444789	1668A	pg/g	*44*	*J*	**40**		*44*	*J*	**40**	
PCB 17 (BZ)	37680663	1668A	pg/g	*50*	*J*	**46**		*50*	*J*	**46**	
PCB 18 (BZ)	37680652	1668A	pg/g	*93*	*C J B*	**88**	**C B**	*93*	*C J B*	**88**	**C B**
PCB 19 (BZ)	38444734	1668A	pg/g	*15*	*J*	*11*	*J*	*15*	*J*	*11*	*J*
PCB 20 (BZ)	38444847	1668A	pg/g	**170**	**C B**	**160**	**C B**	**170**	**C B**	**160**	**C B**
PCB 21 (BZ)	55702460	1668A	pg/g	*71*	*C J B*	**63**	**C B**	*71*	*C J B*	**63**	**C B**
PCB 22 (BZ)	38444858	1668A	pg/g	*56*	*J B*	**48**	**B**	*56*	*J B*	**48**	**B**
PCB 23 (BZ)	55720440	1668A	pg/g	1.1	U	0.6	U	0	U	0	U
PCB 24 (BZ)	55702459	1668A	pg/g	*0.42*	*J Q*	*0.65*	*J Q*	*0.42*	*J Q*	*0.65*	*J Q*
PCB 25 (BZ)	55712373	1668A	pg/g	*15*	*J*	*16*	*J*	*15*	*J*	*16*	*J*
PCB 26 (BZ)	38444814	1668A	pg/g	*32*	*C J*	**30**	**C**	*32*	*C J*	**30**	**C**
PCB 27 (BZ)	38444767	1668A	pg/g	*7.8*	*J*	*7.2*	*J*	*7.8*	*J*	*7.2*	*J*
PCB 28 (BZ)	7012375	1668A	pg/g	0	**C B**	0	**C B**	0	**C B**	0	**C B**
PCB 29 (BZ)	15862074	1668A	pg/g	0	*C J*	0	**C**	0	*C J*	0	**C**
PCB 30 (BZ)	35693926	1668A	pg/g	0	*C J B*	0	**C B**	0	*C J B*	0	**C B**
PCB 31 (BZ)	16606023	1668A	pg/g	**140**	**B**	**130**	**B**	**140**	**B**	**130**	**B**
PCB 32 (BZ)	38444778	1668A	pg/g	*34*	*J B*	**38**		*34*	*J B*	**38**	
PCB 33 (BZ)	38444869	1668A	pg/g	0	*C J B*	0	**C B**	0	*C J B*	0	**C B**
PCB 34 (BZ)	37680685	1668A	pg/g	1.1	U	*2.3*	*J*	0	U	*2.3*	*J*
PCB 35 (BZ)	37680696	1668A	pg/g	1.1	U	*2.9*	*J*	0	U	*2.9*	*J*
PCB 36 (BZ)	38444870	1668A	pg/g	*5.1*	*J Q*	0.58	U	*5.1*	*J Q*	0	U
PCB 37 (BZ)	38444905	1668A	pg/g	*15*	*J*	*20*	*J B*	*15*	*J*	*20*	*J B*
PCB 38 (BZ)	53555661	1668A	pg/g	1.1	U	0.66	U	0	U	0	U
PCB 39 (BZ)	38444881	1668A	pg/g	1	U	*1*	*J Q*	0	U	*1*	*J Q*

APPENDIX C

Table 10: Normalization of 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Normalized PCBs				Normalized Coeluting PCBs ND = MDL				Normalized Coeluting PCBs ND = 0			
				Placement Unit		Management Unit		Placement Unit		Management Unit	
Parameter		Sample ID		MOPU Lake Superior		DS-11-MU5		MOPU Lake Superior		DS-11-MU5	
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 40 (BZ)	38444938	1668A	pg/g	94	C J	170	C B	94	C J	170	C B
PCB 41 (BZ)	52663599	1668A	pg/g	16	J	17	J	16	J	17	J
PCB 42 (BZ)	36559225	1668A	pg/g	68	J	110	B	68	J	110	B
PCB 43 (BZ)	70362468	1668A	pg/g	8.8	J	15	J	8.8	J	15	J
PCB 44 (BZ)	41464395	1668A	pg/g	350	C B	510	C B	350	C B	510	C B
PCB 45 (BZ)	70362457	1668A	pg/g	31	J Q	43		31	J Q	43	
PCB 46 (BZ)	41464475	1668A	pg/g	13	J	19	J	13	J	19	J
PCB 47 (BZ)	2437798	1668A	pg/g	0	C B	0	C B	0	C B	0	C B
PCB 48 (BZ)	70362479	1668A	pg/g	39	J	58	B	39	J	58	B
PCB 49 (BZ)	41464408	1668A	pg/g	240	C B	370	C B	240	C B	370	C B
PCB 50 (BZ)	62796650	1668A	pg/g	39	C J	73	C B	39	C J	73	C B
PCB 51 (BZ)	68194047	1668A	pg/g	13	J	41	B	13	J	41	B
PCB 52 (BZ)	35693993	1668A	pg/g	600	B	910	B	600	B	910	B
PCB 53 (BZ)	41464419	1668A	pg/g	0	C J	0	C B	0	C J	0	C B
PCB 54 (BZ)	15968055	1668A	pg/g	0.32	U	4.3	J	0	U	4.3	J
PCB 55 (BZ)	74338242	1668A	pg/g	1.4	U	0.8	U	0	U	0	U
PCB 56 (BZ)	41464431	1668A	pg/g	120		170	B	120		170	B
PCB 57 (BZ)	70424678	1668A	pg/g	1.4	U	0.77	U	0	U	0	U
PCB 58 (BZ)	41464497	1668A	pg/g	1.3	U	0.76	U	0	U	0	U
PCB 59 (BZ)	74472336	1668A	pg/g	27	C J	40	C	27	C J	40	C
PCB 60 (BZ)	33025411	1668A	pg/g	70	J	46		70	J	46	
PCB 61 (BZ)	33284536	1668A	pg/g	670	C B	780	C B	670	C B	780	C B
PCB 62 (BZ)	54230227	1668A	pg/g	0	C J	0	C	0	C J	0	C
PCB 63 (BZ)	74472347	1668A	pg/g	15	J Q	22		15	J Q	22	
PCB 64 (BZ)	52663588	1668A	pg/g	140	B	180	B	140	B	180	B
PCB 65 (BZ)	33284547	1668A	pg/g	0	C B	0	C B	0	C B	0	C B
PCB 66 (BZ)	32598100	1668A	pg/g	350	B	400	B	350	B	400	B
PCB 67 (BZ)	73575538	1668A	pg/g	9.3	J	13	J	9.3	J	13	J
PCB 68 (BZ)	73575527	1668A	pg/g	12	J	9.8	J Q B	12	J	9.8	J Q B
PCB 69 (BZ)	60233241	1668A	pg/g	0	C B	0	C B	0	C B	0	C B
PCB 70 (BZ)	32598111	1668A	pg/g	0	C B	0	C B	0	C B	0	C B
PCB 71 (BZ)	41464464	1668A	pg/g	0	C J	0	C B	0	C J	0	C B
PCB 72 (BZ)	41464420	1668A	pg/g	11	J	18	J	11	J	18	J
PCB 73 (BZ)	74338231	1668A	pg/g	0.61	U	0.19	U	0	U	0	U
PCB 74 (BZ)	32690930	1668A	pg/g	0	C B	0	C B	0	C B	0	C B
PCB 75 (BZ)	32598122	1668A	pg/g	0	C J	0	C	0	C J	0	C
PCB 76 (BZ)	70362480	1668A	pg/g	0	C B	0	C B	0	C B	0	C B
PCB 77 (BZ)	32598133	1668A	pg/g	20		21		20		21	
PCB 78 (BZ)	70362491	1668A	pg/g	1.5	U	0.83	U	0	U	0	U
PCB 79 (BZ)	41464486	1668A	pg/g	9.8	J Q	19	J	9.8	J Q	19	J
PCB 80 (BZ)	33284525	1668A	pg/g	1.2	U	0.69	U	0	U	0	U
PCB 81 (BZ)	70362504	1668A	pg/g	1.3	U	0.75	U	0	U	0	U
PCB 82 (BZ)	52663624	1668A	pg/g	140		240		140		240	
PCB 83 (BZ)	60145202	1668A	pg/g	130		180		130		180	

APPENDIX C

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Normalized PCBs				Normalized Coeluting PCBs ND = MDL				Normalized Coeluting PCBs ND = 0			
				Placement Unit		Management Unit		Placement Unit		Management Unit	
Parameter		Sample ID		MOPU Lake Superior		DS-11-MU5		MOPU Lake Superior		DS-11-MU5	
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 84 (BZ)	52663602	1668A	pg/g	**300**		**460**		**300**		**460**	
PCB 85 (BZ)	65510454	1668A	pg/g	**240**	**C**	**380**	**C**	**240**	**C**	**380**	**C**
PCB 86 (BZ)	55312691	1668A	pg/g	**770**	**C**	**1,300**	**C B**	**770**	**C**	**1,300**	**C B**
PCB 87 (BZ)	38380028	1668A	pg/g	0	**C**	0	**C B**	0	**C**	0	**C B**
PCB 88 (BZ)	55215173	1668A	pg/g	**200**	**C**	**300**	**C**	**200**	**C**	**300**	**C**
PCB 89 (BZ)	73575572	1668A	pg/g	*10*	*J*	*19*	*J*	*10*	*J*	*19*	*J*
PCB 90 (BZ)	68194070	1668A	pg/g	**1,500**	**C B**	**2,300**	**C B D**	**1,500**	**C B**	**2,300**	**C B D**
PCB 91 (BZ)	68194058	1668A	pg/g	0	**C**	0	**C**	0	**C**	0	**C**
PCB 92 (BZ)	52663613	1668A	pg/g	**340**		**580**		**340**		**580**	
PCB 93 (BZ)	73575561	1668A	pg/g	*16*	*C J*	**43**	**C**	*16*	*C J*	**43**	**C**
PCB 94 (BZ)	73575550	1668A	pg/g	*6.1*	*J*	*17*	*J*	*6.1*	*J*	*17*	*J*
PCB 95 (BZ)	38379996	1668A	pg/g	**1,200**	**B**	**1,700**	**B**	**1,200**	**B**	**1,700**	**B**
PCB 96 (BZ)	73575549	1668A	pg/g	*5.6*	*J*	*11*	*J*	*5.6*	*J*	*11*	*J*
PCB 97 (BZ)	41464511	1668A	pg/g	0	**C**	0	**C B**	0	**C**	0	**C B**
PCB 98 (BZ)	60233252	1668A	pg/g	*37*	*C J*	**60**	**C**	*37*	*C J*	**60**	**C**
PCB 99 (BZ)	38380017	1668A	pg/g	**710**		**950**	**B**	**710**		**950**	**B**
PCB 100 (BZ)	39485831	1668A	pg/g	0	*C J*	0	**C**	0	*C J*	0	**C**
PCB 101 (BZ)	37680732	1668A	pg/g	0	**C B**	0	**C D B**	0	**C B**	0	**C D B**
PCB 102 (BZ)	68194069	1668A	pg/g	0	*C J*	0	**C**	0	*C J*	0	**C**
PCB 103 (BZ)	60145213	1668A	pg/g	*20*	*J*	**43**		*20*	*J*	**43**	
PCB 104 (BZ)	56558168	1668A	pg/g	0.27	U	*2.3*	*J*	0	U	*2.3*	*J*
PCB 105 (BZ)	32598144	1668A	pg/g	**360**		**440**	**B**	**360**		**440**	**B**
PCB 106 (BZ)	70424690	1668A	pg/g	1.4	U	0.75	U	0	U	0	U
PCB 107 (BZ) /109 (IUPAC)	70424689	1668A	pg/g	*96*	*J*	**120**		*96*	*J*	**120**	
PCB 108 (BZ) /107 (IUPAC)	70362413	1668A	pg/g	*39*	*C J*	**60**	**C**	*39*	*C J*	**60**	**C**
PCB 109 (BZ) /108 (IUPAC)	74472358	1668A	pg/g	0	**C**	0	**C B**	0	**C**	0	**C B**
PCB 110 (BZ)	38380039	1668A	pg/g	**1,900**	**C B**	**2,800**	**C D B**	**1,900**	**C B**	**2,800**	**C D B**
PCB 111 (BZ)	39635320	1668A	pg/g	*3.7*	*J*	*5.2*	*J*	*3.7*	*J*	*5.2*	*J*
PCB 112 (BZ)	74472369	1668A	pg/g	1.4	U	0.76	U	0	U	0	U
PCB 113 (BZ)	68194105	1668A	pg/g	0	**C B**	0	**C D B**	0	**C B**	0	**C D B**
PCB 114 (BZ)	74472370	1668A	pg/g	**22**		**27**		**22**		**27**	
PCB 115 (BZ)	74472381	1668A	pg/g	0	**C B**	0	**C D B**	0	**C B**	0	**C D B**
PCB 116 (BZ)	18259057	1668A	pg/g	0	**C**	0	**C**	0	**C**	0	**C**
PCB 117 (BZ)	68194116	1668A	pg/g	0	**C**	0	**C**	0	**C**	0	**C**
PCB 118 (BZ)	31508006	1668A	pg/g	**1,100**	**B**	**1,300**	**B**	**1,100**	**B**	**1,300**	**B**
PCB 119 (BZ)	56558179	1668A	pg/g	0	**C**	0	**C B**	0	**C**	0	**C B**
PCB 120 (BZ)	68194127	1668A	pg/g	*11*	*J*	*15*	*J*	*11*	*J*	*15*	*J*
PCB 121 (BZ)	56558180	1668A	pg/g	1.1	U	*2*	*J Q*	0	U	*2*	*J Q*
PCB 122 (BZ)	76842074	1668A	pg/g	*15*	*J Q*	**22**		*15*	*J Q*	**22**	
PCB 123 (BZ)	65510443	1668A	pg/g	**15**		**17**		**15**		**17**	
PCB 124 (BZ)	70424703	1668A	pg/g	0	*C J*	0	**C**	0	*C J*	0	**C**
PCB 125 (BZ)	74472392	1668A	pg/g	0	**C**	0	**C B**	0	**C**	0	**C B**

APPENDIX C

Table 10: Normalization of 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Normalized PCBs				Normalized Coeluting PCBs ND = MDL				Normalized Coeluting PCBs ND = 0			
				Placement Unit		Management Unit		Placement Unit		Management Unit	
Parameter		Sample ID		MOPU Lake Superior		DS-11-MU5		MOPU Lake Superior		DS-11-MU5	
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 126 (BZ)	57465288	1668A	pg/g	*4.9*	*J*	**4.4**		*4.9*	*J*	**4.4**	
PCB 127 (BZ)	39635331	1668A	pg/g	1.1	U	0.62	U	0	U	0	U
PCB 128 (BZ)	38380073	1668A	pg/g	**290**	**C**	**450**	**C B**	**290**	**C**	**450**	**C B**
PCB 129 (BZ)	55215184	1668A	pg/g	**1,900**	**C B**	**3,300**	**C D B**	**1,900**	**C B**	**3,300**	**C D B**
PCB 130 (BZ)	52663668	1668A	pg/g	**120**		**220**		**120**		**220**	
PCB 131 (BZ)	61798707	1668A	pg/g	*16*	*J*	**27**		*16*	*J*	**27**	
PCB 132 (BZ)	38380051	1668A	pg/g	**530**		**980**	**B**	**530**		**980**	**B**
PCB 133 (BZ)	35694043	1668A	pg/g	*44*	*J*	**84**		*44*	*J*	**84**	
PCB 134 (BZ)	52704708	1668A	pg/g	*68*	*C J*	**150**	**C**	*68*	*C J*	**150**	**C**
PCB 135 (BZ)	52744135	1668A	pg/g	**780**	**C**	**1,600**	**C B**	**780**	**C**	**1,600**	**C B**
PCB 136 (BZ)	38411222	1668A	pg/g	**230**		**410**		**230**		**410**	
PCB 137 (BZ)	35694065	1668A	pg/g	*19*	*J*	**32**		*19*	*J*	**32**	
PCB 138 (BZ)	35065282	1668A	pg/g	0	**C B**	0	**C D B**	0	**C B**	0	**C D B**
PCB 139 (BZ)	56030569	1668A	pg/g	*31*	*C J*	**65**	**C**	*31*	*C J*	**65**	**C**
PCB 140 (BZ)	59291644	1668A	pg/g	0	*C J*	0	**C**	0	*C J*	0	**C**
PCB 141 (BZ)	52712046	1668A	pg/g	*36*	*J*	**80**	**B**	*36*	*J*	**80**	**B**
PCB 142 (BZ)	41411614	1668A	pg/g	1.5	U	0.79	U	0	U	0	U
PCB 143 (BZ)	68194150	1668A	pg/g	0	*C J*	0	**C**	0	*C J*	0	**C**
PCB 144 (BZ)	68194149	1668A	pg/g	*52*	*J*	**110**		*52*	*J*	**110**	
PCB 145 (BZ)	74472405	1668A	pg/g	0.86	U	0.73	U	0	U	0	U
PCB 146 (BZ)	51908168	1668A	pg/g	**310**		**590**		**310**		**590**	
PCB 147 (BZ)	68194138	1668A	pg/g	**1,700**	**C B**	**3,100**	**C D B**	**1,700**	**C B**	**3,100**	**C D B**
PCB 148 (BZ)	74472416	1668A	pg/g	*5.6*	*J Q*	*16*	*J*	*5.6*	*J Q*	*16*	*J*
PCB 149 (BZ)	38380040	1668A	pg/g	0	**C B**	0	**C D B**	0	**C B**	0	**C D B**
PCB 150 (BZ)	68194081	1668A	pg/g	*4.4*	*J Q*	*8.2*	*J*	*4.4*	*J Q*	*8.2*	*J*
PCB 151 (BZ)	52663635	1668A	pg/g	0	**C**	0	**C B**	0	**C**	0	**C B**
PCB 152 (BZ)	68194092	1668A	pg/g	0.8	U	*3.3*	*J Q*	0	U	*3.3*	*J Q*
PCB 153 (BZ)	35065271	1668A	pg/g	**1,600**	**C B**	**2,900**	**C D B**	**1,600**	**C B**	**2,900**	**C D B**
PCB 154 (BZ)	60145224	1668A	pg/g	*45*	*J*	**83**		*45*	*J*	**83**	
PCB 155 (BZ)	33979032	1668A	pg/g	*2.1*	*J Q*	0.44	U	*2.1*	*J Q*	0	U
PCB 156 (BZ)	38380084	1668A	pg/g	**140**	**C**	**260**	**C B**	**140**	**C**	**260**	**C B**
PCB 157 (BZ)	69782907	1668A	pg/g	0	**C**	0	**C B**	0	**C**	0	**C B**
PCB 158 (BZ)	74472427	1668A	pg/g	*79*	*J*	**200**		*79*	*J*	**200**	
PCB 159 (BZ)	39635353	1668A	pg/g	*5.7*	*J Q*	*16*	*J*	*5.7*	*J Q*	*16*	*J*
PCB 160 (BZ)	41411625	1668A	pg/g	1.1	U	0.6	U	0	U	0	U
PCB 161 (BZ)	74472438	1668A	pg/g	1.1	U	0.6	U	0	U	0	U
PCB 162 (BZ)	39635342	1668A	pg/g	*5.4*	*J Q*	*12*	*J B*	*5.4*	*J Q*	*12*	*J B*
PCB 163 (BZ)	74472449	1668A	pg/g	0	**C B**	0	**C D B**	0	**C B**	0	**C D B**
PCB 164 (BZ)	74472450	1668A	pg/g	**140**		**280**		**140**		**280**	
PCB 165 (BZ)	74472461	1668A	pg/g	*1.2*	*J Q*	*2.7*	*J*	*1.2*	*J Q*	*2.7*	*J*
PCB 166 (BZ)	41411636	1668A	pg/g	0	**C**	0	**C B**	0	**C**	0	**C B**
PCB 167 (BZ)	52663726	1668A	pg/g	**46**		**91**		**46**		**91**	
PCB 168 (BZ)	59291655	1668A	pg/g	0	**C B**	0	**C D B**	0	**C B**	0	**C D B**
PCB 169 (BZ)	32774166	1668A	pg/g	1.3	U	0.82	U	0	U	0	U

APPENDIX C

Table 10: Normalization of 209 PCB Congener Analysis of Lumbriculus Tissue Samples

Normalized PCBs				Normalized Coeluting PCBs ND = MDL				Normalized Coeluting PCBs ND = 0			
				Placement Unit		Management Unit		Placement Unit		Management Unit	
Parameter		Sample ID		MOPU Lake Superior		DS-11-MU5		MOPU Lake Superior		DS-11-MU5	
Congener Number	CAS Number	Analysis Method	Units	Result	Footnotes	Result	Footnotes	Result	Footnotes	Result	Footnotes
PCB 170 (BZ)	35065306	1668A	pg/g	**230**		**580**	**B**	**230**		**580**	**B**
PCB 171 (BZ)	52663715	1668A	pg/g	**120**	**C**	**270**	**C**	**120**	**C**	**270**	**C**
PCB 172 (BZ)	52663748	1668A	pg/g	*32*	*J*	**98**		*32*	*J*	**98**	
PCB 173 (BZ)	68194161	1668A	pg/g	0	**C**	0	**C**	0	**C**	0	**C**
PCB 174 (BZ)	38411255	1668A	pg/g	**290**		**740**		**290**		**740**	
PCB 175 (BZ)	40186707	1668A	pg/g	*4*	*J Q*	**28**		*4*	*J Q*	**28**	
PCB 176 (BZ)	52663657	1668A	pg/g	*59*	*J*	**140**		*59*	*J*	**140**	
PCB 177 (BZ)	52663704	1668A	pg/g	**340**		**730**		**340**		**730**	
PCB 178 (BZ)	52663679	1668A	pg/g	**140**		**280**		**140**		**280**	
PCB 179 (BZ)	52663646	1668A	pg/g	**240**		**540**		**240**		**540**	
PCB 180 (BZ)	35065293	1668A	pg/g	**140**	**C**	**300**	**C B**	**140**	**C**	**300**	**C B**
PCB 181 (BZ)	74472472	1668A	pg/g	*2.7*	*J*	0.57	U	*2.7*	*J*	0	U
PCB 182 (BZ)	60145235	1668A	pg/g	0.45	U	0.19	U	0	U	0	U
PCB 183 (BZ)	52663691	1668A	pg/g	**120**		**330**		**120**		**330**	
PCB 184 (BZ)	74472483	1668A	pg/g	0.36	U	*1.7*	*J*	0	U	*1.7*	*J*
PCB 185 (BZ)	52712057	1668A	pg/g	*59*	*J*	**170**		*59*	*J*	**170**	
PCB 186 (BZ)	74472494	1668A	pg/g	0.33	U	0.15	U	0	U	0	U
PCB 187 (BZ)	52663680	1668A	pg/g	**990**		**2,200**	**D B**	**990**		**2,200**	**D B**
PCB 188 (BZ)	74487857	1668A	pg/g	*1.9*	*J Q*	*3*	*J*	*1.9*	*J Q*	*3*	*J*
PCB 189 (BZ)	39635319	1668A	pg/g	**14**		**24**		**14**		**24**	
PCB 190 (BZ)	41411647	1668A	pg/g	*86*	*J*	**170**		*86*	*J*	**170**	
PCB 191 (BZ)	74472507	1668A	pg/g	*3*	*J Q*	*12*	*J*	*3*	*J Q*	*12*	*J*
PCB 192 (BZ)	74472518	1668A	pg/g	0.9	U	0.53	U	0	U	0	U
PCB 193 (BZ)	69782918	1668A	pg/g	0	**C**	0	**C B**	0	**C**	0	**C B**
PCB 194 (BZ)	35694087	1668A	pg/g	*50*	*J*	**120**		*50*	*J*	**120**	
PCB 195 (BZ)	52663782	1668A	pg/g	*72*	*J*	**160**		*72*	*J*	**160**	
PCB 196 (BZ)	42740501	1668A	pg/g	*32*	*J*	**83**		*32*	*J*	**83**	
PCB 197 (BZ)	33091177	1668A	pg/g	*7.6*	*J*	*19*	*J*	*7.6*	*J*	*19*	*J*
PCB 198 (BZ)	68194172	1668A	pg/g	**250**	**C**	**630**	**C**	**250**	**C**	**630**	**C**
PCB 199 (BZ) /200 (IUPAC)	52663737	1668A	pg/g	*37*	*J*	**93**		*37*	*J*	**93**	
PCB 200 (BZ) /201 (IUPAC)	40186718	1668A	pg/g	*40*	*J*	**81**		*40*	*J*	**81**	
PCB 201 (BZ) /199 (IUPAC)	52663759	1668A	pg/g	0	**C**	0	**C**	0	**C**	0	**C**
PCB 202 (BZ)	2136994	1668A	pg/g	*76*	*J*	**130**		*76*	*J*	**130**	
PCB 203 (BZ)	52663760	1668A	pg/g	**160**		**380**		**160**		**380**	
PCB 204 (BZ)	74472529	1668A	pg/g	0.34	U	0.16	U	0	U	0	U
PCB 205 (BZ)	74472530	1668A	pg/g	*10*	*J Q*	**21**		*10*	*J Q*	**21**	
PCB 206 (BZ)	40186729	1668A	pg/g	*81*	*J Q*	**150**		*81*	*J Q*	**150**	
PCB 207 (BZ)	52663793	1668A	pg/g	*14*	*J*	**23**		*14*	*J*	**23**	
PCB 208 (BZ)	52663771	1668A	pg/g	*54*	*J*	**81**		*54*	*J*	**81**	
PCB 209 (BZ)	2051243	1668A	pg/g	*74*	*J*	**120**	**B**	*74*	*J*	**120**	**B**

APPENDIX C

Table 11: PCB Congener Results Comparison Table

Management or Placement Unit			Placement Unit MOPU - ND = MDL												Management Unit - MU5 - ND = MDL											
Parameter	Sample ID		DS-11-MOPU		MOPU Lake Superior		MOPU Lake Superior		MOPU Lake Superior		MOPU Lake Superior		MOPU Lake Superior		DS-11-MU5		DS-11-MU5		DS-11-MU5-1		DS-11-MU5-2		DS-11-MU5-4		DS-11-MU5-5	
	Lab ID		T11H197-38		9052-Rep 1		9052-Rep 2		9052-Rep 3		9052-Rep 4		9052-Rep 5		T11H197-58		G1K090434		1111275-022		1111275-023		1111275-024		1111275-025	
	Sample Type		Soil		Tissue		Tissue		Tissue		Tissue		Tissue		Soil		Tissue		Tissue		Tissue		Tissue		Tissue	
	Analysis Method		SW8082CON		1668A		SW8082CON		SW8082CON		SW8082CON		SW8082CON		SW8082CON		1668A		SW8082CON		SW8082CON		SW8082CON		SW8082CON	
Total PCBs		ppt	<2,930		**13,138**		**15,810**		**13,250**		**13,610**		**13,320**		10,050		**18,036**		**21,170**		**20,300**		**18,990**		**18,790**	
Total PCBs x 2		ppt	NA		**26,275**		**31,620**		**26,500**		**27,220**		**26,640**		NA		**36,072**		**42,340**		**40,600**		**37,980**		**37,580**	
% Lipids			NA		0.017		0.032		0.031		0.036		0.039		NA		0.015		0.053		0.032		0.034		0.035	
Normalized PCBs		ppt	NA		1,545,595		988,125		854,839		756,111		683,077		NA		2,404,789		798,868		1,268,750		1,117,059		1,073,714	
PCB Congener	**Congener Number**	**Units**																								
2,4´-DiCB	**8**	ppt	<210	U	**180**		<470	U	<470	U	<470	U	<480	U	<520	U	**100**		<460	U	<460	U	<470	U	<470	U
2,2´,5-TrCB	**18**	ppt	<150	U	**93**	**C J B**	<340	U	<340	U	<340	U	<350	U	<380	U	**88**	**C B**	<340	U	<330	U	<340	U	<340	U
2,4,4´-TrCB	**28**	ppt	<66	U	**170**	**C B**	<150	U	<150	U	<150	U	<150	U	<160	U	**160**	**C B**	<140	U	<140	U	<150	U	<150	U
2,2´,3,5´-TeCB	**44**	ppt	<130	U	**350**	**C B**	<290	U	<290	U	<290	U	<300	U	<320	U	**510**	**C B**	<290	U	<290	U	<290	U	<290	U
2,2´,4,5´-TeCB	**49**	ppt	<140	U	**240**	**C B**	<320	U	<320	U	<320	U	<320	U	<350	U	**370**	**C B**	<320	U	<310	U	<320	U	<320	U
2,2´,5,5´-TeCB	**52**	ppt	<170	U	**600**	**B**	<380	U	<390	U	<380	U	<390	U	<420	U	**910**	**B**	<380	U	<380	U	<380	U	<390	U
2,3´,4,4´-TeCB	**66**	ppt	<110	U	**350**	**B**	<230	U	<240	U	<230	U	<240	U	<260	U	**40**	**C**	<230	U	<230	U	<230	U	<240	U
3,3´,4,4´-TeCB	**77**	ppt	<180	U	**20**		<390	U	<400	U	<390	U	<400	U	<430	U	**21**		<390	U	<380	U	<390	U	<390	U
2,2´,3,4,5´-PeCB	**87**	ppt	<78	U	**770**	**C B**	<170	U	<170	U	<170	U	<180	U	<190	U	**1,300**	**C B**	<170	U	<170	U	<170	U	<170	U
2,2´,4,5,5´-PeCB	**101**	ppt	<150	U	**1,500**	**C B**	**2,100**		**1,700**	**J**	**1,700**	**J**	**1,700**	**J**	<360	U	**2,300**	**C D B**	**2,900**		**2,800**		**2,500**		**2,400**	
2,3,3´,4,4´-PeCB	**105**	ppt	<83	U	**360**	**B**	**770**	**J**	<190	U	<180	U	<190	U	<200	U	**440**	**B**	<180	U	<180	U	<180	U	<190	U
2,3,3',4',6-PeCB	**110**		0		**1900**	**C B**	**1,700**		**1,400**		**1,400**		**1,300**		-		**2,800**	**C D B**	**2,400**		**2,300**		**2,000**		**1,900**	
2,3´,4,4´,5-PeCB	**118**	ppt	<120	U	**1,100**	**B**	**1,200**	J	**1,000**	**J**	**1,000**	**J**	**970**	**J**	<310	U	**1,300**	**B**	**1,600**	**J**	**1,500**	**J**	**1,400**	**J**	**1,400**	**J**
3,3´,4,4´,5-PeCB	**126**	ppt	<120	U	**4.9**	**J**	<270	U	<270	U	<270	U	<280	U	<300	U	**4**		<270	U	<270	U	<270	U	<270	U
2,2´,3,3´,4,4´-HxCB	**128**	ppt	<68	U	**290**	**C**	<150	U	<150	U	<150	U	<150	U	<170	U	**450**	**C B**	<150	U	<150	U	<150	U	<150	U
2,2´,3,4,4´,5´-HxCB	**138**	ppt	<83	U	**1,900**	**C E B**	**1,800**	**J**	**1,400**	**J**	**1,500**	**J**	**2,000**	**J**	**510**	**J m**	**3,300**	**C D B**	**2,900**		**2,700**		**2,500**		**2,400**	
2,2´,4,4´,5,5´-HxCB	**153**	ppt	<130	U	**1,600**	**C E B**	**2,400**		**1,900**	**J**	**2,200**		**1,800**	**J**	**650**	**J**	**2,900**	**C D B**	**3,700**		**3,500**		**3,200**		**3,300**	
3,3´,4,4´,5,5´-HxCB	**169**	ppt	<150	U	<1.3	U	<330	U	<330	U	<330	U	<330	U	<360	U	<0.82	U	<330	U	<320	U	<330	U	<330	U
2,2´,3,3´,4,4´,5-HpCB	**170**	ppt	<74	U	**230**	**B**	<160	U	<160	U	<160	U	<170	U	**1000**	**J m**	**580**	**B**	**1,100**	**J**	**1,100**	**J**	**1,000**	**J**	**970**	**J**
2,2´,3,4,4´,5,5´-HpCB	**180**	ppt	<86	U	**140**	**C**	<190	U	<190	U	<190	U	<190	U	**1600**	**J**	**300**	**C B**	<190	U	<190	U	<190	U	<190	U
2,2´,3,4,4´,5´,6-HpCB	**183**	ppt	<130	U	**120**		<290	U	<290	U	<290	U	<290	U	<320	U	**330**		<290	U	<280	U	<290	U	<290	U
2,2´,3,4,4´,6,6´-HpCB	**184**	ppt	<110	U	<0.36	U	<250	U	<250	U	<250	U	<250	U	<270	U	**1.7**	**J**	<250	U	<240	U	<250	U	<250	U
2,2´,3,4´,5,5´,6-HpCB	**187**	ppt	<130	U	**990**		**870**	**J**	**660**	**J**	**660**	**J**	<290	U	<320	U	**2,200**	**D B**	**1,600**	**J**	**1,500**	**J**	**1,400**	**J**	**1,400**	**J**
2,2´,3,3´,4,4´,5,6-OcCB	**195**	ppt	<91	U	**73**		<200	U	<200	U	<200	U	<210	U	<220	U	**160**		<200	U	<200	U	<200	U	<200	U
2,2',3,3',4,4',5,5',6-NoCB	**206**	ppt	<80	U	**81**		<180	U	<180	U	<180	U	<180	U	<200	U	**150**		<180	U	<170	U	<180	U	<180	U
DeCB	**209**	ppt	<95	U	**74**		<210	U	<210	U	<210	U	<210	U	<230	U	**120**	**B**	<210	U	<210	U	<210	U	<210	U

Bold - Analysis is above machine detection limit (MDL)

J - estimated concentration above MDL and reporting limit (RL)

APPENDIX C

Table 11: PCB Congener Results Comparison Table

Management or Placement Unit			Placement Unit MOPU - ND = 0												Management Unit - MU5 - ND = 0											
Parameter	Sample ID		DS-11-MOPU		MOPU Lake Superior		MOPU Lake Superior		MOPU Lake Superior		MOPU Lake Superior		MOPU Lake Superior		DS-11-MU5		DS-11-MU5		DS-11-MU5-1		DS-11-MU5-2		DS-11-MU5-4		DS-11-MU5-5	
	Lab ID		T11H197-38		9052-Rep 1		9052-Rep 2		9052-Rep 3		9052-Rep 4		9052-Rep 5		T11H197-58		G1K090434		1111275-022		1111275-023		1111275-024		1111275-025	
	Sample Type		Soil		Tissue		Tissue		Tissue		Tissue		Tissue		Soil		Tissue		Tissue		Tissue		Tissue		Tissue	
	Analysis Method		SW8082CON		1668A		SW8082CON		SW8082CON		SW8082CON		SW8082CON		SW8082CON		1668A		SW8082CON		SW8082CON		SW8082CON		SW8082CON	
Total PCBs		ppt	0		**13,136**		**10,840**		**8,060**		**8,460**		**7,770**		4		**20,835**		**16,200**		**15,400**		**14,000**		**13,770**	
Total PCBs x 2		ppt	NA		**26,272**		**21,680**		**16,120**		**16,920**		**15,540**		NA		**41,670**		**32,400**		**30,800**		**28,000**		**27,540**	
% Lipids			NA		0.017		0.032		0.031		0.036		0.039		NA		0.015		0.053		0.032		0.034		0.035	
Normalized PCBs		ppt	NA		1,545,400		677,500		520,000		470,000		398,462		NA		2,778,000		611,321		962,500		823,529		786,857	
PCB Congener	Congener Number	Units																								
2,4´-DiCB	8	ppt	0	U	**180**		0	U	0	U	0	U	0	U	0	U	**100**		0	U	0	U	0	U	0	U
2,2´,5-TrCB	18	ppt	0	U	**93**	**C J B**	0	U	0	U	0	U	0	U	0	U	**88**	**C B**	0	U	0	U	0	U	0	U
2,4,4´-TrCB	28	ppt	0	U	**170**	**C B**	0	U	0	U	0	U	0	U	0	U	**160**	**C B**	0	U	0	U	0	U	0	U
2,2´,3,5´-TeCB	44	ppt	0	U	**350**	**C B**	0	U	0	U	0	U	0	U	0	U	**510**	**C B**	0	U	0	U	0	U	0	U
2,2´,4,5´-TeCB	49	ppt	0	U	**240**	**C B**	0	U	0	U	0	U	0	U	0	U	**370**	**C B**	0	U	0	U	0	U	0	U
2,2´,5,5´-TeCB	52	ppt	0	U	**600**	**B**	0	U	0	U	0	U	0	U	0	U	**910**	**B**	0	U	0	U	0	U	0	U
2,3´,4,4´-TeCB	66	ppt	0	U	**350**	**B**	0	U	0	U	0	U	0	U	0	U	**40**	**C**	0	U	0	U	0	U	0	U
3,3´,4,4´-TeCB	77	ppt	0	U	**20**		0	U	0	U	0	U	0	U	0	U	**21**		0	U	0	U	0	U	0	U
2,2´,3,4,5´-PeCB	87	ppt	0	U	**770**	**C B**	0	U	0	U	0	U	0	U	0	U	**1,300**	**C B**	0	U	0	U	0	U	0	U
2,2´,4,5,5´-PeCB	101	ppt	0	U	**1,500**	**C B**	**2,100**		**1,700**	**J**	**1,700**	**J**	**1,700**	**J**	0	U	**2,300**	**C D B**	**2,900**		**2,800**		**2,500**		**2,400**	
2,3,3´,4,4´-PeCB	105	ppt	0	U	**360**	**B**	**770**	**J**	0	U	0	U	0	U	0	U	**440**	**B**	0	U	0	U	0	U	0	U
2,3,3',4',6-PeCB	110		0		**1,900**	**C B**	**1,700**		**1,400**		**1,400**		**1,300**		0		**2,800**	**C D B**	**2,400**		**2,300**		**2,000**		**1,900**	
2,3´,4,4´,5-PeCB	118	ppt	0	U	**1,100**	**B**	**1,200**	**J**	**1,000**	**J**	**1,000**	**J**	**970**	**J**	0	U	**1,300**	**B**	**1,600**	**J**	**1,500**	**J**	**1,400**	**J**	**1,400**	**J**
3,3´,4,4´,5-PeCB	126	ppt	0	U	**4.9**	**J**	0	U	0	U	0	U	0	U	0	U	**4**		0	U	0	U	0	U	0	U
2,2´,3,3´,4,4´-HxCB	128	ppt	0	U	**290**	**C**	0	U	0	U	0	U	0	U	0	U	**450**	**C B**	0	U	0	U	0	U	0	U
2,2´,3,4,4´,5´-HxCB	138	ppt	0	U	**1,900**	**C E B**	**1,800**	**J**	**1,400**	**J**	**1,500**	**J**	**2,000**	**J**	**0.51**	**J m**	**3,300**	**C D B**	**2,900**		**2,700**		**2,500**		**2,400**	
2,2´,4,4´,5,5´-HxCB	153	ppt	0	U	**1,600**	**C E B**	**2,400**		**1,900**	**J**	**2,200**		**1,800**	**J**	**0.65**	**J**	**2,900**	**C D B**	**3,700**		**3,500**		**3,200**		**3,300**	
3,3´,4,4´,5,5´-HxCB	169	ppt	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U	0	U
2,2´,3,3´,4,4´,5-HpCB	170	ppt	0	U	**230**	**B**	0	U	0	U	0	U	0	U	**1.00**	**J m**	**580**	**B**	**1,100**	**J**	**1,100**	**J**	**1,000**	**J**	**970**	**J**
2,2´,3,4,4´,5,5´-HpCB	180	ppt	0	U	**140**	**C**	0	U	0	U	0	U	0	U	**1.60**	**J**	**300**	**C B**	0	U	0	U	0	U	0	U
2,2´,3,4,4´,5´,6-HpCB	183	ppt	0	U	**120**		0	U	0	U	0	U	0	U	0	U	**330**		0	U	0	U	0	U	0	U
2,2´,3,4,4´,6,6´-HpCB	184	ppt	0	U	0	U	0	U	0	U	0	U	0	U	0	U	**1.7**	**J**	0	U	0	U	0	U	0	U
2,2´,3,4´,5,5´,6-HpCB	187	ppt	0	U	**990**		**870**	**J**	**660**	**J**	**660**	**J**	0	U	0	U	**2,200**	**D B**	**1,600**	**J**	**1,500**	**J**	**1,400**	**J**	**1,400**	**J**
2,2´,3,3´,4,4´,5,6-OcCB	195	ppt	0	U	**73**		0	U	0	U	0	U	0	U	0	U	**160**		0	U	0	U	0	U	0	U
2,2',3,3',4,4',5,5',6-NoCB	206	ppt	0	U	**81**		0	U	0	U	0	U	0	U	0	U	**150**		0	U	0	U	0	U	0	U
DeCB	209	ppt	0	U	**74**		0	U	0	U	0	U	0	U	0	U	**120**	**B**	0	U	0	U	0	U	0	U

Bold - Analysis is above machine detection limit (MDL)

J - estimated concentration above MDL and reporting limit

APPENDIX D

Duluth-Superior, Minnesota-Wisconsin, Harbor Typed Field Logbook Form

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Duluth-Superior, Minnesota-Wisconsin, Harbor Typed Field Logbook Form

Station ID#	Sample collection date	Time of sample collection	Field water depth (ft.)	Water Elevation Duluth Station, 9099064	Elevation Top of Sediment (ft.)	Thickness of each core retrieved (ft.)	Elevation Bottom of Sediment Core (ft.)	Number of cores at each station	Sample ID#	A description, measurement and identification of the material of each core retrieved according to ASTM D 2488-69, "Description of Soils (Visual- Manual Procedure)".	USCS Classification	Type of sampling equipment used	Latitude and Longitude of station locations	State Plane, NAD83 2201 - Minnesota North, U.S. Feet
DS-11-01	8/20/2011	10:40	22.8	601.4	578.6	surficial	578.1	2	DS-11-01	Clay with sand, dark brown/gray, zebra mussels organic material, no odor, saturated, very soft to soft	CL	Ponar	N 46 43.0455 W 92 10.1721	N 408795.22 E 2858079.73
DS-11-02	8/20/2011	11:00	22.6	601.3	578.7	surficial	578.2	2	DS-11-02	Clay with sand, dark brown/gray, zebra mussels organic material, no odor, saturated, very soft to soft	CL	Ponar	N 46 43.1623 W 92 09.3189	N 409548.57 E 2861638.17
DS-11-03	8/20/2011	11:25	21.8	601.4	579.6	surficial	579.1	2	DS-11-03	Clay with sand, dark brown/gray, zebra mussels organic material, no odor, saturated, very soft to soft	CL	Ponar	N 46 43.2464 W 92 08.5763	N 410097.84 E 2864736.25
DS-11-04	8/20/2011	11:40	22.9	601.4	578.5	surficial	578.0	2	DS-11-04	Clay with sand, dark brown/gray, no odor, saturated, very soft to soft	CL	Ponar	N 46 43.5570 W 92 08.5204	N 411988.60 E 2864946.55
DS-11-05	8/20/2011	12:00	22.4	601.4	579.0	surficial	578.5	2	DS-11-05	Clay with sand, dark brown/gray, no odor, saturated, very soft to soft	CL	Ponar	N 46 43.8357 W 92 08.5636	N 413680.323 E 2864744.968
DS-11-MU1	8/20/2011	12:00	--	--	--	--	--	--	DS-11-MU1	Composite sample of DS-11-01 through DS-11-05	--	Ponar	--	--
DS-11-06	8/16/2011	10:30	26.9	601.3	574.4	2	572.4	10	DS-11-06	Clay with sand, brown, zebra mussels, no odor, saturated to wet, very soft to soft.	CL	Gravity Core	N 46 44.8547 W 92 06.1356	N 420003.031 E 2874813.264
DS-11-07	8/16/2011	11:45	26.9	601.5	574.6	2	572.6	11	DS-11-07	Clay with sand, brown, zebra mussels, no odor, saturated to wet, very soft to soft.	CL	Gravity Core	N 46 44.7540 W 92 06.7075	N 419360.217 E 2872431.505
DS-11-08	8/15/2011	18:00	27.3	601.6	574.3	2	572.3	14	DS-11-08	Clay with sand, brown, zebra mussels, no odor, saturated to wet, very soft to soft.	CL	Gravity Core	N 46 44.792 W 92 06.5806	N 419597.990 E 2872958.792
DS-11-09	8/15/2011	17:00	25.9	601.7	575.8	2.2	573.6	7	DS-11-09	Clay with sand and silt, brown with black streaks, zebra mussels, no odor, saturated to wet, very soft to soft,	CL	Gravity Core	N 46 44.9588 W 92 06.3582	N 420623.830 E 2873875.031
DS-11-10	8/15/2011	16:15	26.7	601.6	574.9	2.5	572.4	8	DS-11-10	Clay with sand and silt, brown with black streaks, zebra mussels, no odor, saturated to wet, very soft to soft, sheen in water	CL	Gravity Core	N 46 44.5828 W 92 06.0289	N 418356.019 E 2875280.463
DS-11-MU2	8/16/2011	12:00	--	--	--	--	--	--	DS-11-MU2	Composite sample of DS-11-06 through DS-11-10	--	Gravity Core	--	--

APPENDIX D

Duluth-Superior, Minnesota-Wisconsin, Harbor Typed Field Logbook Form

Station ID#	Sample collection date	Time of sample collection	Field water depth (ft.)	Water Elevation Duluth Station, 9099064	Elevation Top of Sediment (ft.)	Thickness of each core retrieved (ft.)	Elevation Bottom of Sediment Core (ft.)	Number of cores at each station	Sample ID#	A description, measurement and identification of the material of each core retrieved according to ASTM D 2488-69, "Description of Soils (Visual- Manual Procedure)".	USCS Classification	Type of sampling equipment used	Latitude and Longitude of station locations	State Plane, NAD83 2201 - Minnesota North, U.S. Feet
DS-11-11	8/16/2011	15:30	27.0	601.7	574.7	surficial	574.2	10	DS-11-11	Sand with gravel, medium to very fine, brown, no odor, zebra mussles and wood, saturated to wet, loose to medium.	SP	Ponar	N 46 46.0801 W 92 05.8516	N 427467.086 E 2875903.301
DS-11-12	8/16/2011	16:00	27.0	601.7	574.7	surficial	574.2	10	DS-11-12	Sand with gravel, medium to very fine, brown, no odor, zebra mussles and wood, saturated to wet, loose to medium,	SP	Ponar	N 46 46.0292 W 92 05.8109	N 427159.935 E 2876077.18
DS-11-13	8/17/2011	8:00	27.5	601.4	573.9	surficial	573.4	8	DS-11-13	Sand with silty clay, fine to very fine, brown, no odor, zebra mussles and wood, saturated to wet, loose to medium,	SP	Ponar	N 46 45.5431 W 92 05.7393	N 424208.977 E 2876414.759
DS-11-14	8/17/2011	9:00	27.2	601.3	574.1	1.5	572.6	10	DS-11-14	Clay with sand, medium to very fine, dark gray/brown, no odor, saturated to wet, very soft to soft	CL	Gravity Core	N 46 45.4627 W 92 05.4495	N 423736.027 E 2877631.754
DS-11-15	8/17/2011	10:00	27.3	601.3	574.0	1.8	572.2	9	DS-11-15	Clay with sand, medium to very fine, dark gray/brown, no odor, saturated to wet, very soft to soft	CL	Gravity Core	N 46 45.3716 W 92 05.4257	N 423183.567 E 2877738.412
DS-11-MU3	8/17/2011	10:30	--	--	--	--	--	--	DS-11-MU3	Composite sample of DS-11-11 through DS-11-15	--	Gravity Core / Ponar	--	--
DS-11-16	8/15/2011	10:00	26.9	601.4	574.5	1.5	573.0	10	DS-11-16	Clay with sand and silt, fine to very fine, brown, no odor, saturated to wet, soft	CL	Gravity Core	N 46 45.3107 W 92 05.3461	N 422817.728 E 2878075.793
DS-11-17	8/15/2011	11:30	26.7	601.4	574.7	1.5	573.2	8	DS-11-17	Clay with sand and silt, fine to very fine, brown with red streaks, no odor, zebra mussels, saturated to wet, soft	CL	Gravity Core	N 46 45.163 W 92 05.2922	N 421922.868 E 2878312.725
DS-11-18	8/15/2011	13:30	27.0	601.6	574.6	1.5	573.1	9	DS-11-18	Clay with sand and silt, fine to very fine, brown, no odor, saturated to wet, soft	CL	Gravity Core	N 46 45.3313 W 92 05.3569	N 422942.356 E 2878029.037
DS-11-19	8/16/2011	8:30	27.4	601.5	574.1	surficial	573.6	2	DS-11-19	Sand with clay, black gravel, brown, coarse to very fine, zebra mussels and wood, no odor, saturated to wet, loose	SP	Ponar	N 46 45.0179 W 92 05.3623	N 421037.033 E 2878031.385
DS-11-20	8/16/2011	9:45	27.4	601.5	574.1	surficial	573.6	2	DS-11-20	Sand with clay, brown, coarse to very fine, zebra mussels and wood, no odor, saturated to wet, loose	SP	Ponar	N 46 45.0089 W 92 05.5464	N 420972.419 E 2877263.01
DS-11-MU4	8/16/2011	10:00	--	--	--	--	--	--	DS-11-MU4	Composite sample of DS-11-16 through DS-11-20	--	Gravity Core / Ponar	--	--

APPENDIX D

Duluth-Superior, Minnesota-Wisconsin, Harbor Typed Field Logbook Form

Station ID#	Sample collection date	Time of sample collection	Field water depth (ft.)	Water Elevation Duluth Station, 9099064	Elevation Top of Sediment (ft.)	Thickness of each core retrieved (ft.)	Elevation Bottom of Sediment Core (ft.)	Number of cores at each station	Sample ID#	A description, measurement and identification of the material of each core retrieved according to ASTM D 2488-69, "Description of Soils (Visual- Manual Procedure)".	USCS Classification	Type of sampling equipment used	Latitude and Longitude of station locations	State Plane, NAD83 2201 - Minnesota North, U.S. Feet
DS-11-21	8/17/2011	14:30	26.8	601.3	574.5	2	572.5	9	DS-11-21	Clay with sand and gravel, dark brown with red streaks, zebra mussels and wood, no odor, saturated to wet, very soft to soft, sand lense at bottom	CL	Gravity Core	N 46 44.3459 W 92 04.7746	N 416984.488 E 2880540.778
DS-11-22	8/17/2011	15:45	27.3	601.5	574.2	2	572.2	10	DS-11-22	Clay with sand and gravel, dark brown with red streaks, zebra mussels and wood, no odor, saturated to wet, very soft to soft	CL	Gravity Core	N 46 44.086 W 92 04.3762	N 415426.715 E 2882226.672
DS-11-23	8/20/2011	7:00	27.2	601.4	574.2	surficial	573.7	1	DS-11-23	Clay with sand and gravel, dark brown with red streaks, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 43.7596 W 92 03.9364	N 413466.96 E 2884091.26
DS-11-24	8/20/2011	7:25	27.2	601.4	574.2	surficial	573.7	1	DS-11-24	Clay with sand and gravel, dark brown with red streaks, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 43.4310 W 92 03.4373	N 411497.92 E2886204.52
DS-11-25	8/20/2011	8:00	26.9	601.4	574.5	surficial	574.0	1	DS-11-25	Clay with sand and gravel, dark brown with red streaks, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 43.1449 W 92 03.0283	N 409781.84 2887937.79
DS-11-MU5	8/20/2011	8:00		--	--	--	--	--	DS-11-MU5	Composite sample of DS-11-21 through DS-11-25	--	Gravity Core / Ponar	--	--
DS-11-26	8/20/2011	8:45	26.8	601.3	574.5	surficial	574.0	3	DS-11-26	Sand with gravel, medium to fine, brown, organic material, no odor, saturated to wet, loose to medium Clay with sand and gravel, brown, organic material, no odor, saturated to wet, very soft to soft	SP	Ponar	N 46 42.3996 W 92 01.6169	N 405332.23 E 2893901.03
DS-11-27	8/20/2011	9:00	26.7	601.3	574.6	surficial	574.1	1	DS-11-27	Clay with sand and gravel, dark brown, zebra mussels, no odor, saturated to wet, soft	CL	Ponar	N 46 42.3497 W 92 01.5488	N 405033.21 E 2894189.71
DS-11-28	8/18/2011	17:30	26.8	601.6	574.8	2	572.8	8	DS-11-28	Clay with sand and gravel, dark brown, zebra mussels, no odor, saturated to wet, soft	CL	Gravity Core	N 46 42.5215 W 92 01.7652	N 406064.85 E 2893270.44
DS-11-29	8/18/2011	16:45	26.6	601.6	575.0	2	573.0	9	DS-11-29	Sand, dark reddish brown with black streaks, with wood, no odor, saturated, loose	SP	Gravity Core	N 46 42.3500 W 92 01.6029	N 405031.79 E 2893963.77

APPENDIX D

Duluth-Superior, Minnesota-Wisconsin, Harbor Typed Field Logbook Form

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DS-11-30	8/18/2011	14:30	26.2	601.6	575.4	surficial	574.9	3	DS-11-30	Sand with gravel, brown, with wood, saturated, loose Clay with sand and gravel, brown, with wood, saturated, very soft to soft	SP	Ponar	N 46 42.2003 W 92 01.0890	N 404152.00 E 2896125.13
DS-11-MU6	8/20/2011	9:00	--	--	--	--	--	--	DS-11-MU6	Composite sample of DS-11-26 through DS-11-30	--	Gravity Core / Ponar	--	--
DS-11-31	8/18/2011	10:45	58.0	601.3	543.3	surficial	542.8	3	DS-11-31	Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated, medium to loose	SP	Ponar	N 46 42.6643 W 91 59.1655	N 407086.30 E 2904128.01
DS-11-32	8/18/2011	11:20	60.0	601.3	541.3	surficial	540.8	1	DS-11-32	Clay, with sand, reddish brown, no odor, saturated, very soft	CL	Ponar	N 46 42.7301 W 91 58.9310	N 407500.43 E 2905103.02
DS-11-33	8/18/2011	11:40	59.0	601.3	542.3	surficial	541.8	5	DS-11-33	Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated, medium to loose	SP	Ponar	N 46 42.7281 W 91 58.9695	N 407486.11 E 2904942.13
DS-11-34	8/18/2011	12:00	58.0	601.3	543.3	surficial	542.8	6	DS-11-34	Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated , medium density	SP	Ponar	N 46 42.6921 W 91 59.0687	N 407261.28 E 2904530.64
DS-11-35	8/18/2011	12:55	62.0	601.4	539.4	surficial	538.9	7	DS-11-35	Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated, medium density	SP	Ponar	N 46 42.7795 W 91 59.1449	N 407788.21 E2904204.27
DS-11-WOPU	8/18/2011	12:45	--	--	--	--	--	--	DS-11-WOPU	Composite sample of DS-11-31 through DS-11-35	--	Ponar	--	--
DS-11-36	8/18/2011	8:00	90.0	601.5	511.5	surficial	511.0	2	DS-11-36	Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated to wet, medium to loose	SP	Ponar	N 46 47.1195 W 92 03.0114	N 433942.586 E 2887680.140
DS-11-37	8/18/2011	8:30	92.0	601.4	509.4	surficial	508.9	2	DS-11-37	Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated to wet, medium to loose	SP	Ponar	N 46 47.2131 W 92 02.9714	N 434513.804 E 2887839.420

APPENDIX D

Duluth-Superior, Minnesota-Wisconsin, Harbor Typed Field Logbook Form

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DS-11-38	8/18/2011	8:50	93.0	601.4	508.4	surficial	507.9	2	DS-11-38	Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated to wet, medium to loose	SP	Ponar	N 46 47.1209 W 92 03.0280	N 433950.155 E 2887610.714
DS-11-39	8/18/2011	9:00	95.0	601.4	506.4	surficial	505.9	2	DS-11-39	Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated to wet, medium to loose	SP	Ponar	N 46 47.1965 W 92 03.0468	N 434408.625 E 2887525.980
DS-11-40	8/18/2011	9:20	92.0	601.4	509.4	surficial	508.9	2	DS-11-40	Sand, with trace of silt and clay, reddish brown, trace wood, no odor, very fine to fine, saturated to wet, medium to loose	SP	Ponar	N 46 47.2383 W 92 03.0321	N 434663.540 E 2887583.906
DS-11-MOPU	8/18/2011	9:20	--	--	--	--	--	--	DS-11-MOPU	Composite sample of DS-11-36 through DS-11-40	--	Ponar	--	--
DS-11-41	8/17/2011	11:45	34.0	601.2	567.2	surficial	566.7	2	DS-11-41	Clay with silt, sand and gravel, dark gray/brown with read streaks, zebra mussels, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 45.555 W 92 05.2582	N 424307.530 E 2878423.565
DS-11-42	8/17/2011	12:00	35.0	601.2	566.2	surficial	565.7	2	DS-11-42	Clay with silt, sand and gravel, dark gray/brown with read streaks, zebra mussels, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 45.5231 W 92 05.3336	N 424109.501 E 2878111.126
DS-11-43	8/17/2011	12:15	36.0	601.2	565.2	surficial	564.7	2	DS-11-43	Clay with silt, sand and gravel, dark gray/brown with read streaks, zebra mussels, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 45.4821 W 92 05.2500	N 423864.851 E 2878463.624
DS-11-44	8/17/2011	12:30	34.0	601.2	567.2	surficial	566.7	2	DS-11-44	Clay with silt, sand and gravel, dark gray/brown with read streaks, zebra mussels, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 45.5158 W 92 05.2418	N 424070.148 E 2878495.196
DS-11-45	8/17/2011	12:50	35.0	601.2	566.2	surficial	565.7	2	DS-11-45	Clay with silt, sand and gravel, dark gray/brown with read streaks, zebra mussels, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 45.5114 W 92 05.2762	N 424041.52 E 2878351.842
DS-11-HIPU	8/17/2011	13:00	--	--	--	--	--	--	DS-11-HIPU	Composite sample of DS-11-41 through DS-11-45	--	Ponar	--	--

APPENDIX D

Duluth-Superior, Minnesota-Wisconsin, Harbor Typed Field Logbook Form

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DS-11-46	8/17/2011	16:30	41.0	601.5	560.5	surficial	560.0	2	DS-11-46	Clay with sand, dark brown/gray with black streaks, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 44.904 W 92 06.637	N 420275.777 E 2872714.416
DS-11-47	8/17/2011	16:45	39.0	601.5	562.5	surficial	562.0	2	DS-11-47	Clay with sand, dark brown/gray with black streaks, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 44.919 W 92 06.621	N 420367.812 E 2872780.101
DS-11-48	8/17/2011	17:00	36.0	601.5	565.5	surficial	565.0	2	DS-11-48	Clay with sand, dark brown/gray with black streaks, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 44.917 W 92 06.674	N 420352.82 E 2872558.809
DS-11-49	8/18/2011	18:45	42.0	601.5	559.5	surficial	559.0	2	DS-11-49	Clay with sand, dark brown/gray with black streaks, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 44.904 W 92 06.669	N 420274.066 E 2872580.711
DS-11-50	8/18/2011	19:00	35.0	601.5	566.5	surficial	566.0	2	DS-11-50	Clay with sand, dark brown/gray with black streaks, no odor, saturated to wet, very soft to soft	CL	Ponar	N 46 44.924 W 92 06.647	N 420396.814 E 2872671.077
DS-11-IIPU	8/18/2011	19:00	--	--	--	--	--	--	DS-11-IIPU	Composite sample of DS-11-46 through DS-11-50	--	Ponar	--	--

APPENDIX E

Duluth-Superior, Minnesota-Wisconsin Harbor Sediment Boring Logs

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 20, 2011
DRILLING START TIME: 10:40
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 10:40
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-01
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 578.6 ft.
STATE PLANE COORDINATES: 2,858,079.73 ft. E
NAD83 2201 - Minnesota North 408,795.22 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-01	2			0.5	(CL) Clay with sand, dark brown/gray, zebra mussels organic material, no odor, saturated, very soft to soft	578.1	% MOISTURE = 67.5 % MEDIUM SAND = 28.7 % FINE SAND = 54.9 % FINES = 16.4

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 20, 2011
DRILLING START TIME: 11:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-02
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.3
SEDIMENT ELEVATION: 578.7 ft.
STATE PLANE COORDINATES: 2,861,638.17 ft. E
NAD83 2201 - Minnesota North 409,548.57 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-02	2			0.5	(CL) Clay with sand, dark brown/gray, zebra mussels organic material, no odor, saturated, very soft to soft	578.2	% MOISTURE = 59.8 % MEDIUM SAND = 25.7 % FINE SAND = 30.2 % FINES = 44.1

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 20, 2011
DRILLING START TIME: 11:25
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:25
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-03
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 579.6 ft.
STATE PLANE COORDINATES: 2,864,736.25 ft. E
NAD83 2201 - Minnesota North 410,097.84 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-03	2			0.5	(CL) Clay with sand, dark brown/gray, zebra mussels organic material, no odor, saturated, very soft to soft	579.1	% MOISTURE = 61.8 % MEDIUM SAND = 25.8 % FINE SAND = 31.4 % FINES = 42.8

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 20, 2011
DRILLING START TIME: 11:40
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:40
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-04
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 578.5 ft.
STATE PLANE COORDINATES: 2,864,946.55 ft. E
NAD83 2201 - Minnesota North 411,988.60 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-04	2			0.5	(CL) Clay with sand, dark brown/gray, no odor, saturated, very soft to soft	578.0	% MOISTURE = 57.2 % MEDIUM SAND = 19.1 % FINE SAND = 36.7 % FINES = 44.2

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 20, 2011
DRILLING START TIME: 12:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 12:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-05
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 579.0 ft.
STATE PLANE COORDINATES: 2,864,744.97 ft. E
NAD83 2201 - Minnesota North 413,680.32 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-05	2			0.5	(CL) Clay with sand, dark brown/gray, no odor, saturated, very soft to soft	578.5	% MOISTURE = 49.3 % MEDIUM SAND = 14.4 % FINE SAND = 42.7 % FINES = 44.9
1								

Bottom of borehole at 1.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 16, 2011
DRILLING START TIME: 10:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 10:30
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-06
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.3
SEDIMENT ELEVATION: 574.4 ft.
STATE PLANE COORDINATES: 2,874,813.26 ft. E
NAD83 2201 - Minnesota North 420,003.03 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0								
1	PP DS-11-06	10				(CL) Clay with sand, brown, zebra mussels, no odor, saturated to wet, very soft to soft.		% MOISTURE = 39.2 % MEDIUM SAND = 36.3 % FINE SAND = 57.6 % FINES = 6.1
2					2.0		572.4	

Bottom of borehole at 2.0 feet.

FUTURENET GROUP
ENVIRONMENTAL • CONSTRUCTION • TECHNOLOGY

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 16, 2011
DRILLING START TIME: 11:45
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:45
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-07
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.5
SEDIMENT ELEVATION: 574.6 ft.
STATE PLANE COORDINATES: 2,872,431.51 ft. E
NAD83 2201 - Minnesota North 419,360.22 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0								
1	PP DS-11-07	11				(CL) Clay with sand, brown, zebra mussels, no odor, saturated to wet, very soft to soft.		% MOISTURE = 37 % MEDIUM SAND = 33.4 % FINE SAND = 29.3 % FINES = 37.3
2					2.0		572.6	

Bottom of borehole at 2.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 15, 2011
DRILLING START TIME: 18:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 18:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-08
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.6
SEDIMENT ELEVATION: 574.3 ft.
STATE PLANE COORDINATES: 2,872,958.79 ft. E
NAD83 2201 - Minnesota North 419,597.99 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0								
1	GC DS-11-08	14				(CL) Clay with sand, brown, zebra mussels, no odor, saturated to wet, very soft to soft.		% MOISTURE = 59.4 % MEDIUM SAND = 7.7 % FINE SAND = 74.1 % FINES = 18.2
2					2.0		572.3	

Bottom of borehole at 2.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 15, 2011
DRILLING START TIME: 17:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 17:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-09
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.7
SEDIMENT ELEVATION: 575.8 ft.
STATE PLANE COORDINATES: 2,873,875.03 ft. E
NAD83 2201 - Minnesota North 420,623.83 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	GC DS-11-09	7				(CL) Clay with sand and silt, brown with black streaks, zebra mussels, no odor, saturated to wet, very soft to soft,		% MOISTURE = 53.1 % MEDIUM SAND = 26.7 % FINE SAND = 47.5 % FINES = 25.8
1								
2					2.2		573.6	

Bottom of borehole at 2.2 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 15, 2011
DRILLING START TIME: 16:15
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 16:15
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-10
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.6
SEDIMENT ELEVATION: 574.9 ft.
STATE PLANE COORDINATES: 2,875,280.46 ft. E
NAD83 2201 - Minnesota North 418,356.02 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	GC DS-11-10	8				(CL) Clay with sand and silt, brown with black streaks, zebra mussels, no odor, saturated to wet, very soft to soft, sheen in water		% MOISTURE = 46.3 % MEDIUM SAND = 28 % FINE SAND = 37.3 % FINES = 34.3
1								
2					2.5		572.4	

Bottom of borehole at 2.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 16, 2011
DRILLING START TIME: 15:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 15:30
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-11
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.7
SEDIMENT ELEVATION: 574.7 ft.
STATE PLANE COORDINATES: 2,875,903.30 ft. E
NAD83 2201 - Minnesota North 427,467.09 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-11	10			0.5	(SP) Sand with gravel, medium to very fine, brown, no odor, zebra mussles and wood, saturated to wet, loose to medium.	574.2	% MOISTURE = 27.5 % MEDIUM SAND = 6 % FINE SAND = 80.2 % FINES = 13.8

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 16, 2011
DRILLING START TIME: 16:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 16:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-12
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.7
SEDIMENT ELEVATION: 574.7 ft.
STATE PLANE COORDINATES: 2,876,077.18 ft. E
NAD83 2201 - Minnesota North 427,159.94 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-12	10			0.5	(SP) Sand with gravel, medium to very fine, brown, no odor, zebra mussles and wood, saturated to wet, loose to medium,	574.2	% MOISTURE = 36.5 % MEDIUM SAND = 5.5 % FINE SAND = 81.1 % FINES = 13.4

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 08:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 08:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-13
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 573.9 ft.
STATE PLANE COORDINATES: 2,876,414.76 ft. E
NAD83 2201 - Minnesota North 424,208.98 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-13	8			0.5	(SP) Sand with silty clay, fine to very fine, brown, no odor, zebra mussles and wood, saturated to wet, loose to medium,	573.4	% MOISTURE = 38.8 % MEDIUM SAND = 9.5 % FINE SAND = 83.9 % FINES = 6.6

Bottom of borehole at 0.5 feet.

FUTURENET GROUP
ENVIRONMENTAL • CONSTRUCTION • TECHNOLOGY

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 09:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 09:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-14
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.3
SEDIMENT ELEVATION: 574.1 ft.
STATE PLANE COORDINATES: 2,877,631.75 ft. E
NAD83 2201 - Minnesota North 423,736.03 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	GC DS-11-14	10				(CL) Clay with sand, medium to very fine, dark gray/brown, no odor, saturated to wet, very soft to soft		% MOISTURE = 29.5 % MEDIUM SAND = 12.5 % FINE SAND = 72.3 % FINES = 15.2
1					1.5		572.6	

Bottom of borehole at 1.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 10:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 10:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-15
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.3
SEDIMENT ELEVATION: 574.0 ft.
STATE PLANE COORDINATES: 2,877,738.41 ft. E
NAD83 2201 - Minnesota North 423,183.57 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	GC DS-11-15	9				(CL) Clay with sand, medium to very fine, dark gray/brown, no odor, saturated to wet, very soft to soft		% MOISTURE = 27.2 % MEDIUM SAND = 20.3 % FINE SAND = 55.6 % FINES = 24.1
1					1.8		572.2	

Bottom of borehole at 1.8 feet.

U.S. Army Corps of Engineers, Detroit District
Contract No.: W911XK-09-D-0014 Task Order # 0040
Duluth Harbor Sediment Sampling and Analysis-Duluth Harbor
FNG Project No.: 11652-0040

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 15, 2011
DRILLING START TIME: 10:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 10:00
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-16
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 574.5 ft.
STATE PLANE COORDINATES: 2,878,075.79 ft. E
NAD83 2201 - Minnesota North 422,817.73 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	GC DS-11-16	10			1.5	(CL) Clay with sand and silt, fine to very fine, brown, no odor, saturated to wet, soft	573.0	% MOISTURE = 40.3 % MEDIUM SAND = 5.7 % FINE SAND = 76.6 % FINES = 17.7
1								

Bottom of borehole at 1.5 feet.

FUTURENET GROUP
ENVIRONMENTAL • CONSTRUCTION • TECHNOLOGY

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 15, 2011
DRILLING START TIME: 11:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:30
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-17
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 574.7 ft.
STATE PLANE COORDINATES: 2,878,312.73 ft. E
NAD83 2201 - Minnesota North 421,922.87 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	GC DS-11-17	8			1.5	(CL) Clay with sand and silt, fine to very fine, brown with red streaks, no odor, zebra mussels, saturated to wet, soft	573.2	% MOISTURE = 44.3 % MEDIUM SAND = 11.3 % FINE SAND = 58.7 % FINES = 30
1								

Bottom of borehole at 1.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 15, 2011
DRILLING START TIME: 13:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 13:30
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-18
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.6
SEDIMENT ELEVATION: 574.6 ft.
STATE PLANE COORDINATES: 2,878,029.04 ft. E
NAD83 2201 - Minnesota North 422,942.36 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	GC DS-11-18	9				(CL) Clay with sand and silt, fine to very fine, brown, no odor, saturated to wet, soft		% MOISTURE = 38.5 % MEDIUM SAND = 7.1 % FINE SAND = 62 % FINES = 30.9
1					1.5		573.1	

Bottom of borehole at 1.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 16, 2011
DRILLING START TIME: 08:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 08:30
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-19
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.5
SEDIMENT ELEVATION: 574.1 ft.
STATE PLANE COORDINATES: 2,878,031.39 ft. E
NAD83 2201 - Minnesota North 421,037.03 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-19	2			0.5	(SP) Sand with clay, black gravel, brown, coarse to very fine, zebra mussels and wood, no odor, saturated to wet, loose	573.6	% MOISTURE = 17.7 % MEDIUM SAND = 16.2 % FINE SAND = 83.2 % FINES = 0.6

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 16, 2011
DRILLING START TIME: 09:45
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 09:45
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-20
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.5
SEDIMENT ELEVATION: 574.1 ft.
STATE PLANE COORDINATES: 2,877,263.01 ft. E
NAD83 2201 - Minnesota North 420,972.42 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-20	2			0.5	(SP) Sand with clay, brown, coarse to very fine, zebra mussels and wood, no odor, saturated to wet, loose	573.6	% MOISTURE = 21.4 % MEDIUM SAND = 2.5 % FINE SAND = 96 % FINES = 1.5

Bottom of borehole at 0.5 feet.

FUTURENET GROUP
ENVIRONMENTAL • CONSTRUCTION • TECHNOLOGY

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 14:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 14:30
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-21
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.3
SEDIMENT ELEVATION: 574.5 ft.
STATE PLANE COORDINATES: 2,880,540.78 ft. E
NAD83 2201 - Minnesota North 416,984.49 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0								
1	GC DS-11-21	9				(CL) Clay with sand and gravel, dark brown with red streaks, zebra mussels and wood, no odor, saturated to wet, very soft to soft, sand lense at bottom		% MOISTURE = 55.9 % MEDIUM SAND = 43.3 % FINE SAND = 47.7
2					2.0		572.5	

Bottom of borehole at 2.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 15:45
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 15:45
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-22
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.5
SEDIMENT ELEVATION: 574.2 ft.
STATE PLANE COORDINATES: 2,882,226.67 ft. E
NAD83 2201 - Minnesota North 415,426.72 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0								
1	GC DS-11-22	10				(CL) Clay with sand and gravel, dark brown with red streaks, zebra mussels and wood, no odor, saturated to wet, very soft to soft		% MOISTURE = 47.7 % MEDIUM SAND = 31.2 % FINE SAND = 62.2 % FINES = 6.6
2					2.0		572.2	

Bottom of borehole at 2.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 20, 2011
DRILLING START TIME: 07:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 07:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-23
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 574.2 ft.
STATE PLANE COORDINATES: 2,884,091.26 ft. E
NAD83 2201 - Minnesota North 413,466.96 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-23	1			0.5	(CL) Clay with sand and gravel, dark brown with red streaks, no odor, saturated to wet, very soft to soft	573.7	% MOISTURE = 69.3 % MEDIUM SAND = 31.2 % FINE SAND = 40.1 % FINES = 28.7

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 20, 2011
DRILLING START TIME: 07:25
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 07:25
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-24
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 574.2 ft.
STATE PLANE COORDINATES: 2,886,204.52 ft. E
NAD83 2201 - Minnesota North 411,497.92 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-24	1			0.5	(CL) Clay with sand and gravel, dark brown with red streaks, no odor, saturated to wet, very soft to soft	573.7	% MOISTURE = 62.1 % MEDIUM SAND = 39.5 % FINE SAND = 36.9 % FINES = 23.6

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 20, 2011
DRILLING START TIME: 08:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 08:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-25
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 574.5 ft.
STATE PLANE COORDINATES: 2,887,937.79 ft. E
NAD83 2201 - Minnesota North 409,781.84 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-25	1			0.5	(CL) Clay with sand and gravel, dark brown with red streaks, no odor, saturated to wet, very soft to soft	574.0	% MOISTURE = 72.1 % MEDIUM SAND = 44.3 % FINE SAND = 29.1 % FINES = 26.6

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 20, 2011
DRILLING START TIME: 08:45
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 08:45
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-26
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.3
SEDIMENT ELEVATION: 574.5 ft.
STATE PLANE COORDINATES: 2,893,901.03 ft. E
NAD83 2201 - Minnesota North 405,332.23 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-26	3			0.5	(SP) Sand with gravel, medium to fine, brown, organic material, no odor, saturated to wet, loose to medium. Clay with sand and gravel, brown, organic material, no odor, saturated to wet, very soft to sof.	574.0	% MOISTURE = 48.3 % MEDIUM SAND = 32.2 % FINE SAND = 36.2 % FINES = 31.6

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 20, 2011
DRILLING START TIME: 09:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 09:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-27
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.3
SEDIMENT ELEVATION: 574.6 ft.
STATE PLANE COORDINATES: 405,033.21 ft. E
NAD83 2201 - Minnesota North 405,033.21 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-27	1			0.5	(CL) Clay with sand and gravel, dark brown, zebra mussels, no odor, saturated to wet, soft	574.1	% MOISTURE = 39.3 % MEDIUM SAND = 15.5 % FINE SAND = 59.8 % FINES = 24.7

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 17:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 17:30
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-28
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.6
SEDIMENT ELEVATION: 574.8 ft.
STATE PLANE COORDINATES: 2,893,270.44 ft. E
NAD83 2201 - Minnesota North 406,064.85 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0								
1	GC DS-11-28	8				(CL) Clay with sand and gravel, dark brown, zebra mussels, no odor, saturated to wet, soft		% MOISTURE = 39.7 % MEDIUM SAND = 44.3 % FINE SAND = 25.2 % FINES = 30.2
2					2.0		572.8	

Bottom of borehole at 2.0 feet.

FUTURENET GROUP
ENVIRONMENTAL • CONSTRUCTION • TECHNOLOGY

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 16:45
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 16:45
SAMPLING METHOD: Gravity Core

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-29
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.6
SEDIMENT ELEVATION: 575.0 ft.
STATE PLANE COORDINATES: 2,893,963.77 ft. E
NAD83 2201 - Minnesota North 405,031.79 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0								
1	GC DS-11-29	9				(SP) Sand, dark reddish brown with black streaks, with wood, no odor, saturated, loose		% MOISTURE = 24.7 % MEDIUM SAND = 8.3 % FINE SAND = 87.7 % FINES = 4
2					2.0		573.0	

Bottom of borehole at 2.0 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 14:40
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 14:40
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-30
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.6
SEDIMENT ELEVATION: 575.4 ft.
STATE PLANE COORDINATES: 2,896,125.13 ft. E
NAD83 2201 - Minnesota North 404,152.00 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-30	3			0.5	(SP) Sand with gravel, brown, with wood, saturated, loose. Clay with sand and gravel, brown, with wood, saturated, very soft to soft	574.9	% MOISTURE = 31.4 % MEDIUM SAND = 8.1 % FINE SAND = 80.3 % FINES = 11.6

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 10:45
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 10:45
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-31
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.3
SEDIMENT ELEVATION: 543.3 ft.
STATE PLANE COORDINATES: 2,904,128.01 ft. E
NAD83 2201 - Minnesota North 407,086.30 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-31	3			0.5	(SP) Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated, medium to loose	542.8	% MOISTURE = 33.1 % MEDIUM SAND = 11.2 % FINE SAND = 85.6 % FINES = 3.2

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 11:20
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:20
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-32
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.3
SEDIMENT ELEVATION: 541.3 ft.
STATE PLANE COORDINATES: 2,905,103.02 ft. E
NAD83 2201 - Minnesota North 407,500.43 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-32	1			0.5	(CL) Clay, with sand, reddish brown, no odor, saturated, very soft	540.8	% MOISTURE = 35.6 % MEDIUM SAND = 16.2 % FINE SAND = 54.6 % FINES = 29.2

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 11:40
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:40
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-33
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.3
SEDIMENT ELEVATION: 542.3 ft.
STATE PLANE COORDINATES: 2,904,942.13 ft. E
NAD83 2201 - Minnesota North 407,486.11 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-33	5			0.5	(SP) Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated, medium to loose	541.8	% MOISTURE = 19.2 % MEDIUM SAND = 13.9 % FINE SAND = 79.6 % FINES = 6.5

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 12:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 12:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-34
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.3
SEDIMENT ELEVATION: 543.3 ft.
STATE PLANE COORDINATES: 2,904,530.64 ft. E
NAD83 2201 - Minnesota North 407,261.28 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-34	6			0.5	(SP) Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated , medium density	542.8	% MOISTURE = 35.6 % MEDIUM SAND = 6.1 % FINE SAND = 92.9 % FINES = 1

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 12:55
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 12:55
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-35
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 539.4 ft.
STATE PLANE COORDINATES: 2,904,204.27 ft. E
NAD83 2201 - Minnesota North 407,788.21 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-35	7			0.5	(SP) Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated, medium density	538.9	% MOISTURE = 34.6 % MEDIUM SAND = 6.8 % FINE SAND = 85.1 % FINES = 8.1

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 08:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 08:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-36
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.5
SEDIMENT ELEVATION: 511.5 ft.
STATE PLANE COORDINATES: 2,887,680.14 ft. E
NAD83 2201 - Minnesota North 433,942.59 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-36	2			0.5	(SP) Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated to wet, medium to loose	511.0	% MOISTURE = 33.5 % MEDIUM SAND = 2.1 % FINE SAND = 45.7 % FINES = 52.2

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 08:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 08:30
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-37
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 509.4 ft.
STATE PLANE COORDINATES: 2,887,839.42 ft. E
NAD83 2201 - Minnesota North 434,513.80 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-37	2			0.5	(SP) Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated to wet, medium to loose	508.9	% MOISTURE = 32.1 % COARSE SAND = 2.6 % MEDIUM SAND = 13.5 % FINE SAND = 63.6 % FINES = 20.3

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 08:50
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 08:50
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-38
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 508.4 ft.
STATE PLANE COORDINATES: 2,887,610.71 ft. E
NAD83 2201 - Minnesota North 433,950.16 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-38	2			0.5	(SP) Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated to wet, medium to loose	507.9	% MOISTURE = 33.9 % MEDIUM SAND = 14.3 % FINE SAND = 63.1 % FINES = 22.6

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 09:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 09:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-39
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 506.4 ft.
STATE PLANE COORDINATES: 2,887,525.98 ft. E
NAD83 2201 - Minnesota North 434,408.63 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-1139	2			0.5	(SP) Sand, with trace of silt and clay, reddish brown, no odor, very fine to fine, saturated to wet, medium to loose	505.9	% MOISTURE = 51 % MEDIUM SAND = 10.6 % FINE SAND = 59.3 % FINES = 30.1

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 09:20
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 09:20
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-40
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.4
SEDIMENT ELEVATION: 509.4 ft.
STATE PLANE COORDINATES: 2,887,583.91 ft. E
NAD83 2201 - Minnesota North 434,663.54 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-40	2			0.5	(SP) Sand, with trace of silt and clay, reddish brown, trace wood, no odor, very fine to fine, saturated to wet, medium to loose	508.9	% MOISTURE = 42.2 % MEDIUM SAND = 2 % FINE SAND = 54.9 % FINES = 43.1

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 11:45
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 11:45
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-41
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.2
SEDIMENT ELEVATION: 567.2 ft.
STATE PLANE COORDINATES: 2,878,423.57 ft. E
NAD83 2201 - Minnesota North 424,307.53 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-41	2			0.5	(CL) Sand, with trace of silt and clay, reddish brown, trace wood, no odor, very fine to fine, saturated to wet, medium to loose	566.7	% MOISTURE = 63.9 % MEDIUM SAND = 36.6 % FINE SAND = 38.7 % FINES = 24.7

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 12:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 12:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-42
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.2
SEDIMENT ELEVATION: 566.2 ft.
STATE PLANE COORDINATES: 2,878,111.13 ft. E
NAD83 2201 - Minnesota North 424,109.50 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-43	2			0.5	(CL) Clay with silt, sand and gravel, dark gray/brown with read streaks, zebra mussels, no odor, saturated to wet, very soft to soft	565.7	% MOISTURE = 65.4 % MEDIUM SAND = 23.5 % FINE SAND = 48.6 % FINES = 27.9

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 12:15
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 12:15
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-43
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.2
SEDIMENT ELEVATION: 565.2 ft.
STATE PLANE COORDINATES: 2,878,463.62 ft. E
NAD83 2201 - Minnesota North 423,864.85 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-43	2			0.5	(CL) Clay with silt, sand and gravel, dark gray/brown with read streaks, zebra mussels, no odor, saturated to wet, very soft to soft	564.7	% MOISTURE = 61.4 % MEDIUM SAND = 26.6 % FINE SAND = 52.9 % FINES = 20.5

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 12:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 12:30
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-44
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.2
SEDIMENT ELEVATION: 567.2 ft.
STATE PLANE COORDINATES: 2,878,495.20 ft. E
NAD83 2201 - Minnesota North 424,070.15 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-44	2			0.5	(CL) Clay with silt, sand and gravel, dark gray/brown with read streaks, zebra mussels, no odor, saturated to wet, very soft to soft	566.7	% MOISTURE = 66.2 % MEDIUM SAND = 29.1 % FINE SAND = 48.6 % FINES = 22.3

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 12:50
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 12:50
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-45
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.2
SEDIMENT ELEVATION: 566.2 ft.
STATE PLANE COORDINATES: 2,878,351.84 ft. E
NAD83 2201 - Minnesota North 424,041.52 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-45	2			0.5	(CL) Clay with silt, sand and gravel, dark gray/brown with read streaks, zebra mussels, no odor, saturated to wet, very soft to soft	565.7	% MOISTURE = 63.8 % MEDIUM SAND = 41.3 % FINE SAND = 35.3 % FINES = 23.4

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 16:30
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 16:30
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-46
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.5
SEDIMENT ELEVATION: 560.5 ft.
STATE PLANE COORDINATES: 2,872,714.42 ft. E
NAD83 2201 - Minnesota North 420,275.78 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-46	2			0.5	(CL) Clay with sand, dark brown/gray with black streaks, no odor, saturated to wet, very soft to soft	560.0	% MOISTURE = 53.9 % MEDIUM SAND = 38.7 % FINE SAND = 33.5 % FINES = 27.8

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 16:45
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 16:45
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-47
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.5
SEDIMENT ELEVATION: 562.5 ft.
STATE PLANE COORDINATES: 2,872,780.10 ft. E
NAD83 2201 - Minnesota North 420,367.81 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-47	2			0.5	(CL) Clay with sand, dark brown/gray with black streaks, no odor, saturated to wet, very soft to soft	562.0	% MOISTURE = 62.1 % MEDIUM SAND = 43 % FINE SAND = 37.1 % FINES = 19.9

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 17, 2011
DRILLING START TIME: 17:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 17:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-48
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.5
SEDIMENT ELEVATION: 565.0 ft.
STATE PLANE COORDINATES: 2,872,558.81 ft. E
NAD83 2201 - Minnesota North 420,352.82 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-48	2			0.5	(CL) Clay with sand, dark brown/gray with black streaks, no odor, saturated to wet, very soft to soft	564.5	% MOISTURE = 60 % COARSE SAND = 1.2 % MEDIUM SAND = 36.3 % FINE SAND = 37.6 % FINES = 24.9

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 18:45
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 18:45
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-49
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.5
SEDIMENT ELEVATION: 559.5 ft.
STATE PLANE COORDINATES: 2,872,580.71 ft. E
NAD83 2201 - Minnesota North 420,274.07 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-49	2			0.5	(CL) Clay with sand, dark brown/gray with black streaks, no odor, saturated to wet, very soft to soft	559.0	% MOISTURE = 57.3 % COARSE SAND = 1.2 % MEDIUM SAND = 43.2 % FINE SAND = 20.6 % FINES = 35

Bottom of borehole at 0.5 feet.

SEDIMENT BORING LOG

CLIENT: U.S. Army Corps of Engineers, Detroit District
PROJECT NAME: Duluth Harbor Sediment Sampling and Analysis
PROJECT LOCATION: Duluth Harbor
DRILLING DATE: August 18, 2011
DRILLING START TIME: 19:00
DRILLERS: Coleman Engineering Co.
TIME OF SAMPLE COLLECTION: 19:00
SAMPLING METHOD: Petite Ponar

PROJECT NUMBER: 11652-0040
BORING NUMBER: DS-11-50
NOAA STATION: Duluth 9099064
WATER ELEVATION: 601.5
SEDIMENT ELEVATION: 566.5 ft.
STATE PLANE COORDINATES: 2,872,671.08 ft. E
NAD83 2201 - Minnesota North 420,396.81 ft. N
US Feet

DEPTH (ft)	SAMPLE TYPE NUMBER	BLOW COUNTS (N VALUE)	ENVIRONMENTAL DATA	GRAPHIC LOG	Depth (ft)	MATERIAL DESCRIPTION	Elev. (ft)	GRAIN SIZE ANALYSIS % MOISTURE
0	PP DS-11-50	2			0.5	(CL) Clay with sand, dark brown/gray with black streaks, no odor, saturated to wet, very soft to soft	566.0	% MOISTURE = 60.6 % MEDIUM SAND = 17.8 % FINE SAND = 47.6 % FINES = 34.6

Bottom of borehole at 0.5 feet.

APPENDIX F

Duluth-Superior, Minnesota-Wisconsin Harbor Management Unit Photographs

APPENDIX F

Management Unit Photographs

 MU-1 **DS-11-01**	 **MU-1** **DS-11-01**
Photo 1 – Sample location DS-11-01, looking upstream to the west.	Photo 2 – Sample location DS-11-01, looking northeast. The Bong Bridge is located in the background.
 MU-1 **DS-11-01**	 **MU-1** **DS-11-02**
Photo 3 – Sample DS-11-01, dark brown gray sandy clay.	Photo 4 – Sample location DS-11-02, looking upstream to the west.

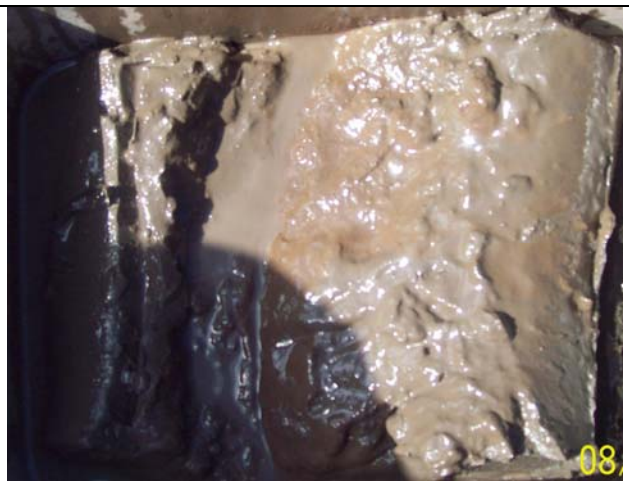
APPENDIX F

Management Unit Photographs

 MU-1 **DS-11-02**		 **MU-1** **DS-11-02**
Photo 5 – Sample location DS-11-02, looking downstream to the northeast. The Bong Bridge is located on the left of the photograph.		Photo 6 – Sample DS-11-02, dark brown gray sandy clay.
 MU-1 **DS-11-03**		 **MU-1** **DS-11-03**
Photo 7 – Sample location DS-11-03, looking upstream to the west.		Photo 8 – Sample location DS-11-03, looking downstream to the north. The Bong Bridge is located in the center of the photograph.

APPENDIX F

Management Unit Photographs

 **MU-1** **DS-11-03**		 **MU-1** **DS-11-04**
Photo 9 – Sample DS-11-03, dark brown gray sandy clay.		Photo 10 – Sample location DS-11-04, looking upstream to the southwest.
 MU-1 **DS-11-04**		 **MU-1** **DS-11-04**
Photo 11 – Sample location DS-11-04, looking downstream to the north. The Bong Bridge is located in the background.		Photo 12 – Sample DS-11-04, dark brown gray sandy clay.

APPENDIX F

Management Unit Photographs

 MU-1 **DS-11-05**		 **MU-1** **DS-11-05**
Photo 13 – Sample location DS-11-05, looking downstream to the south.		Photo 14 – Sample location DS-11-05, looking west at the power plant from near the Bong Bridge.
 MU-1 **DS-11-05**		 **MU-2** **DS-11-06**
Photo 15 – Sample DS-11-05, dark brown gray sandy clay.		Photo 16 – Sample location DS-11-06, looking upstream to the southwest.

APPENDIX F

Management Unit Photographs

 MU-2 **DS-11-06**		 **MU-2** **DS-11-06**
Photo 17 – Sample location DS-11-06, looking downstream to the east. Sampling is near the Blatnik Bridge.		Photo 18 – Sample DS-11-06, brown sandy clay.
 MU-2 **DS-11-07**		 **MU-2** **DS-11-07**
Photo 19 – Sample location DS-11-07, looking upstream to the southwest.		Photo 20 – Sample location DS-11-07, looking upstream to the east. The Blatnik Bridge is in the center of the photograph

APPENDIX F

Management Unit Photographs

 MU-2 **DS-11-07**		 **MU-2** **DS-11-08**
Photo 21 – Sample DS-11-07, brown sandy clay.		Photo 22 – Sample location DS-11-08, looking upstream to the southwest.
 MU-2 **DS-11-08**		 **MU-2** **DS-11-08**
Photo 23 – Sample location DS-11-08, looking downstream to the east.		Photo 24 – Sample DS-11-08, brown sandy clay.

APPENDIX F

Management Unit Photographs

 MU-2 **DS-11-09**	 **MU-2** **DS-11-09**
Photo 25 – Sample location DS-11-09 looking upstream to the southwest.	Photo 26 – Sample location DS-11-09 looking downstream to the east.
  MU-2 **DS-11-09**	 **MU-2** **DS-11-10**
Photo 27 – Sample DS-11-09, brown sandy clay.	Photo 28 – Sample location DS-11-10 looking upstream to the northwest and the West Gate Basin.

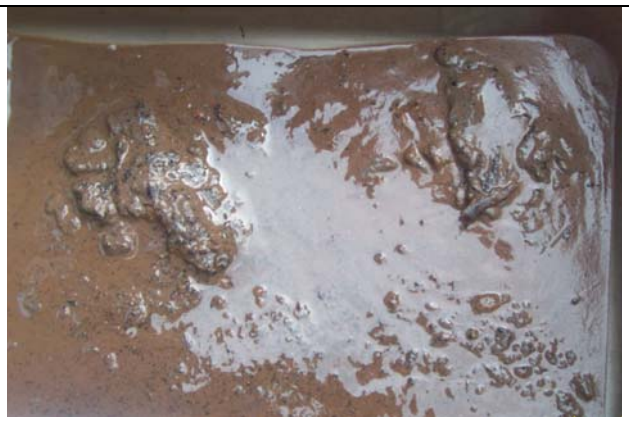
APPENDIX F

Management Unit Photographs

 MU-2 **DS-11-10**		 **MU-2** **DS-11-10**
Photo 29 – Sample location DS-11-10 looking southeast upstream of the Howard Channel.		Photo 30 – Sample DS-11-10, brown sandy clay.
 MU-3 **DS-11-11**		 **MU-3** **DS-11-11**
Photo 31 – Sample location DS-11-11 looking south towards the Blatnik Bridge		Photo 32 – Sample location DS-11-11, looking north towards Duluth.

APPENDIX F

Management Unit Photographs

 **MU-3** **DS-11-11**		 **MU-3** **DS-11-12**
Photo 33 – Sample DS-11-11, brown sand.		Photo 34 – Sample location DS-11-12, looking south towards Wisconsin.
 MU-3 **DS-11-12**		 **MU-3** **DS-11-12**
Photo 35 – Sample DS-11-12, looking north towards Duluth.		Photo 36 – Sample DS-11-12, brown sand.

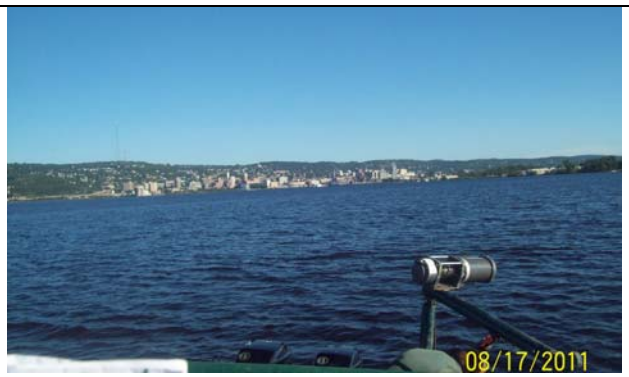
APPENDIX F

Management Unit Photographs

 MU-3 **DS-11-13**	 **MU-3** **DS-11-13**
Photo 37 – Sample location DS-11-13, looking south towards Wisconsin.	Photo 38 – Sample location DS-11-13, looking north towards Duluth.
 MU-3 **DS-11-13**	 **MU-3** **DS-11-14**
Photo 39 – Sample DS-11-13, brown sand.	Photo 40 – Sample DS-11-14, looking west towards the Blatnik Bridge.

APPENDIX F

Management Unit Photographs

 **MU-3** **DS-11-14**		 **MU-3** **DS-11-14**
Photo 41 – Sample location DS-11-14, looking north towards Duluth.		Photo 42 – Sample location DS-11-14, dark gray brown sandy clay.
 MU-3 **DS-11-15**		 **MU-3** **DS-11-15**
Photo 43 – Sample DS-11-15, looking north towards Duluth.		Photo 44 – Sample DS-11-15, dark gray brown sandy clay.

APPENDIX F

Management Unit Photographs

 MU-4 **DS-11-16**	 **MU-4** **DS-11-16**
Photo 45 – Sample location DS-11-16, looking north towards Duluth.	Photo 46 – Sample location DS-11-16, looking upstream to the west. The Blatnik Bridge is located in the background.
 MU-4 **DS-11-16**	 **MU-4** **DS-11-17**
Photo 47 – Sample DS-11-16, brown sandy clay.	Photo 48 – Sample location DS-11-17, looking north towards Duluth.

APPENDIX F

Management Unit Photographs

 MU-4 **DS-11-17**		 **MU-4** **DS-11-17**
Photo 49 – Sample location DS-11-17, looking upstream to the west. The Blatnik Bridge is located in the background.		Photo 50 – Sample DS-11-17, brown sandy clay.
 MU-4 **DS-11-18**		 **MU-4** **DS-11-18**
Photo 51 – Sample location DS-11-18, looking north towards Duluth.		Photo 52 – Sample location DS-11-18, looking upstream to the west. The Blatnik Bridge is located in the background.

APPENDIX F

Management Unit Photographs

 MU-4 **DS-11-18**	 **MU-4** **DS-11-19**
Photo 53 – Sample DS-11-18, brown sandy clay.	Photo 54 – Sample location DS-11-19, looking north towards Duluth.
 MU-4 **DS-11-19**	 **MU-4** **DS-11-19**
Photo 55 – Sample location DS-11-19, looking upstream to the west. The Blatnik Bridge is located in the background.	Photo 56 – Sample DS-11-19, brown sand with black gravel.

APPENDIX F

Management Unit Photographs

 MU-4 **DS-11-20**	 **MU-4** **DS-11-20**
Photo 57 – Sample location DS-11-20, looking downstream to the south.	Photo 58 – Sample location DS-11-20, looking upstream to the west. The Blatnik Bridge is located in the background.
 MU-4 **DS-11-20**	 **MU-5** **DS-11-21**
Photo 59 – Sample DS-11-20, brown sand.	Photo 60 – Sample location DS-11-21, looking west at Superior, Wisconsin.

APPENDIX F

Management Unit Photographs

 MU-5 **DS-11-21**	 **MU-5** **DS-11-21**
Photo 61 – Sample location DS-11-21, looking downstream to the south.	Photo 62 – Sample DS-11-21, dark brown sandy clay.
  MU-5 **DS-11-22**	 **MU-5** **DS-11-22**
Photo 63 – Sample location DS-11-22, looking west at Superior, Wisconsin.	Photo 64 – Sample location DS-11-22, looking downstream to the south.

APPENDIX F

Management Unit Photographs

 MU-5 **DS-11-22**	 **MU-5** **DS-11-23**
Photo 65 – Sample DS-11-22, dark brown sandy clay.	Photo 66 – Sample location DS-11-23, looking west at Superior, Wisconsin.
 MU-5 **DS-11-23**	 **MU-5** **DS-11-23**
Photo 67 – Sample location DS-11-23, looking downstream to the south.	Photo 68 – Sample DS-11-23, dark brown sandy clay.

APPENDIX F

Management Unit Photographs

 MU-5 **DS-11-24**	 **MU-5** **DS-11-24**
Photo 69 – Sample location DS-11-24, looking west at Superior, Wisconsin.	Photo 70 – Sample location DS-11-24, looking downstream to the south.
 MU-5 **DS-11-24**	 **MU-5** **DS-11-25**
Photo 71 – Sample DS-11-24, dark brown sandy clay.	Photo 72 – Sample location DS-11-25, looking west at Superior, Wisconsin.

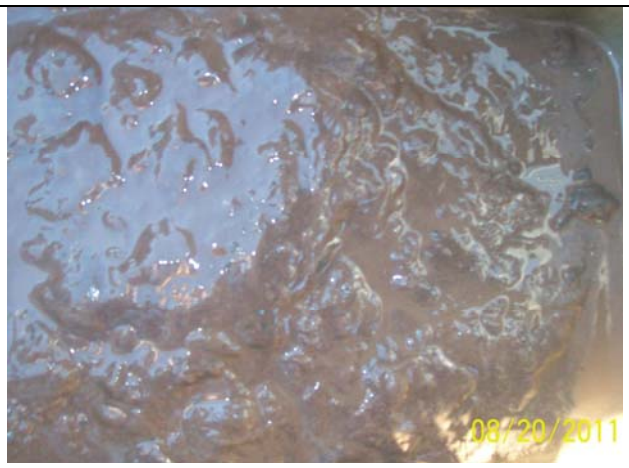
APPENDIX F

Management Unit Photographs

MU-5 **DS-11-25**	**MU-5** **DS-11-25**
Photo 73 – Sample location DS-11-25, looking downstream to the south.	Photo 74 – Sample DS-11-25, dark brown sandy clay.
MU-6 **DS-11-26**	**MU-6** **DS-11-26**
Photo 75 – Sample location DS-11-26, looking west at Superior, Wisconsin.	Photo 76 – Sample location DS-11-26, looking southwest at Superior, Wisconsin.

APPENDIX F

Management Unit Photographs

 **MU-6** **DS-11-26**		 **MU-6** **DS-11-27**
Photo 77 – Sample DS-11-26, brown sandy clay.		Photo 78 – Sample location DS-11-27, looking west at Superior, Wisconsin.
 MU-6 **DS-11-27**		 **MU-6** **DS-11-27**
Photo 79 – Sample location DS-11-27, looking upstream towards Duluth.		Photo 80 – Sample DS-11-27, dark brown sandy clay.

APPENDIX F

Management Unit Photographs

MU-6
DS-11-28

Photo 81 – Sample location DS-11-28, looking west at Superior, Wisconsin.

MU-6
DS-11-28

Photo 82 – Sample location DS-11-28, looking downstream towards the Superior Entrance.

MU-6
DS-11-28

Photo 83 – Sample DS-11-28, dark brown sandy clay.

MU-6
DS-11-29

Photo 84 – Sample location DS-11-29, looking southwest at Superior, Wisconsin.

APPENDIX F

Management Unit Photographs

MU-6
DS-11-29

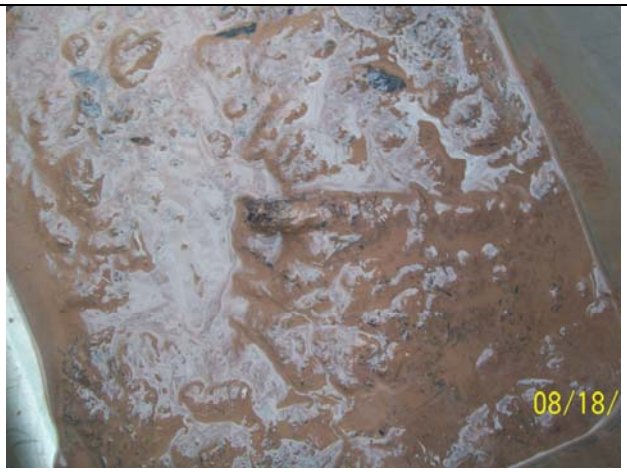
Photo 33 – Sample DS-11-29, dark reddish brown sand.

MU-6
DS-11-30

Photo 34 – Sample location DS-11-30, looking northwest at Superior, Wisconsin.

MU-6
DS-11-30

Photo 35 – Sample location DS-11-30, looking east at the Superior Entrance.



MU-6
DS-11-30

Photo 36 – Sample DS-11-30, brown gravelly sand.

APPENDIX G

Duluth-Superior, Minnesota-Wisconsin Harbor Placement Unit Photographs

APPENDIX G

Placement Unit Photographs

 DS-11-WOPU		 **DS-11-WOPU**
Photo 1 – Sample location Lake Superior Wisconsin Open Water Placement Unit, looking towards the Superior Entrance (west).		Photo 2 – Sample location Lake Superior Wisconsin Open Water Placement Unit, looking towards Duluth (west-northwest).
  DS-11-WOPU		 **WOPU** **DS-11-31**
Photo 3 – Sample location Lake Superior Wisconsin Open Water Placement Unit, looking towards Wisconsin (south-southeast).		Photo 4 – Sample DS-11-31, Lake Superior Wisconsin Open Water Placement Unit, reddish brown sand.

APPENDIX G

Placement Unit Photographs

WOPU
DS-11-32

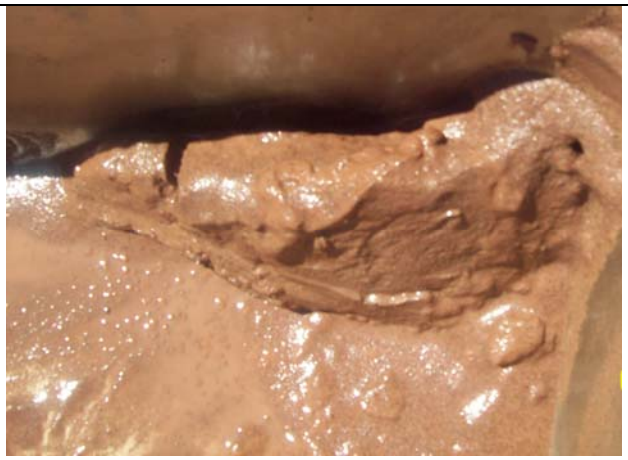
Photo 5 – Sample DS-11-32, Lake Superior Wisconsin Open Water Placement Unit, reddish brown sandy clay.

WOPU
DS-11-33

Photo 6 – Sample DS-11-33, Lake Superior Wisconsin Open Water Placement Unit, reddish brown sand.

WOPU
DS-11-34

Photo 7 – Sample DS-11-34, Lake Superior Wisconsin Open Water Placement Unit, reddish brown sand.



WOPU
DS-11-35

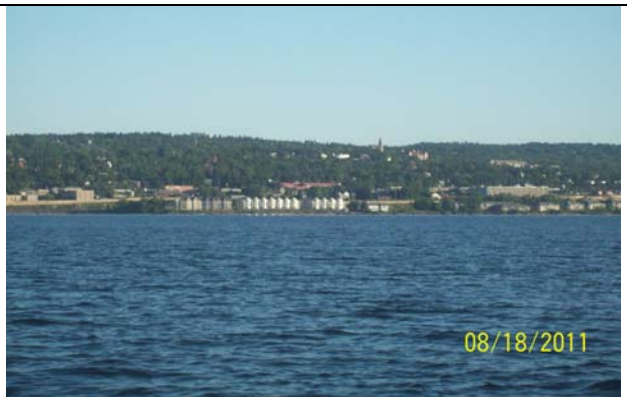
Photo 8 – Sample DS-11-35, Lake Superior Wisconsin Open Water Placement Unit, reddish brown sand.

APPENDIX G

Placement Unit Photographs

DS-11-MOPU

Photo 9 – Sample location Lake Superior Minnesota Open Water Placement Unit, looking towards the Lift Bridge and downtown Duluth (west-southwest).



DS-11-MOPU

Photo 10 – Sample location Lake Superior Minnesota Open Water Placement Unit, looking towards the Lift Bridge and downtown Duluth (west-northwest).

DS-11-MOPU

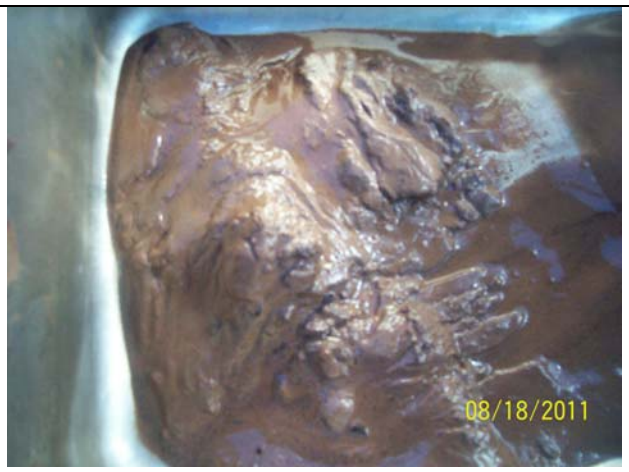
Photo 11 – Sample location Lake Superior Minnesota Open Water Placement Unit, looking towards the Blatnik Bridge (south-southwest).

MOPU
DS-11-36

Photo 12 – Sample DS-11-36, Lake Superior Minnesota Open Water Placement Unit, reddish brown sand.

APPENDIX G

Placement Unit Photographs



MOPU
DS-11-37

Photo 13 – Sample DS-11-37, Lake Superior Minnesota Open Water Placement Unit, reddish brown sand.

MOPU
DS-11-38

Photo 14 – Sample DS-11-38, Lake Superior Minnesota Open Water Placement Unit, reddish brown sand.

MOPU
DS-11-39

Photo 15 – Sample DS-11-39, Lake Superior Minnesota Open Water Placement Unit, reddish brown sand.

MOPU
DS-11-40

Photo 16 – Sample DS-11-40, Lake Superior Minnesota Open Water Placement Unit, reddish brown sand.

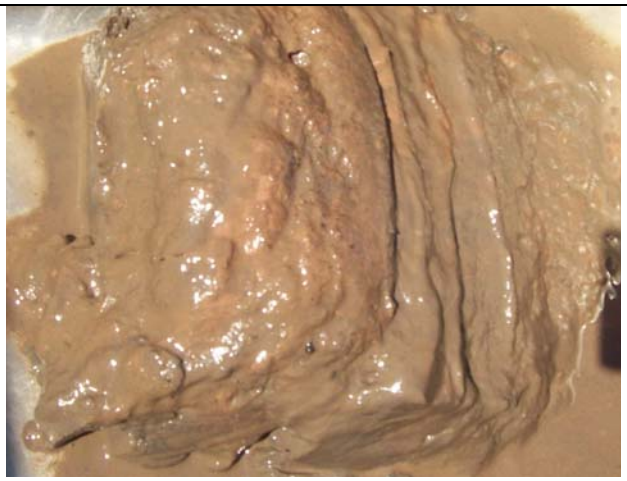
APPENDIX G

Placement Unit Photographs

 DS-11-HIPU		 **DS-11-HIPU**
Photo 17 – Sample location Hearding Island Placement Unit looking towards downtown Duluth (north-northwest).		Photo 18 – Sample location Hearding Island Placement Unit looking towards Duluth shipping docks (west).
 DS-11-HIPU		 **HIPU** **DS-11-41**
Photo 19 – Sample location Hearding Island Placement Unit looking towards Superior shipping docks (south-southeast).		Photo 20 – Sample DS-11-41, Hearding Island Placement Unit, dark gray brown clay.

APPENDIX G

Placement Unit Photographs

 HIPU **DS-11-42**	 **HIPU** **DS-11-43**
Photo 21 – Sample DS-11-42, Hearding Island Placement Unit, dark gray brown clay.	Photo 22 – Sample DS-11-43, Hearding Island Placement Unit, dark gray brown clay.
  HIPU **DS-11-44**	 **HIPU** **DS-11-45**
Photo 23 – Sample DS-11-44, Hearding Island Placement Unit, dark gray brown clay.	Photo 24 – Sample DS-11-45, Hearding Island Placement Unit, dark gray brown clay.

APPENDIX G

Placement Unit Photographs

DS-11-IIPU

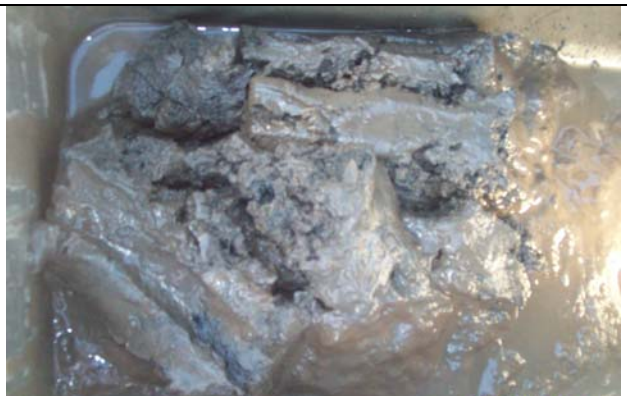
Photo 25 – Sample location DS-11-IIPU looking north at Interstate Island.

DS-11-IIPU

Photo 26 – Sample location DS-11-IIPU looking east at Interstate Island and the Blatnik Bridge.

DS-11-IIPU

Photo 27 – Sample location DS-11-IIPU looking south at Superior, Wisconsin.



IIPU
DS-11-46

Photo 28 – Sample DS-11-46, Interstate Island Placement Unit, dark brown gray clay.

APPENDIX G

Placement Unit Photographs

 IIPU **DS-11-47**		 **IIPU** **DS-11-48**
Photo 29 – Sample DS-11-47, Interstate Island Placement Unit, dark brown gray clay.		Photo 30 – Sample DS-11-48, Interstate Island Placement Unit, dark brown gray clay.
 IIPU **DS-11-49**		
Photo 31 – Sample DS-11-49, Interstate Island Placement Unit, dark brown gray clay.		No Photograph for DS-11-50

APPENDIX H

Trace Soil Bulk Laboratory Reports

Table 12: Laboratory Analytical Results Table

Trace Analytical Reports and Chain-of Custodies

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-01	DS-11-16	ASTM D2974-87	Sediment	% Solids	1	60	% by Wt.	0.10		08/15/11	08/17/11	08/17/11	08/18/11				
T11H197-01	DS-11-16	ASTM D854-91	Sediment	Specific Gravity	1	2.6				08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-01	DS-11-16	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	39	mg/kg dry	1.0		08/15/11	08/17/11	08/25/11	08/26/11				
T11H197-01	DS-11-16	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	580	mg/kg dry	15		08/15/11	08/17/11	08/22/11	08/23/11				
T11H197-01	DS-11-16	EPA 6010B	Sediment	Iron	1	17000	mg/kg dry	5.0		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-01	DS-11-16	EPA 6010B	Sediment	Phosphorus	1	480	mg/kg dry	5.7		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-01	DS-11-16	EPA 6020	Sediment	Arsenic	10	2.1	mg/kg dry	0.11		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-01	DS-11-16	EPA 6020	Sediment	Barium	10	45	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-01	DS-11-16	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-01	DS-11-16	EPA 6020	Sediment	Chromium	10	18	mg/kg dry	2.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-01	DS-11-16	EPA 6020	Sediment	Copper	10	9.4	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-01	DS-11-16	EPA 6020	Sediment	Lead	10	9.1	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-01	DS-11-16	EPA 6020	Sediment	Manganese	100	540	mg/kg dry	1.8		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-01	DS-11-16	EPA 6020	Sediment	Nickel	10	11	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-01	DS-11-16	EPA 6020	Sediment	Selenium	10	<0.36	mg/kg dry	0.36		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-01	DS-11-16	EPA 6020	Sediment	Silver	10	0.14	mg/kg dry	0.10		08/15/11	08/17/11	08/22/11	09/12/11				
T11H197-01	DS-11-16	EPA 6020	Sediment	Zinc	10	37	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-01	DS-11-16	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/15/11	08/17/11	08/22/11	08/24/11				
T11H197-01	DS-11-16	EPA 8082	Sediment	Aroclor-1016	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-01	DS-11-16	EPA 8082	Sediment	Aroclor-1221	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-01	DS-11-16	EPA 8082	Sediment	Aroclor-1232	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-01	DS-11-16	EPA 8082	Sediment	Aroclor-1242	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-01	DS-11-16	EPA 8082	Sediment	Aroclor-1248	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-01	DS-11-16	EPA 8082	Sediment	Aroclor-1254	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-01	DS-11-16	EPA 8082	Sediment	Aroclor-1260	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-01	DS-11-16	EPA 8082	Sediment	Tetrachloro-m-xylene	1	41	%			08/15/11	08/17/11	08/18/11	08/24/11	41	%	40	113
T11H197-01	DS-11-16	EPA 8082	Sediment	Decachlorobiphenyl	1	57	%			08/15/11	08/17/11	08/18/11	08/24/11	57	%	32	111
T11H197-01	DS-11-16	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-01	DS-11-16	EPA 8270C	Sediment	Nitrobenzene-d5	1	57	%			08/15/11	08/17/11	08/18/11	08/22/11	57	%	36	98
T11H197-01	DS-11-16	EPA 8270C	Sediment	2-Fluorobiphenyl	1	53	%			08/15/11	08/17/11	08/18/11	08/22/11	53	%	44	105
T11H197-01	DS-11-16	EPA 8270C	Sediment	Terphenyl-d14	1	64	%			08/15/11	08/17/11	08/18/11	08/22/11	64	%	46	109
T11H197-01	DS-11-16	EPA 9012B	Sediment	Cyanide (total)	1	0.31	mg/kg dry	0.20		08/15/11	08/17/11	08/18/11	08/19/11				
T11H197-01	DS-11-16	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<700	mg/kg dry	700		08/15/11	08/17/11	08/25/11	08/25/11				
T11H197-01	DS-11-16	PLUMB	Sediment	Chemical Oxygen Demand	1	30000	mg/kg dry	480		08/15/11	08/17/11	08/19/11	08/22/11				
T11H197-01	DS-11-16	PLUMB	Sediment	Volatile Solids	1	3.8	% by Wt.	0.10		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-01	DS-11-16	USACE, In-Place Density	Sediment	In-Place Density	1	1.9	g/mL			08/15/11	08/17/11	08/17/11	08/17/11				
T11H197-01	DS-11-16	WALKLEY BLACK	Sediment	Total Organic Carbon	1	16000	mg/kg dry	1100		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-02	DS-11-17	ASTM D2974-87	Sediment	% Solids	1	56	% by Wt.	0.10		08/15/11	08/17/11	08/17/11	08/18/11				
T11H197-02	DS-11-17	ASTM D854-91	Sediment	Specific Gravity	1	2.5				08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-02	DS-11-17	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	100	mg/kg dry	1.1		08/15/11	08/17/11	08/25/11	08/26/11				
T11H197-02	DS-11-17	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	2	1200	mg/kg dry	30		08/15/11	08/17/11	08/22/11	08/23/11				
T11H197-02	DS-11-17	EPA 6010B	Sediment	Iron	1	18000	mg/kg dry	5.0		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-02	DS-11-17	EPA 6010B	Sediment	Phosphorus	1	500	mg/kg dry	5.8		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-02	DS-11-17	EPA 6020	Sediment	Arsenic	10	2.6	mg/kg dry	0.11		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-02	DS-11-17	EPA 6020	Sediment	Barium	100	67	mg/kg dry	2.8		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-02	DS-11-17	EPA 6020	Sediment	Cadmium	10	0.20	mg/kg dry	0.20		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-02	DS-11-17	EPA 6020	Sediment	Chromium	10	20	mg/kg dry	2.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-02	DS-11-17	EPA 6020	Sediment	Copper	10	15	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-02	DS-11-17	EPA 6020	Sediment	Lead	10	15	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-02	DS-11-17	EPA 6020	Sediment	Manganese	200	750	mg/kg dry	3.7		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-02	DS-11-17	EPA 6020	Sediment	Nickel	10	14	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-02	DS-11-17	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-02	DS-11-17	EPA 6020	Sediment	Silver	10	0.25	mg/kg dry	0.10		08/15/11	08/17/11	08/22/11	09/12/11				
T11H197-02	DS-11-17	EPA 6020	Sediment	Zinc	100	60	mg/kg dry	9.3		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-02	DS-11-17	EPA 7471A	Sediment	Mercury	1	0.091	mg/kg dry	0.050		08/15/11	08/17/11	08/22/11	08/24/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-02	DS-11-17	EPA 8270C	Sediment	Nitrobenzene-d5	1	55	%			08/15/11	08/17/11	08/18/11	08/22/11	55	%	36	98
T11H197-02	DS-11-17	EPA 8270C	Sediment	2-Fluorobiphenyl	1	52	%			08/15/11	08/17/11	08/18/11	08/22/11	52	%	44	105
T11H197-02	DS-11-17	EPA 8270C	Sediment	Terphenyl-d14	1	61	%			08/15/11	08/17/11	08/18/11	08/22/11	61	%	46	109
T11H197-02	DS-11-17	EPA 9012B	Sediment	Cyanide (total)	1	0.27	mg/kg dry	0.20		08/15/11	08/17/11	08/18/11	08/19/11				
T11H197-02	DS-11-17	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<750	mg/kg dry	750		08/15/11	08/17/11	08/25/11	08/25/11				
T11H197-02	DS-11-17	PLUMB	Sediment	Chemical Oxygen Demand	1	51000	mg/kg dry	510		08/15/11	08/17/11	08/19/11	08/22/11				
T11H197-02	DS-11-17	PLUMB	Sediment	Volatile Solids	1	5.8	% by Wt.	0.10		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-02	DS-11-17	USACE, In-Place Density	Sediment	In-Place Density	1	1.6	g/mL			08/15/11	08/17/11	08/17/11	08/17/11				
T11H197-02	DS-11-17	WALKLEY BLACK	Sediment	Total Organic Carbon	1	24000	mg/kg dry	1200		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-02	DS-11-17	EPA 8082	Sediment	Aroclor-1016	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-02	DS-11-17	EPA 8082	Sediment	Aroclor-1221	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-02	DS-11-17	EPA 8082	Sediment	Aroclor-1232	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-02	DS-11-17	EPA 8082	Sediment	Aroclor-1242	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-02	DS-11-17	EPA 8082	Sediment	Aroclor-1248	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-02	DS-11-17	EPA 8082	Sediment	Aroclor-1254	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-02	DS-11-17	EPA 8082	Sediment	Aroclor-1260	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-02	DS-11-17	EPA 8082	Sediment	Tetrachloro-m-xylene	1	47	%			08/15/11	08/17/11	08/29/11	08/31/11	47	%	40	113
T11H197-02	DS-11-17	EPA 8082	Sediment	Decachlorobiphenyl	1	53	%			08/15/11	08/17/11	08/29/11	08/31/11	53	%	32	111
T11H197-03	DS-11-18	ASTM D2974-87	Sediment	% Solids	1	62	% by Wt.	0.10		08/15/11	08/17/11	08/17/11	08/18/11				
T11H197-03	DS-11-18	ASTM D854-91	Sediment	Specific Gravity	1	2.6				08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-03	DS-11-18	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	40	mg/kg dry	1.0		08/15/11	08/17/11	08/25/11	08/26/11				
T11H197-03	DS-11-18	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	470	mg/kg dry	21		08/15/11	08/17/11	08/22/11	08/23/11				
T11H197-03	DS-11-18	EPA 6010B	Sediment	Iron	1	17000	mg/kg dry	5.0		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-03	DS-11-18	EPA 6010B	Sediment	Phosphorus	1	450	mg/kg dry	5.8		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-03	DS-11-18	EPA 6020	Sediment	Arsenic	10	1.9	mg/kg dry	0.11		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-03	DS-11-18	EPA 6020	Sediment	Barium	10	34	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-03	DS-11-18	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-03	DS-11-18	EPA 6020	Sediment	Chromium	10	16	mg/kg dry	2.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-03	DS-11-18	EPA 6020	Sediment	Copper	10	7.8	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-03	DS-11-18	EPA 6020	Sediment	Lead	10	6.5	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-03	DS-11-18	EPA 6020	Sediment	Manganese	100	450	mg/kg dry	1.8		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-03	DS-11-18	EPA 6020	Sediment	Nickel	10	9.4	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-03	DS-11-18	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-03	DS-11-18	EPA 6020	Sediment	Silver	10	0.11	mg/kg dry	0.10		08/15/11	08/17/11	08/22/11	09/12/11				
T11H197-03	DS-11-18	EPA 6020	Sediment	Zinc	10	30	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-03	DS-11-18	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/15/11	08/17/11	08/22/11	08/24/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-03	DS-11-18	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-03	DS-11-18	EPA 8270C	Sediment	Nitrobenzene-d5	1	48	%			08/15/11	08/17/11	08/18/11	08/22/11	48	%	36	98
T11H197-03	DS-11-18	EPA 8270C	Sediment	2-Fluorobiphenyl	1	40	%		802	08/15/11	08/17/11	08/18/11	08/22/11	40	%	44	105
T11H197-03	DS-11-18	EPA 8270C	Sediment	Terphenyl-d14	1	58	%			08/15/11	08/17/11	08/18/11	08/22/11	58	%	46	109
T11H197-03	DS-11-18	EPA 9012B	Sediment	Cyanide (total)	1	0.28	mg/kg dry	0.20		08/15/11	08/17/11	08/18/11	08/19/11				
T11H197-03	DS-11-18	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<680	mg/kg dry	680		08/15/11	08/17/11	08/25/11	08/25/11				
T11H197-03	DS-11-18	PLUMB	Sediment	Chemical Oxygen Demand	1	28000	mg/kg dry	460		08/15/11	08/17/11	08/19/11	08/22/11				
T11H197-03	DS-11-18	PLUMB	Sediment	Volatile Solids	1	3.5	% by Wt.	0.10		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-03	DS-11-18	USACE, In-Place Density	Sediment	In-Place Density	1	1.5	g/mL			08/15/11	08/17/11	08/17/11	08/17/11				
T11H197-03	DS-11-18	WALKLEY BLACK	Sediment	Total Organic Carbon	1	15000	mg/kg dry	1100		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-03	DS-11-18	EPA 8082	Sediment	Aroclor-1016	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-03	DS-11-18	EPA 8082	Sediment	Aroclor-1221	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-03	DS-11-18	EPA 8082	Sediment	Aroclor-1232	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-03	DS-11-18	EPA 8082	Sediment	Aroclor-1242	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-03	DS-11-18	EPA 8082	Sediment	Aroclor-1248	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-03	DS-11-18	EPA 8082	Sediment	Aroclor-1254	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-03	DS-11-18	EPA 8082	Sediment	Aroclor-1260	1	<110	ug/kg dry	110		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-03	DS-11-18	EPA 8082	Sediment	Tetrachloro-m-xylene	1	52	%			08/15/11	08/17/11	08/29/11	08/31/11	52	%	40	113
T11H197-03	DS-11-18	EPA 8082	Sediment	Decachlorobiphenyl	1	58	%			08/15/11	08/17/11	08/29/11	08/31/11	58	%	32	111
T11H197-04	DS-11-19	ASTM D2974-87	Sediment	% Solids	1	82	% by Wt.	0.10		08/16/11	08/17/11	08/17/11	08/18/11				
T11H197-04	DS-11-19	ASTM D854-91	Sediment	Specific Gravity	1	2.7				08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-04	DS-11-19	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	<1.0	mg/kg dry	1.0		08/16/11	08/17/11	08/25/11	08/26/11				
T11H197-04	DS-11-19	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	44	mg/kg dry	18		08/16/11	08/17/11	08/22/11	08/23/11				
T11H197-04	DS-11-19	EPA 6010B	Sediment	Iron	1	8400	mg/kg dry	5.0		08/16/11	08/17/11	08/22/11	09/06/11				
T11H197-04	DS-11-19	EPA 6010B	Sediment	Phosphorus	1	250	mg/kg dry	6.0		08/16/11	08/17/11	08/22/11	09/06/11				
T11H197-04	DS-11-19	EPA 6020	Sediment	Arsenic	10	1.1	mg/kg dry	0.11		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-04	DS-11-19	EPA 6020	Sediment	Barium	10	12	mg/kg dry	1.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-04	DS-11-19	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-04	DS-11-19	EPA 6020	Sediment	Chromium	10	9.7	mg/kg dry	2.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-04	DS-11-19	EPA 6020	Sediment	Copper	10	16	mg/kg dry	1.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-04	DS-11-19	EPA 6020	Sediment	Lead	10	2.6	mg/kg dry	1.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-04	DS-11-19	EPA 6020	Sediment	Manganese	100	120	mg/kg dry	1.9		08/16/11	08/17/11	08/22/11	09/08/11				
T11H197-04	DS-11-19	EPA 6020	Sediment	Nickel	10	8.8	mg/kg dry	1.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-04	DS-11-19	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-04	DS-11-19	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/16/11	08/17/11	08/22/11	09/12/11				
T11H197-04	DS-11-19	EPA 6020	Sediment	Zinc	10	14	mg/kg dry	1.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-04	DS-11-19	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/16/11	08/17/11	08/22/11	08/24/11				
T11H197-04	DS-11-19	EPA 8082	Sediment	Aroclor-1016	1	<81	ug/kg dry	81		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-04	DS-11-19	EPA 8082	Sediment	Aroclor-1221	1	<81	ug/kg dry	81		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-04	DS-11-19	EPA 8082	Sediment	Aroclor-1232	1	<81	ug/kg dry	81		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-04	DS-11-19	EPA 8082	Sediment	Aroclor-1242	1	<81	ug/kg dry	81		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-04	DS-11-19	EPA 8082	Sediment	Aroclor-1248	1	<81	ug/kg dry	81		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-04	DS-11-19	EPA 8082	Sediment	Aroclor-1254	1	<81	ug/kg dry	81		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-04	DS-11-19	EPA 8082	Sediment	Aroclor-1260	1	<81	ug/kg dry	81		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-04	DS-11-19	EPA 8082	Sediment	Tetrachloro-m-xylene	1	48	%			08/16/11	08/17/11	08/18/11	08/24/11	48	%	40	113
T11H197-04	DS-11-19	EPA 8082	Sediment	Decachlorobiphenyl	1	73	%			08/16/11	08/17/11	08/18/11	08/24/11	73	%	32	111
T11H197-04	DS-11-19	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-04	DS-11-19	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-04	DS-11-19	EPA 8270C	Sediment	Nitrobenzene-d5	1	57	%			08/16/11	08/17/11	08/18/11	08/22/11	57	%	36	98
T11H197-04	DS-11-19	EPA 8270C	Sediment	2-Fluorobiphenyl	1	55	%			08/16/11	08/17/11	08/18/11	08/22/11	55	%	44	105
T11H197-04	DS-11-19	EPA 8270C	Sediment	Terphenyl-d14	1	69	%			08/16/11	08/17/11	08/18/11	08/22/11	69	%	46	109
T11H197-04	DS-11-19	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/16/11	08/17/11	08/18/11	08/19/11				
T11H197-04	DS-11-19	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<510	mg/kg dry	510		08/16/11	08/17/11	08/25/11	08/25/11				
T11H197-04	DS-11-19	PLUMB	Sediment	Chemical Oxygen Demand	1	2000	mg/kg dry	350		08/16/11	08/17/11	08/19/11	08/22/11				
T11H197-04	DS-11-19	PLUMB	Sediment	Volatile Solids	1	0.55	% by Wt.	0.10		08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-04	DS-11-19	USACE, In-Place Density	Sediment	In-Place Density	1	2.3	g/mL			08/16/11	08/17/11	08/17/11	08/17/11				
T11H197-04	DS-11-19	WALKLEY BLACK	Sediment	Total Organic Carbon	1	1800	mg/kg dry	1000		08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-05	DS-11-20	ASTM D2974-87	Sediment	% Solids	1	79	% by Wt.	0.10		08/16/11	08/17/11	08/17/11	08/18/11				
T11H197-05	DS-11-20	ASTM D854-91	Sediment	Specific Gravity	1	2.6				08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-05	DS-11-20	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	<1.0	mg/kg dry	1.0		08/16/11	08/17/11	08/25/11	08/26/11				
T11H197-05	DS-11-20	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	50	mg/kg dry	15		08/16/11	08/17/11	08/22/11	08/23/11				
T11H197-05	DS-11-20	EPA 6010B	Sediment	Iron	1	9000	mg/kg dry	5.0		08/16/11	08/17/11	08/22/11	09/06/11				
T11H197-05	DS-11-20	EPA 6010B	Sediment	Phosphorus	1	230	mg/kg dry	6.1		08/16/11	08/17/11	08/22/11	09/06/11				
T11H197-05	DS-11-20	EPA 6020	Sediment	Arsenic	10	1.1	mg/kg dry	0.12		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-05	DS-11-20	EPA 6020	Sediment	Barium	10	10	mg/kg dry	1.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-05	DS-11-20	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-05	DS-11-20	EPA 6020	Sediment	Chromium	10	8.2	mg/kg dry	2.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-05	DS-11-20	EPA 6020	Sediment	Copper	10	4.0	mg/kg dry	1.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-05	DS-11-20	EPA 6020	Sediment	Lead	10	2.6	mg/kg dry	1.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-05	DS-11-20	EPA 6020	Sediment	Manganese	100	140	mg/kg dry	1.9		08/16/11	08/17/11	08/22/11	09/08/11				
T11H197-05	DS-11-20	EPA 6020	Sediment	Nickel	10	6.0	mg/kg dry	1.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-05	DS-11-20	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-05	DS-11-20	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/16/11	08/17/11	08/22/11	09/12/11				
T11H197-05	DS-11-20	EPA 6020	Sediment	Zinc	10	12	mg/kg dry	1.0		08/16/11	08/17/11	08/22/11	09/07/11				
T11H197-05	DS-11-20	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/16/11	08/17/11	08/22/11	08/24/11				
T11H197-05	DS-11-20	EPA 8082	Sediment	Aroclor-1016	1	<85	ug/kg dry	85		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-05	DS-11-20	EPA 8082	Sediment	Aroclor-1221	1	<85	ug/kg dry	85		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-05	DS-11-20	EPA 8082	Sediment	Aroclor-1232	1	<85	ug/kg dry	85		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-05	DS-11-20	EPA 8082	Sediment	Aroclor-1242	1	<85	ug/kg dry	85		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-05	DS-11-20	EPA 8082	Sediment	Aroclor-1248	1	<85	ug/kg dry	85		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-05	DS-11-20	EPA 8082	Sediment	Aroclor-1254	1	<85	ug/kg dry	85		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-05	DS-11-20	EPA 8082	Sediment	Aroclor-1260	1	<85	ug/kg dry	85		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-05	DS-11-20	EPA 8082	Sediment	Tetrachloro-m-xylene	1	71	%			08/16/11	08/17/11	08/18/11	08/24/11	71	%	40	113
T11H197-05	DS-11-20	EPA 8082	Sediment	Decachlorobiphenyl	1	86	%			08/16/11	08/17/11	08/18/11	08/24/11	86	%	32	111
T11H197-05	DS-11-20	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-05	DS-11-20	EPA 8270C	Sediment	Nitrobenzene-d5	1	67	%			08/16/11	08/17/11	08/18/11	08/22/11	67	%	36	98
T11H197-05	DS-11-20	EPA 8270C	Sediment	2-Fluorobiphenyl	1	64	%			08/16/11	08/17/11	08/18/11	08/22/11	64	%	44	105
T11H197-05	DS-11-20	EPA 8270C	Sediment	Terphenyl-d14	1	67	%			08/16/11	08/17/11	08/18/11	08/22/11	67	%	46	109
T11H197-05	DS-11-20	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/16/11	08/17/11	08/18/11	08/19/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-05	DS-11-20	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<530	mg/kg dry	530		08/16/11	08/17/11	08/25/11	08/25/11				
T11H197-05	DS-11-20	PLUMB	Sediment	Chemical Oxygen Demand	1	4500	mg/kg dry	360		08/16/11	08/17/11	08/19/11	08/22/11				
T11H197-05	DS-11-20	PLUMB	Sediment	Volatile Solids	1	0.69	% by Wt.	0.10		08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-05	DS-11-20	USACE, In-Place Density	Sediment	In-Place Density	1	2.7	g/mL			08/16/11	08/17/11	08/17/11	08/17/11				
T11H197-05	DS-11-20	WALKLEY BLACK	Sediment	Total Organic Carbon	1	2700	mg/kg dry	1000		08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-06	DS-11-MU4	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	350	mg/kg dry	15		08/16/11	08/17/11	08/31/11	09/01/11				
T11H197-06	DS-11-MU4	EPA 6010B	Sediment	Phosphorus	1	390	mg/kg dry	6.0		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-06	DS-11-MU4	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	44	mg/kg dry	1.0		08/16/11	08/17/11	08/31/11	08/31/11				
T11H197-07	DS-11-10	ASTM D2974-87	Sediment	% Solids	1	54	% by Wt.	0.10		08/15/11	08/17/11	08/17/11	08/18/11				
T11H197-07	DS-11-10	ASTM D854-91	Sediment	Specific Gravity	1	2.5				08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-07	DS-11-10	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	160	mg/kg dry	1.0		08/15/11	08/17/11	08/25/11	08/26/11				
T11H197-07	DS-11-10	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	1300	mg/kg dry	24		08/15/11	08/17/11	08/22/11	08/23/11				
T11H197-07	DS-11-10	EPA 6010B	Sediment	Iron	1	19000	mg/kg dry	5.0		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-07	DS-11-10	EPA 6010B	Sediment	Phosphorus	1	620	mg/kg dry	5.8		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-07	DS-11-10	EPA 6020	Sediment	Arsenic	10	2.9	mg/kg dry	0.11		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-07	DS-11-10	EPA 6020	Sediment	Barium	100	88	mg/kg dry	2.7		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-07	DS-11-10	EPA 6020	Sediment	Cadmium	10	0.30	mg/kg dry	0.20		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-07	DS-11-10	EPA 6020	Sediment	Chromium	10	22	mg/kg dry	2.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-07	DS-11-10	EPA 6020	Sediment	Copper	10	22	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-07	DS-11-10	EPA 6020	Sediment	Lead	10	31	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-07	DS-11-10	EPA 6020	Sediment	Manganese	200	660	mg/kg dry	3.7		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-07	DS-11-10	EPA 6020	Sediment	Nickel	10	17	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-07	DS-11-10	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-07	DS-11-10	EPA 6020	Sediment	Silver	10	0.26	mg/kg dry	0.10		08/15/11	08/17/11	08/22/11	09/12/11				
T11H197-07	DS-11-10	EPA 6020	Sediment	Zinc	100	95	mg/kg dry	9.1		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-07	DS-11-10	EPA 7471A	Sediment	Mercury	1	0.13	mg/kg dry	0.050		08/15/11	08/17/11	08/22/11	08/24/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-07	DS-11-10	EPA 8270C	Sediment	Nitrobenzene-d5	1	55	%			08/15/11	08/17/11	08/18/11	08/22/11	55	%	36	98
T11H197-07	DS-11-10	EPA 8270C	Sediment	2-Fluorobiphenyl	1	50	%			08/15/11	08/17/11	08/18/11	08/22/11	50	%	44	105
T11H197-07	DS-11-10	EPA 8270C	Sediment	Terphenyl-d14	1	65	%			08/15/11	08/17/11	08/18/11	08/22/11	65	%	46	109
T11H197-07	DS-11-10	EPA 9012B	Sediment	Cyanide (total)	1	0.23	mg/kg dry	0.20		08/15/11	08/17/11	08/18/11	08/19/11				
T11H197-07	DS-11-10	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<780	mg/kg dry	780		08/15/11	08/17/11	08/25/11	08/25/11				
T11H197-07	DS-11-10	PLUMB	Sediment	Chemical Oxygen Demand	1	66000	mg/kg dry	530		08/15/11	08/17/11	08/19/11	08/22/11				
T11H197-07	DS-11-10	PLUMB	Sediment	Volatile Solids	1	7.0	% by Wt.	0.10		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-07	DS-11-10	USACE, In-Place Density	Sediment	In-Place Density	1	1.5	g/mL			08/15/11	08/17/11	08/17/11	08/17/11				
T11H197-07	DS-11-10	WALKLEY BLACK	Sediment	Total Organic Carbon	1	<1300	mg/kg dry	1300		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-07	DS-11-10	EPA 8082	Sediment	Aroclor-1016	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-07	DS-11-10	EPA 8082	Sediment	Aroclor-1221	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-07	DS-11-10	EPA 8082	Sediment	Aroclor-1232	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-07	DS-11-10	EPA 8082	Sediment	Aroclor-1242	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-07	DS-11-10	EPA 8082	Sediment	Aroclor-1248	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-07	DS-11-10	EPA 8082	Sediment	Aroclor-1254	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-07	DS-11-10	EPA 8082	Sediment	Aroclor-1260	1	<120	ug/kg dry	120		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-07	DS-11-10	EPA 8082	Sediment	Tetrachloro-m-xylene	1	45	%			08/15/11	08/17/11	08/29/11	08/31/11	45	%	40	113
T11H197-07	DS-11-10	EPA 8082	Sediment	Decachlorobiphenyl	1	50	%			08/15/11	08/17/11	08/29/11	08/31/11	50	%	32	111
T11H197-08	DS-11-09	ASTM D2974-87	Sediment	% Solids	1	47	% by Wt.	0.10		08/15/11	08/17/11	08/17/11	08/18/11				
T11H197-08	DS-11-09	ASTM D854-91	Sediment	Specific Gravity	1	2.2				08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-08	DS-11-09	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	16	mg/kg dry	1.0		08/15/11	08/17/11	08/25/11	08/26/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-08	DS-11-09	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	2	1900	mg/kg dry	44		08/15/11	08/17/11	08/22/11	08/23/11				
T11H197-08	DS-11-09	EPA 6010B	Sediment	Iron	10	30000	mg/kg dry	28		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-08	DS-11-09	EPA 6010B	Sediment	Phosphorus	1	800	mg/kg dry	6.0		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-08	DS-11-09	EPA 6020	Sediment	Arsenic	10	3.6	mg/kg dry	0.11		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-08	DS-11-09	EPA 6020	Sediment	Barium	100	140	mg/kg dry	2.8		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-08	DS-11-09	EPA 6020	Sediment	Cadmium	10	0.53	mg/kg dry	0.20		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-08	DS-11-09	EPA 6020	Sediment	Chromium	10	35	mg/kg dry	2.0		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-08	DS-11-09	EPA 6020	Sediment	Copper	10	24	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-08	DS-11-09	EPA 6020	Sediment	Lead	10	29	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-08	DS-11-09	EPA 6020	Sediment	Manganese	200	550	mg/kg dry	3.8		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-08	DS-11-09	EPA 6020	Sediment	Nickel	10	23	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-08	DS-11-09	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-08	DS-11-09	EPA 6020	Sediment	Silver	10	0.74	mg/kg dry	0.10		08/15/11	08/17/11	08/22/11	09/12/11				
T11H197-08	DS-11-09	EPA 6020	Sediment	Zinc	100	140	mg/kg dry	9.5		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-08	DS-11-09	EPA 7471A	Sediment	Mercury	1	0.21	mg/kg dry	0.050		08/15/11	08/17/11	08/22/11	08/24/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Naphthalene	1	<350	ug/kg dry	350		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	2-Methylnaphthalene	1	<350	ug/kg dry	350		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Acenaphthylene	1	<350	ug/kg dry	350		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Acenaphthene	1	<350	ug/kg dry	350		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Fluorene	1	<350	ug/kg dry	350		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Anthracene	1	<350	ug/kg dry	350		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Pyrene	1	<350	ug/kg dry	350		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-08	DS-11-09	EPA 8270C	Sediment	Nitrobenzene-d5	1	59	%			08/15/11	08/17/11	08/18/11	08/22/11	59	%	36	98
T11H197-08	DS-11-09	EPA 8270C	Sediment	2-Fluorobiphenyl	1	49	%			08/15/11	08/17/11	08/18/11	08/22/11	49	%	44	105
T11H197-08	DS-11-09	EPA 8270C	Sediment	Terphenyl-d14	1	62	%			08/15/11	08/17/11	08/18/11	08/22/11	62	%	46	109
T11H197-08	DS-11-09	EPA 9012B	Sediment	Cyanide (total)	1	0.25	mg/kg dry	0.20		08/15/11	08/17/11	08/18/11	08/19/11				
T11H197-08	DS-11-09	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<890	mg/kg dry	890		08/15/11	08/17/11	08/25/11	08/25/11				
T11H197-08	DS-11-09	PLUMB	Sediment	Chemical Oxygen Demand	1	96000	mg/kg dry	610		08/15/11	08/17/11	08/19/11	08/22/11				
T11H197-08	DS-11-09	PLUMB	Sediment	Volatile Solids	1	16	% by Wt.	0.10		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-08	DS-11-09	USACE, In-Place Density	Sediment	In-Place Density	1	1.4	g/mL			08/15/11	08/17/11	08/17/11	08/17/11				
T11H197-08	DS-11-09	WALKLEY BLACK	Sediment	Total Organic Carbon	1	48000	mg/kg dry	1400		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-08	DS-11-09	EPA 8082	Sediment	Aroclor-1016	1	<140	ug/kg dry	140		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-08	DS-11-09	EPA 8082	Sediment	Aroclor-1221	1	<140	ug/kg dry	140		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-08	DS-11-09	EPA 8082	Sediment	Aroclor-1232	1	<140	ug/kg dry	140		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-08	DS-11-09	EPA 8082	Sediment	Aroclor-1242	1	<140	ug/kg dry	140		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-08	DS-11-09	EPA 8082	Sediment	Aroclor-1248	1	<140	ug/kg dry	140		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-08	DS-11-09	EPA 8082	Sediment	Aroclor-1254	1	<140	ug/kg dry	140		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-08	DS-11-09	EPA 8082	Sediment	Aroclor-1260	1	<140	ug/kg dry	140		08/15/11	08/17/11	08/29/11	08/31/11				
T11H197-08	DS-11-09	EPA 8082	Sediment	Tetrachloro-m-xylene	1	22	%		314.5	08/15/11	08/17/11	08/29/11	08/31/11	22	%	40	113
T11H197-08	DS-11-09	EPA 8082	Sediment	Decachlorobiphenyl	1	24	%		314.5	08/15/11	08/17/11	08/29/11	08/31/11	24	%	32	111
T11H197-09	DS-11-08	ASTM D2974-87	Sediment	% Solids	1	41	% by Wt.	0.10		08/15/11	08/17/11	08/17/11	08/18/11				
T11H197-09	DS-11-08	ASTM D854-91	Sediment	Specific Gravity	1	2.7				08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-09	DS-11-08	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	24	mg/kg dry	1.0		08/15/11	08/17/11	08/25/11	08/26/11				
T11H197-09	DS-11-08	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	550	mg/kg dry	23		08/15/11	08/17/11	08/22/11	08/23/11				
T11H197-09	DS-11-08	EPA 6010B	Sediment	Iron	1	11000	mg/kg dry	5.0		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-09	DS-11-08	EPA 6010B	Sediment	Phosphorus	1	340	mg/kg dry	5.9		08/15/11	08/17/11	08/22/11	09/06/11				
T11H197-09	DS-11-08	EPA 6020	Sediment	Arsenic	10	1.6	mg/kg dry	0.11		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-09	DS-11-08	EPA 6020	Sediment	Barium	10	30	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-09	DS-11-08	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-09	DS-11-08	EPA 6020	Sediment	Chromium	10	11	mg/kg dry	2.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-09	DS-11-08	EPA 6020	Sediment	Copper	10	7.2	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-09	DS-11-08	EPA 6020	Sediment	Lead	10	5.3	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-09	DS-11-08	EPA 6020	Sediment	Manganese	100	350	mg/kg dry	1.9		08/15/11	08/17/11	08/22/11	09/08/11				
T11H197-09	DS-11-08	EPA 6020	Sediment	Nickel	10	8.9	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-09	DS-11-08	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/15/11	08/17/11	08/22/11	09/07/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-09	DS-11-08	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-09	DS-11-08	EPA 6020	Sediment	Zinc	10	24	mg/kg dry	1.0		08/15/11	08/17/11	08/22/11	09/07/11				
T11H197-09	DS-11-08	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/15/11	08/17/11	08/22/11	08/24/11				
T11H197-09	DS-11-08	EPA 8082	Sediment	Aroclor-1016	1	<160	ug/kg dry	160		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-09	DS-11-08	EPA 8082	Sediment	Aroclor-1221	1	<160	ug/kg dry	160		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-09	DS-11-08	EPA 8082	Sediment	Aroclor-1232	1	<160	ug/kg dry	160		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-09	DS-11-08	EPA 8082	Sediment	Aroclor-1242	1	<160	ug/kg dry	160		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-09	DS-11-08	EPA 8082	Sediment	Aroclor-1248	1	<160	ug/kg dry	160		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-09	DS-11-08	EPA 8082	Sediment	Aroclor-1254	1	<160	ug/kg dry	160		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-09	DS-11-08	EPA 8082	Sediment	Aroclor-1260	1	<160	ug/kg dry	160		08/15/11	08/17/11	08/18/11	08/24/11				
T11H197-09	DS-11-08	EPA 8082	Sediment	Tetrachloro-m-xylene	1	58	%			08/15/11	08/17/11	08/18/11	08/24/11	58	%	40	113
T11H197-09	DS-11-08	EPA 8082	Sediment	Decachlorobiphenyl	1	63	%			08/15/11	08/17/11	08/18/11	08/24/11	63	%	32	111
T11H197-09	DS-11-08	EPA 8270C	Sediment	Naphthalene	1	<410	ug/kg dry	410		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	2-Methylnaphthalene	1	<410	ug/kg dry	410		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Acenaphthylene	1	<410	ug/kg dry	410		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Acenaphthene	1	<410	ug/kg dry	410		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Fluorene	1	<410	ug/kg dry	410		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Anthracene	1	<410	ug/kg dry	410		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Pyrene	1	<410	ug/kg dry	410		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/15/11	08/17/11	08/18/11	08/22/11				
T11H197-09	DS-11-08	EPA 8270C	Sediment	Nitrobenzene-d5	1	59	%			08/15/11	08/17/11	08/18/11	08/22/11	59	%	36	98
T11H197-09	DS-11-08	EPA 8270C	Sediment	2-Fluorobiphenyl	1	58	%			08/15/11	08/17/11	08/18/11	08/22/11	58	%	44	105
T11H197-09	DS-11-08	EPA 8270C	Sediment	Terphenyl-d14	1	69	%			08/15/11	08/17/11	08/18/11	08/22/11	69	%	46	109
T11H197-09	DS-11-08	EPA 9012B	Sediment	Cyanide (total)	1	0.26	mg/kg dry	0.20		08/15/11	08/17/11	08/18/11	08/19/11				
T11H197-09	DS-11-08	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1000	mg/kg dry	1000		08/15/11	08/17/11	08/25/11	08/25/11				
T11H197-09	DS-11-08	PLUMB	Sediment	Chemical Oxygen Demand	1	43000	mg/kg dry	700		08/15/11	08/17/11	08/19/11	08/22/11				
T11H197-09	DS-11-08	PLUMB	Sediment	Volatile Solids	1	4.5	% by Wt.	0.10		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-09	DS-11-08	USACE, In-Place Density	Sediment	In-Place Density	1	1.8	g/mL			08/15/11	08/17/11	08/17/11	08/17/11				
T11H197-09	DS-11-08	WALKLEY BLACK	Sediment	Total Organic Carbon	1	16000	mg/kg dry	1700		08/15/11	08/17/11	08/18/11	08/18/11				
T11H197-10	DS-11-06	ASTM D2974-87	Sediment	% Solids	1	61	% by Wt.	0.10		08/16/11	08/17/11	08/18/11	08/19/11				
T11H197-10	DS-11-06	ASTM D854-91	Sediment	Specific Gravity	1	2.5				08/16/11	08/17/11	08/22/11	08/24/11				
T11H197-10	DS-11-06	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	75	mg/kg dry	1.0	205	08/16/11	08/17/11	08/25/11	08/26/11				
T11H197-10	DS-11-06	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	5	490	mg/kg dry	68		08/16/11	08/17/11	08/26/11	08/29/11				
T11H197-10	DS-11-06	EPA 6010B	Sediment	Iron	1	20000	mg/kg dry	5.0		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-10	DS-11-06	EPA 6010B	Sediment	Phosphorus	1	580	mg/kg dry	6.1		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-10	DS-11-06	EPA 6020	Sediment	Arsenic	10	2.9	mg/kg dry	0.12		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-10	DS-11-06	EPA 6020	Sediment	Barium	100	100	mg/kg dry	2.9		08/16/11	08/17/11	09/02/11	09/08/11				
T11H197-10	DS-11-06	EPA 6020	Sediment	Cadmium	10	0.42	mg/kg dry	0.20		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-10	DS-11-06	EPA 6020	Sediment	Chromium	10	26	mg/kg dry	2.0	205	08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-10	DS-11-06	EPA 6020	Sediment	Copper	10	18	mg/kg dry	1.0	205	08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-10	DS-11-06	EPA 6020	Sediment	Lead	10	28	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-10	DS-11-06	EPA 6020	Sediment	Manganese	100	500	mg/kg dry	1.9		08/16/11	08/17/11	09/02/11	09/08/11				
T11H197-10	DS-11-06	EPA 6020	Sediment	Nickel	10	17	mg/kg dry	1.0	205	08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-10	DS-11-06	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39	205	08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-10	DS-11-06	EPA 6020	Sediment	Silver	10	0.36	mg/kg dry	0.10		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-10	DS-11-06	EPA 6020	Sediment	Zinc	100	100	mg/kg dry	9.7		08/16/11	08/17/11	09/02/11	09/08/11				
T11H197-10	DS-11-06	EPA 7471A	Sediment	Mercury	1	0.17	mg/kg dry	0.050	205	08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-10	DS-11-06	EPA 8082	Sediment	Aroclor-1016	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-10	DS-11-06	EPA 8082	Sediment	Aroclor-1221	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-10	DS-11-06	EPA 8082	Sediment	Aroclor-1232	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-10	DS-11-06	EPA 8082	Sediment	Aroclor-1242	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-10	DS-11-06	EPA 8082	Sediment	Aroclor-1248	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-10	DS-11-06	EPA 8082	Sediment	Aroclor-1254	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-10	DS-11-06	EPA 8082	Sediment	Aroclor-1260	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-10	DS-11-06	EPA 8082	Sediment	Tetrachloro-m-xylene	1	56	%			08/16/11	08/17/11	08/18/11	08/24/11	56	%	40	113
T11H197-10	DS-11-06	EPA 8082	Sediment	Decachlorobiphenyl	1	60	%			08/16/11	08/17/11	08/18/11	08/24/11	60	%	32	111

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-10	DS-11-06	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330	205	08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-10	DS-11-06	EPA 8270C	Sediment	Nitrobenzene-d5	1	54	%			08/16/11	08/17/11	08/18/11	08/23/11	54	%	36	98
T11H197-10	DS-11-06	EPA 8270C	Sediment	2-Fluorobiphenyl	1	41	%		802	08/16/11	08/17/11	08/18/11	08/23/11	41	%	44	105
T11H197-10	DS-11-06	EPA 8270C	Sediment	Terphenyl-d14	1	55	%			08/16/11	08/17/11	08/18/11	08/23/11	55	%	46	109
T11H197-10	DS-11-06	EPA 9012B	Sediment	Cyanide (total)	1	0.53	mg/kg dry	0.20		08/16/11	08/17/11	08/18/11	08/19/11				
T11H197-10	DS-11-06	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<690	mg/kg dry	690		08/16/11	08/17/11	08/25/11	08/25/11				
T11H197-10	DS-11-06	PLUMB	Sediment	Chemical Oxygen Demand	1	62000	mg/kg dry	470	202	08/16/11	08/17/11	08/22/11	08/25/11				
T11H197-10	DS-11-06	PLUMB	Sediment	Volatile Solids	1	4.1	% by Wt.	0.10		08/16/11	08/17/11	08/23/11	08/29/11				
T11H197-10	DS-11-06	USACE, In-Place Density	Sediment	In-Place Density	1	1.7	g/mL			08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-10	DS-11-06	WALKLEY BLACK	Sediment	Total Organic Carbon	1	22000	mg/kg dry	1100	205	08/16/11	08/17/11	08/22/11	08/23/11				
T11H197-11	DS-11-07	ASTM D2974-87	Sediment	% Solids	1	63	% by Wt.	0.10		08/16/11	08/17/11	08/17/11	08/18/11				
T11H197-11	DS-11-07	ASTM D854-91	Sediment	Specific Gravity	1	2.7				08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-11	DS-11-07	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	56	mg/kg dry	1.0		08/16/11	08/17/11	08/25/11	08/26/11				
T11H197-11	DS-11-07	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	680	mg/kg dry	16		08/16/11	08/17/11	08/22/11	08/23/11				
T11H197-11	DS-11-07	EPA 6010B	Sediment	Iron	1	19000	mg/kg dry	5.0		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-11	DS-11-07	EPA 6010B	Sediment	Phosphorus	1	510	mg/kg dry	6.2		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-11	DS-11-07	EPA 6020	Sediment	Arsenic	10	2.6	mg/kg dry	0.12		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-11	DS-11-07	EPA 6020	Sediment	Barium	100	100	mg/kg dry	2.9		08/16/11	08/17/11	09/02/11	09/08/11				
T11H197-11	DS-11-07	EPA 6020	Sediment	Cadmium	10	0.22	mg/kg dry	0.20		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-11	DS-11-07	EPA 6020	Sediment	Chromium	10	22	mg/kg dry	2.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-11	DS-11-07	EPA 6020	Sediment	Copper	10	14	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-11	DS-11-07	EPA 6020	Sediment	Lead	10	14	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-11	DS-11-07	EPA 6020	Sediment	Manganese	200	1000	mg/kg dry	3.9		08/16/11	08/17/11	09/02/11	09/08/11				
T11H197-11	DS-11-07	EPA 6020	Sediment	Nickel	10	15	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-11	DS-11-07	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-11	DS-11-07	EPA 6020	Sediment	Silver	10	0.18	mg/kg dry	0.10		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-11	DS-11-07	EPA 6020	Sediment	Zinc	100	74	mg/kg dry	9.8		08/16/11	08/17/11	09/02/11	09/08/11				
T11H197-11	DS-11-07	EPA 7471A	Sediment	Mercury	1	0.083	mg/kg dry	0.050		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-11	DS-11-07	EPA 8082	Sediment	Aroclor-1016	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-11	DS-11-07	EPA 8082	Sediment	Aroclor-1221	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-11	DS-11-07	EPA 8082	Sediment	Aroclor-1232	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-11	DS-11-07	EPA 8082	Sediment	Aroclor-1242	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-11	DS-11-07	EPA 8082	Sediment	Aroclor-1248	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-11	DS-11-07	EPA 8082	Sediment	Aroclor-1254	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-11	DS-11-07	EPA 8082	Sediment	Aroclor-1260	1	<110	ug/kg dry	110		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-11	DS-11-07	EPA 8082	Sediment	Tetrachloro-m-xylene	1	51	%			08/16/11	08/17/11	08/18/11	08/24/11	51	%	40	113
T11H197-11	DS-11-07	EPA 8082	Sediment	Decachlorobiphenyl	1	74	%			08/16/11	08/17/11	08/18/11	08/24/11	74	%	32	111
T11H197-11	DS-11-07	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-11	DS-11-07	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/22/11				
T11H197-11	DS-11-07	EPA 8270C	Sediment	Nitrobenzene-d5	1	63	%			08/16/11	08/17/11	08/18/11	08/22/11	63	%	36	98
T11H197-11	DS-11-07	EPA 8270C	Sediment	2-Fluorobiphenyl	1	46	%			08/16/11	08/17/11	08/18/11	08/22/11	46	%	44	105
T11H197-11	DS-11-07	EPA 8270C	Sediment	Terphenyl-d14	1	60	%			08/16/11	08/17/11	08/18/11	08/22/11	60	%	46	109
T11H197-11	DS-11-07	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/16/11	08/17/11	08/18/11	08/19/11				
T11H197-11	DS-11-07	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<660	mg/kg dry	660		08/16/11	08/17/11	08/25/11	08/25/11				
T11H197-11	DS-11-07	PLUMB	Sediment	Chemical Oxygen Demand	1	52000	mg/kg dry	450		08/16/11	08/17/11	08/19/11	08/22/11				
T11H197-11	DS-11-07	PLUMB	Sediment	Volatile Solids	1	5.0	% by Wt.	0.10		08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-11	DS-11-07	USACE, In-Place Density	Sediment	In-Place Density	1	2.0	g/mL			08/16/11	08/17/11	08/17/11	08/17/11				
T11H197-11	DS-11-07	WALKLEY BLACK	Sediment	Total Organic Carbon	1	22000	mg/kg dry	1100		08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-12	DS-11-MU2	EPA 6010B	Sediment	Phosphorus	1	370	mg/kg dry	5.9		08/15/11	08/17/11	09/02/11	09/06/11				
T11H197-12	DS-11-MU2	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	59	mg/kg dry	1.0		08/15/11	08/17/11	08/31/11	08/31/11				
T11H197-12	DS-11-MU2	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	850	mg/kg dry	140		08/15/11	08/17/11	08/31/11	09/01/11				
T11H197-13	DS-11-11	ASTM D2974-87	Sediment	% Solids	1	73	% by Wt.	0.10		08/16/11	08/17/11	08/17/11	08/18/11				
T11H197-13	DS-11-11	ASTM D854-91	Sediment	Specific Gravity	1	2.7				08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-13	DS-11-11	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	<1.0	mg/kg dry	1.0		08/16/11	08/17/11	08/25/11	08/26/11				
T11H197-13	DS-11-11	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	260	mg/kg dry	18		08/16/11	08/17/11	08/22/11	08/23/11				
T11H197-13	DS-11-11	EPA 6010B	Sediment	Iron	1	8700	mg/kg dry	5.0		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-13	DS-11-11	EPA 6010B	Sediment	Phosphorus	1	260	mg/kg dry	6.2		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-13	DS-11-11	EPA 6020	Sediment	Arsenic	10	1.5	mg/kg dry	0.12		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-13	DS-11-11	EPA 6020	Sediment	Barium	10	19	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-13	DS-11-11	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-13	DS-11-11	EPA 6020	Sediment	Chromium	10	9.7	mg/kg dry	2.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-13	DS-11-11	EPA 6020	Sediment	Copper	10	5.9	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-13	DS-11-11	EPA 6020	Sediment	Lead	10	5.2	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-13	DS-11-11	EPA 6020	Sediment	Manganese	100	290	mg/kg dry	2.0		08/16/11	08/17/11	09/02/11	09/08/11				
T11H197-13	DS-11-11	EPA 6020	Sediment	Nickel	10	7.1	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-13	DS-11-11	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-13	DS-11-11	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-13	DS-11-11	EPA 6020	Sediment	Zinc	10	42	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-13	DS-11-11	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-13	DS-11-11	EPA 8082	Sediment	Aroclor-1016	1	<92	ug/kg dry	92		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-13	DS-11-11	EPA 8082	Sediment	Aroclor-1221	1	<92	ug/kg dry	92		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-13	DS-11-11	EPA 8082	Sediment	Aroclor-1232	1	<92	ug/kg dry	92		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-13	DS-11-11	EPA 8082	Sediment	Aroclor-1242	1	<92	ug/kg dry	92		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-13	DS-11-11	EPA 8082	Sediment	Aroclor-1248	1	<92	ug/kg dry	92		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-13	DS-11-11	EPA 8082	Sediment	Aroclor-1254	1	<92	ug/kg dry	92		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-13	DS-11-11	EPA 8082	Sediment	Aroclor-1260	1	<92	ug/kg dry	92		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-13	DS-11-11	EPA 8082	Sediment	Tetrachloro-m-xylene	1	55	%			08/16/11	08/17/11	08/18/11	08/24/11	55	%	40	113
T11H197-13	DS-11-11	EPA 8082	Sediment	Decachlorobiphenyl	1	87	%			08/16/11	08/17/11	08/18/11	08/24/11	87	%	32	111
T11H197-13	DS-11-11	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-13	DS-11-11	EPA 8270C	Sediment	Nitrobenzene-d5	1	52	%			08/16/11	08/17/11	08/18/11	08/23/11	52	%	36	98
T11H197-13	DS-11-11	EPA 8270C	Sediment	2-Fluorobiphenyl	1	52	%			08/16/11	08/17/11	08/18/11	08/23/11	52	%	44	105
T11H197-13	DS-11-11	EPA 8270C	Sediment	Terphenyl-d14	1	61	%			08/16/11	08/17/11	08/18/11	08/23/11	61	%	46	109
T11H197-13	DS-11-11	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/16/11	08/17/11	08/18/11	08/19/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-13	DS-11-11	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<580	mg/kg dry	580		08/16/11	08/17/11	08/25/11	08/25/11				
T11H197-13	DS-11-11	PLUMB	Sediment	Chemical Oxygen Demand	1	20000	mg/kg dry	390		08/16/11	08/17/11	08/19/11	08/22/11				
T11H197-13	DS-11-11	PLUMB	Sediment	Volatile Solids	1	2.5	% by Wt.	0.10		08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-13	DS-11-11	USACE, In-Place Density	Sediment	In-Place Density	1	1.9	g/mL			08/16/11	08/17/11	08/17/11	08/17/11				
T11H197-13	DS-11-11	WALKLEY BLACK	Sediment	Total Organic Carbon	1	6100	mg/kg dry	1000		08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-14	DS-11-12	ASTM D2974-87	Sediment	% Solids	1	63	% by Wt.	0.10		08/16/11	08/17/11	08/17/11	08/18/11				
T11H197-14	DS-11-12	ASTM D854-91	Sediment	Specific Gravity	1	2.7				08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-14	DS-11-12	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	<1.0	mg/kg dry	1.0		08/16/11	08/17/11	08/25/11	08/26/11				
T11H197-14	DS-11-12	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	360	mg/kg dry	19		08/16/11	08/17/11	08/22/11	08/23/11				
T11H197-14	DS-11-12	EPA 6010B	Sediment	Iron	1	11000	mg/kg dry	5.0		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-14	DS-11-12	EPA 6010B	Sediment	Phosphorus	1	350	mg/kg dry	6.1		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-14	DS-11-12	EPA 6020	Sediment	Arsenic	10	1.8	mg/kg dry	0.12		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-14	DS-11-12	EPA 6020	Sediment	Barium	10	25	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-14	DS-11-12	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-14	DS-11-12	EPA 6020	Sediment	Chromium	10	12	mg/kg dry	2.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-14	DS-11-12	EPA 6020	Sediment	Copper	10	7.6	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-14	DS-11-12	EPA 6020	Sediment	Lead	10	6.5	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-14	DS-11-12	EPA 6020	Sediment	Manganese	100	370	mg/kg dry	1.9		08/16/11	08/17/11	09/02/11	09/08/11				
T11H197-14	DS-11-12	EPA 6020	Sediment	Nickel	10	8.0	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-14	DS-11-12	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-14	DS-11-12	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-14	DS-11-12	EPA 6020	Sediment	Zinc	10	24	mg/kg dry	1.0		08/16/11	08/17/11	09/02/11	09/07/11				
T11H197-14	DS-11-12	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/16/11	08/17/11	09/02/11	09/06/11				
T11H197-14	DS-11-12	EPA 8082	Sediment	Aroclor-1016	1	<100	ug/kg dry	100		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-14	DS-11-12	EPA 8082	Sediment	Aroclor-1221	1	<100	ug/kg dry	100		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-14	DS-11-12	EPA 8082	Sediment	Aroclor-1232	1	<100	ug/kg dry	100		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-14	DS-11-12	EPA 8082	Sediment	Aroclor-1242	1	<100	ug/kg dry	100		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-14	DS-11-12	EPA 8082	Sediment	Aroclor-1248	1	<100	ug/kg dry	100		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-14	DS-11-12	EPA 8082	Sediment	Aroclor-1254	1	<100	ug/kg dry	100		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-14	DS-11-12	EPA 8082	Sediment	Aroclor-1260	1	<100	ug/kg dry	100		08/16/11	08/17/11	08/18/11	08/24/11				
T11H197-14	DS-11-12	EPA 8082	Sediment	Tetrachloro-m-xylene	1	43	%			08/16/11	08/17/11	08/18/11	08/24/11	43	%	40	113
T11H197-14	DS-11-12	EPA 8082	Sediment	Decachlorobiphenyl	1	67	%			08/16/11	08/17/11	08/18/11	08/24/11	67	%	32	111
T11H197-14	DS-11-12	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/16/11	08/17/11	08/18/11	08/23/11				
T11H197-14	DS-11-12	EPA 8270C	Sediment	Nitrobenzene-d5	1	54	%			08/16/11	08/17/11	08/18/11	08/23/11	54	%	36	98
T11H197-14	DS-11-12	EPA 8270C	Sediment	2-Fluorobiphenyl	1	57	%			08/16/11	08/17/11	08/18/11	08/23/11	57	%	44	105
T11H197-14	DS-11-12	EPA 8270C	Sediment	Terphenyl-d14	1	62	%			08/16/11	08/17/11	08/18/11	08/23/11	62	%	46	109
T11H197-14	DS-11-12	EPA 9012B	Sediment	Cyanide (total)	1	0.39	mg/kg dry	0.20		08/16/11	08/17/11	08/18/11	08/19/11				
T11H197-14	DS-11-12	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<660	mg/kg dry	660		08/16/11	08/17/11	08/25/11	08/25/11				
T11H197-14	DS-11-12	PLUMB	Sediment	Chemical Oxygen Demand	1	23000	mg/kg dry	450		08/16/11	08/17/11	08/19/11	08/22/11				
T11H197-14	DS-11-12	PLUMB	Sediment	Volatile Solids	1	1.4	% by Wt.	0.10		08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-14	DS-11-12	USACE, In-Place Density	Sediment	In-Place Density	1	2.0	g/mL			08/16/11	08/17/11	08/17/11	08/17/11				
T11H197-14	DS-11-12	WALKLEY BLACK	Sediment	Total Organic Carbon	1	8500	mg/kg dry	1100		08/16/11	08/17/11	08/18/11	08/18/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 350.1	Elutriate	Ammonia as N	1	1.6	mg/L	0.010	205	08/16/11	08/17/11	08/29/11	08/30/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 351.2	Elutriate	Total Kjeldahl Nitrogen	1	2.2	mg/L	0.50		08/16/11	08/17/11	08/30/11	09/01/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 365.2	Elutriate	Phosphorus-Total (as P)	1	0.13	mg/L	0.010		08/16/11	08/17/11	08/30/11	08/30/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-15	DS-11-MU4 Elutriate	EPA 6010B	Elutriate	Iron	1	4.8	mg/L	0.20		08/16/11	08/17/11	09/06/11	09/07/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 6020	Elutriate	Arsenic	5	<0.0050	mg/L	0.0050		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 6020	Elutriate	Barium	5	<0.10	mg/L	0.10		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 6020	Elutriate	Cadmium	5	<0.0010	mg/L	0.0010		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 6020	Elutriate	Chromium	5	<0.010	mg/L	0.010		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 6020	Elutriate	Copper	5	0.010	mg/L	0.0040		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 6020	Elutriate	Lead	5	0.0058	mg/L	0.0030		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 6020	Elutriate	Manganese	50	2.4	mg/L	0.050		08/16/11	08/17/11	09/06/11	09/07/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 6020	Elutriate	Nickel	5	<0.020	mg/L	0.020		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 6020	Elutriate	Selenium	5	<0.0050	mg/L	0.0050		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 6020	Elutriate	Silver	5	0.00020	mg/L	0.00020		08/16/11	08/17/11	09/06/11	09/12/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 6020	Elutriate	Zinc	5	<0.15	mg/L	0.15		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-15	DS-11-MU4 Elutriate	EPA 7470A	Elutriate	Mercury	1	<0.00020	mg/L	0.00020		08/16/11	08/17/11	09/02/11	09/02/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 350.1	Elutriate	Ammonia as N	1	1.2	mg/L	0.010		08/16/11	08/17/11	08/29/11	08/30/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 351.2	Elutriate	Total Kjeldahl Nitrogen	1	2.3	mg/L	0.50		08/16/11	08/17/11	08/30/11	09/01/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 365.2	Elutriate	Phosphorus-Total (as P)	1	0.20	mg/L	0.010		08/16/11	08/17/11	08/30/11	08/30/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6010B	Elutriate	Iron	1	7.6	mg/L	0.20		08/16/11	08/17/11	09/06/11	09/07/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6020	Elutriate	Arsenic	5	<0.0050	mg/L	0.0050		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6020	Elutriate	Barium	5	<0.10	mg/L	0.10		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6020	Elutriate	Cadmium	5	<0.0010	mg/L	0.0010		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6020	Elutriate	Chromium	5	0.010	mg/L	0.010		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6020	Elutriate	Copper	5	0.014	mg/L	0.0040		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6020	Elutriate	Lead	5	0.011	mg/L	0.0030		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6020	Elutriate	Manganese	50	1.4	mg/L	0.050		08/16/11	08/17/11	09/06/11	09/07/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6020	Elutriate	Nickel	5	<0.020	mg/L	0.020		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6020	Elutriate	Selenium	5	<0.0050	mg/L	0.0050		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6020	Elutriate	Silver	5	0.00030	mg/L	0.00020		08/16/11	08/17/11	09/06/11	09/12/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 6020	Elutriate	Zinc	5	<0.15	mg/L	0.15		08/16/11	08/17/11	09/06/11	09/06/11				
T11H197-16	DS-11-MU2 Elutriate	EPA 7470A	Elutriate	Mercury	1	<0.00020	mg/L	0.00020		08/16/11	08/17/11	09/02/11	09/02/11				
T11H197-17	DS-11-13	ASTM D2974-87	Sediment	% Solids	1	61	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-17	DS-11-13	ASTM D854-91	Sediment	Specific Gravity	1	2.6				08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-17	DS-11-13	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	110	mg/kg dry	1.0		08/17/11	08/17/11	08/25/11	08/26/11				
T11H197-17	DS-11-13	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	360	mg/kg dry	15		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-17	DS-11-13	EPA 6010B	Sediment	Iron	1	11000	mg/kg dry	5.0		08/17/11	08/17/11	09/02/11	09/06/11				
T11H197-17	DS-11-13	EPA 6010B	Sediment	Phosphorus	1	320	mg/kg dry	5.9		08/17/11	08/17/11	09/02/11	09/06/11				
T11H197-17	DS-11-13	EPA 6020	Sediment	Arsenic	10	1.5	mg/kg dry	0.11		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-17	DS-11-13	EPA 6020	Sediment	Barium	10	23	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-17	DS-11-13	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-17	DS-11-13	EPA 6020	Sediment	Chromium	10	12	mg/kg dry	2.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-17	DS-11-13	EPA 6020	Sediment	Copper	10	6.8	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-17	DS-11-13	EPA 6020	Sediment	Lead	10	6.1	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-17	DS-11-13	EPA 6020	Sediment	Manganese	100	320	mg/kg dry	1.9		08/17/11	08/17/11	09/02/11	09/08/11				
T11H197-17	DS-11-13	EPA 6020	Sediment	Nickel	10	8.3	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-17	DS-11-13	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-17	DS-11-13	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-17	DS-11-13	EPA 6020	Sediment	Zinc	10	23	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-17	DS-11-13	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/17/11	08/17/11	09/02/11	09/06/11				
T11H197-17	DS-11-13	EPA 8082	Sediment	Aroclor-1016	1	<110	ug/kg dry	110		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-17	DS-11-13	EPA 8082	Sediment	Aroclor-1221	1	<110	ug/kg dry	110		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-17	DS-11-13	EPA 8082	Sediment	Aroclor-1232	1	<110	ug/kg dry	110		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-17	DS-11-13	EPA 8082	Sediment	Aroclor-1242	1	<110	ug/kg dry	110		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-17	DS-11-13	EPA 8082	Sediment	Aroclor-1248	1	<110	ug/kg dry	110		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-17	DS-11-13	EPA 8082	Sediment	Aroclor-1254	1	<110	ug/kg dry	110		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-17	DS-11-13	EPA 8082	Sediment	Aroclor-1260	1	<110	ug/kg dry	110		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-17	DS-11-13	EPA 8082	Sediment	Tetrachloro-m-xylene	1	70	%			08/17/11	08/17/11	08/23/11	08/25/11	70	%	40	113
T11H197-17	DS-11-13	EPA 8082	Sediment	Decachlorobiphenyl	1	83	%			08/17/11	08/17/11	08/23/11	08/25/11	83	%	32	111
T11H197-17	DS-11-13	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-17	DS-11-13	EPA 8270C	Sediment	Nitrobenzene-d5	1	57	%			08/17/11	08/17/11	08/18/11	08/23/11	57	%	36	98
T11H197-17	DS-11-13	EPA 8270C	Sediment	2-Fluorobiphenyl	1	54	%			08/17/11	08/17/11	08/18/11	08/23/11	54	%	44	105
T11H197-17	DS-11-13	EPA 8270C	Sediment	Terphenyl-d14	1	57	%			08/17/11	08/17/11	08/18/11	08/23/11	57	%	46	109
T11H197-17	DS-11-13	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-17	DS-11-13	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<690	mg/kg dry	690		08/17/11	08/17/11	08/25/11	08/25/11				
T11H197-17	DS-11-13	PLUMB	Sediment	Chemical Oxygen Demand	1	29000	mg/kg dry	470		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-17	DS-11-13	PLUMB	Sediment	Volatile Solids	1	1.4	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-17	DS-11-13	USACE, In-Place Density	Sediment	In-Place Density	1	1.8	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-17	DS-11-13	WALKLEY BLACK	Sediment	Total Organic Carbon	1	5400	mg/kg dry	1100		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-18	DS-11-14	ASTM D2974-87	Sediment	% Solids	1	71	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-18	DS-11-14	ASTM D854-91	Sediment	Specific Gravity	1	2.5				08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-18	DS-11-14	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	<1.0	mg/kg dry	1.0		08/17/11	08/17/11	08/25/11	08/26/11				
T11H197-18	DS-11-14	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	610	mg/kg dry	23		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-18	DS-11-14	EPA 6010B	Sediment	Iron	1	15000	mg/kg dry	5.0		08/17/11	08/17/11	09/02/11	09/06/11				
T11H197-18	DS-11-14	EPA 6010B	Sediment	Phosphorus	1	390	mg/kg dry	6.3		08/17/11	08/17/11	09/02/11	09/06/11				
T11H197-18	DS-11-14	EPA 6020	Sediment	Arsenic	10	1.8	mg/kg dry	0.12		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-18	DS-11-14	EPA 6020	Sediment	Barium	10	40	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-18	DS-11-14	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-18	DS-11-14	EPA 6020	Sediment	Chromium	10	16	mg/kg dry	2.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-18	DS-11-14	EPA 6020	Sediment	Copper	10	11	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-18	DS-11-14	EPA 6020	Sediment	Lead	10	11	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-18	DS-11-14	EPA 6020	Sediment	Manganese	100	310	mg/kg dry	2.0		08/17/11	08/17/11	09/02/11	09/08/11				
T11H197-18	DS-11-14	EPA 6020	Sediment	Nickel	10	11	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-18	DS-11-14	EPA 6020	Sediment	Selenium	10	<0.40	mg/kg dry	0.40		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-18	DS-11-14	EPA 6020	Sediment	Silver	10	0.15	mg/kg dry	0.10		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-18	DS-11-14	EPA 6020	Sediment	Zinc	10	40	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-18	DS-11-14	EPA 7471A	Sediment	Mercury	1	0.068	mg/kg dry	0.050		08/17/11	08/17/11	09/02/11	09/06/11				
T11H197-18	DS-11-14	EPA 8082	Sediment	Aroclor-1016	1	<94	ug/kg dry	94		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-18	DS-11-14	EPA 8082	Sediment	Aroclor-1221	1	<94	ug/kg dry	94		08/17/11	08/17/11	08/23/11	08/25/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-18	DS-11-14	EPA 8082	Sediment	Aroclor-1232	1	<94	ug/kg dry	94		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-18	DS-11-14	EPA 8082	Sediment	Aroclor-1242	1	<94	ug/kg dry	94		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-18	DS-11-14	EPA 8082	Sediment	Aroclor-1248	1	<94	ug/kg dry	94		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-18	DS-11-14	EPA 8082	Sediment	Aroclor-1254	1	<94	ug/kg dry	94		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-18	DS-11-14	EPA 8082	Sediment	Aroclor-1260	1	<94	ug/kg dry	94		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-18	DS-11-14	EPA 8082	Sediment	Tetrachloro-m-xylene	1	48	%			08/17/11	08/17/11	08/23/11	08/25/11	48	%	40	113
T11H197-18	DS-11-14	EPA 8082	Sediment	Decachlorobiphenyl	1	58	%			08/17/11	08/17/11	08/23/11	08/25/11	58	%	32	111
T11H197-18	DS-11-14	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-18	DS-11-14	EPA 8270C	Sediment	Nitrobenzene-d5	1	57	%			08/17/11	08/17/11	08/18/11	08/23/11	57	%	36	98
T11H197-18	DS-11-14	EPA 8270C	Sediment	2-Fluorobiphenyl	1	58	%			08/17/11	08/17/11	08/18/11	08/23/11	58	%	44	105
T11H197-18	DS-11-14	EPA 8270C	Sediment	Terphenyl-d14	1	68	%			08/17/11	08/17/11	08/18/11	08/23/11	68	%	46	109
T11H197-18	DS-11-14	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-18	DS-11-14	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<590	mg/kg dry	590		08/17/11	08/17/11	08/25/11	08/25/11				
T11H197-18	DS-11-14	PLUMB	Sediment	Chemical Oxygen Demand	1	33000	mg/kg dry	400		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-18	DS-11-14	PLUMB	Sediment	Volatile Solids	1	2.5	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-18	DS-11-14	USACE, In-Place Density	Sediment	In-Place Density	1	1.6	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-18	DS-11-14	WALKLEY BLACK	Sediment	Total Organic Carbon	1	12000	mg/kg dry	1000		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-19	DS-11-15	ASTM D2974-87	Sediment	% Solids	1	73	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-19	DS-11-15	ASTM D854-91	Sediment	Specific Gravity	1	2.6				08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-19	DS-11-15	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	<1.0	mg/kg dry	1.0		08/17/11	08/17/11	08/25/11	08/26/11				
T11H197-19	DS-11-15	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	510	mg/kg dry	16		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-19	DS-11-15	EPA 6010B	Sediment	Iron	1	12000	mg/kg dry	5.0		08/17/11	08/17/11	09/02/11	09/06/11				
T11H197-19	DS-11-15	EPA 6010B	Sediment	Phosphorus	1	370	mg/kg dry	6.2		08/17/11	08/17/11	09/02/11	09/06/11				
T11H197-19	DS-11-15	EPA 6020	Sediment	Arsenic	10	1.6	mg/kg dry	0.12		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-19	DS-11-15	EPA 6020	Sediment	Barium	10	24	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-19	DS-11-15	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-19	DS-11-15	EPA 6020	Sediment	Chromium	10	12	mg/kg dry	2.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-19	DS-11-15	EPA 6020	Sediment	Copper	10	6.9	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-19	DS-11-15	EPA 6020	Sediment	Lead	10	5.7	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-19	DS-11-15	EPA 6020	Sediment	Manganese	100	380	mg/kg dry	2.0		08/17/11	08/17/11	09/02/11	09/08/11				
T11H197-19	DS-11-15	EPA 6020	Sediment	Nickel	10	8.7	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-19	DS-11-15	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-19	DS-11-15	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-19	DS-11-15	EPA 6020	Sediment	Zinc	10	24	mg/kg dry	1.0		08/17/11	08/17/11	09/02/11	09/07/11				
T11H197-19	DS-11-15	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/17/11	08/17/11	09/02/11	09/06/11				
T11H197-19	DS-11-15	EPA 8082	Sediment	Aroclor-1016	1	<91	ug/kg dry	91		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-19	DS-11-15	EPA 8082	Sediment	Aroclor-1221	1	<91	ug/kg dry	91		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-19	DS-11-15	EPA 8082	Sediment	Aroclor-1232	1	<91	ug/kg dry	91		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-19	DS-11-15	EPA 8082	Sediment	Aroclor-1242	1	<91	ug/kg dry	91		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-19	DS-11-15	EPA 8082	Sediment	Aroclor-1248	1	<91	ug/kg dry	91		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-19	DS-11-15	EPA 8082	Sediment	Aroclor-1254	1	<91	ug/kg dry	91		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-19	DS-11-15	EPA 8082	Sediment	Aroclor-1260	1	<91	ug/kg dry	91		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-19	DS-11-15	EPA 8082	Sediment	Tetrachloro-m-xylene	1	65	%			08/17/11	08/17/11	08/23/11	08/25/11	65	%	40	113
T11H197-19	DS-11-15	EPA 8082	Sediment	Decachlorobiphenyl	1	78	%			08/17/11	08/17/11	08/23/11	08/25/11	78	%	32	111
T11H197-19	DS-11-15	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-19	DS-11-15	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-19	DS-11-15	EPA 8270C	Sediment	Nitrobenzene-d5	1	58	%			08/17/11	08/17/11	08/18/11	08/23/11	58	%	36	98
T11H197-19	DS-11-15	EPA 8270C	Sediment	2-Fluorobiphenyl	1	58	%			08/17/11	08/17/11	08/18/11	08/23/11	58	%	44	105
T11H197-19	DS-11-15	EPA 8270C	Sediment	Terphenyl-d14	1	60	%			08/17/11	08/17/11	08/18/11	08/23/11	60	%	46	109
T11H197-19	DS-11-15	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-19	DS-11-15	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<580	mg/kg dry	580		08/17/11	08/17/11	08/25/11	08/25/11				
T11H197-19	DS-11-15	PLUMB	Sediment	Chemical Oxygen Demand	1	34000	mg/kg dry	390		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-19	DS-11-15	PLUMB	Sediment	Volatile Solids	1	1.4	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-19	DS-11-15	USACE, In-Place Density	Sediment	In-Place Density	1	1.9	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-19	DS-11-15	WALKLEY BLACK	Sediment	Total Organic Carbon	1	8800	mg/kg dry	1000		08/17/11	08/17/11	08/24/11	08/25/11				
T11H197-20	DS-11-MU3	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	30	mg/kg dry	1.0		08/17/11	08/17/11	08/25/11	08/26/11				
T11H197-20	DS-11-MU3	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	560	mg/kg dry	15		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-20	DS-11-MU3	EPA 6010B	Sediment	Phosphorus	1	370	mg/kg dry	6.0		08/17/11	08/17/11	09/02/11	09/06/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 350.1	Elutriate	Ammonia as N	1	1.5	mg/L	0.010		08/17/11	08/17/11	08/29/11	08/30/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 351.2	Elutriate	Total Kjeldahl Nitrogen	1	2.9	mg/L	0.50		08/17/11	08/17/11	08/30/11	09/01/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 365.2	Elutriate	Phosphorus-Total (as P)	1	0.11	mg/L	0.010		08/17/11	08/17/11	08/30/11	08/30/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6010B	Elutriate	Iron	1	3.2	mg/L	0.20		08/17/11	08/17/11	09/06/11	09/07/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6020	Elutriate	Arsenic	5	<0.0050	mg/L	0.0050		08/17/11	08/17/11	09/06/11	09/06/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6020	Elutriate	Barium	5	<0.10	mg/L	0.10		08/17/11	08/17/11	09/06/11	09/06/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6020	Elutriate	Cadmium	5	<0.0010	mg/L	0.0010		08/17/11	08/17/11	09/06/11	09/06/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6020	Elutriate	Chromium	5	<0.010	mg/L	0.010		08/17/11	08/17/11	09/06/11	09/06/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6020	Elutriate	Copper	5	0.0052	mg/L	0.0040		08/17/11	08/17/11	09/06/11	09/06/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6020	Elutriate	Lead	5	0.0036	mg/L	0.0030		08/17/11	08/17/11	09/06/11	09/06/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6020	Elutriate	Manganese	50	2.9	mg/L	0.050		08/17/11	08/17/11	09/06/11	09/07/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6020	Elutriate	Nickel	5	<0.020	mg/L	0.020		08/17/11	08/17/11	09/06/11	09/06/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6020	Elutriate	Selenium	5	<0.0050	mg/L	0.0050		08/17/11	08/17/11	09/06/11	09/06/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6020	Elutriate	Silver	5	<0.00020	mg/L	0.00020		08/17/11	08/17/11	09/06/11	09/12/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 6020	Elutriate	Zinc	5	<0.15	mg/L	0.15		08/17/11	08/17/11	09/06/11	09/06/11				
T11H197-21	DS-11-MU3 Elutriate	EPA 7470A	Elutriate	Mercury	1	<0.00020	mg/L	0.00020		08/17/11	08/17/11	09/02/11	09/02/11				
T11H197-22	DS-11-41	ASTM D2974-87	Sediment	% Solids	1	36	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-22	DS-11-41	ASTM D854-91	Sediment	Specific Gravity	1	2.1				08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-22	DS-11-41	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	15	mg/kg dry	1.0		08/17/11	08/17/11	08/25/11	08/26/11				
T11H197-22	DS-11-41	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	2	2300	mg/kg dry	44		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-22	DS-11-41	EPA 6010B	Sediment	Iron	10	25000	mg/kg dry	29		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-22	DS-11-41	EPA 6010B	Sediment	Phosphorus	1	660	mg/kg dry	6.1		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-22	DS-11-41	EPA 6020	Sediment	Arsenic	10	3.6	mg/kg dry	0.12		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-22	DS-11-41	EPA 6020	Sediment	Barium	100	100	mg/kg dry	2.9		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-22	DS-11-41	EPA 6020	Sediment	Cadmium	10	0.33	mg/kg dry	0.20		08/17/11	08/17/11	08/19/11	09/07/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-22	DS-11-41	EPA 6020	Sediment	Chromium	10	29	mg/kg dry	2.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-22	DS-11-41	EPA 6020	Sediment	Copper	10	19	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-22	DS-11-41	EPA 6020	Sediment	Lead	10	22	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-22	DS-11-41	EPA 6020	Sediment	Manganese	200	1100	mg/kg dry	3.9		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-22	DS-11-41	EPA 6020	Sediment	Nickel	10	18	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-22	DS-11-41	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-22	DS-11-41	EPA 6020	Sediment	Silver	10	0.29	mg/kg dry	0.10		08/17/11	08/17/11	08/19/11	09/12/11				
T11H197-22	DS-11-41	EPA 6020	Sediment	Zinc	100	92	mg/kg dry	9.7		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-22	DS-11-41	EPA 7471A	Sediment	Mercury	1	0.15	mg/kg dry	0.050		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-22	DS-11-41	EPA 8082	Sediment	Aroclor-1016	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-22	DS-11-41	EPA 8082	Sediment	Aroclor-1221	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-22	DS-11-41	EPA 8082	Sediment	Aroclor-1232	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-22	DS-11-41	EPA 8082	Sediment	Aroclor-1242	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-22	DS-11-41	EPA 8082	Sediment	Aroclor-1248	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-22	DS-11-41	EPA 8082	Sediment	Aroclor-1254	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-22	DS-11-41	EPA 8082	Sediment	Aroclor-1260	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-22	DS-11-41	EPA 8082	Sediment	Tetrachloro-m-xylene	1	53	%			08/17/11	08/17/11	08/23/11	08/25/11	53	%	40	113
T11H197-22	DS-11-41	EPA 8082	Sediment	Decachlorobiphenyl	1	66	%			08/17/11	08/17/11	08/23/11	08/25/11	66	%	32	111
T11H197-22	DS-11-41	EPA 8270C	Sediment	Naphthalene	1	<460	ug/kg dry	460		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	2-Methylnaphthalene	1	<460	ug/kg dry	460		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Acenaphthylene	1	<460	ug/kg dry	460		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Acenaphthene	1	<460	ug/kg dry	460		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Fluorene	1	<460	ug/kg dry	460		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Anthracene	1	<460	ug/kg dry	460		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Pyrene	1	<460	ug/kg dry	460		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/18/11	08/23/11				
T11H197-22	DS-11-41	EPA 8270C	Sediment	Nitrobenzene-d5	1	46	%			08/17/11	08/17/11	08/18/11	08/23/11	46	%	36	98
T11H197-22	DS-11-41	EPA 8270C	Sediment	2-Fluorobiphenyl	1	40	%		802	08/17/11	08/17/11	08/18/11	08/23/11	40	%	44	105
T11H197-22	DS-11-41	EPA 8270C	Sediment	Terphenyl-d14	1	47	%			08/17/11	08/17/11	08/18/11	08/23/11	47	%	46	109
T11H197-22	DS-11-41	EPA 9012B	Sediment	Cyanide (total)	1	2.1	mg/kg dry	0.20		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-22	DS-11-41	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1200	mg/kg dry	1200		08/17/11	08/17/11	08/25/11	08/25/11				
T11H197-22	DS-11-41	PLUMB	Sediment	Chemical Oxygen Demand	1	210000	mg/kg dry	790		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-22	DS-11-41	PLUMB	Sediment	Volatile Solids	1	12	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-22	DS-11-41	USACE, In-Place Density	Sediment	In-Place Density	1	1.3	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-22	DS-11-41	WALKLEY BLACK	Sediment	Total Organic Carbon	1	61000	mg/kg dry	1900		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-23	DS-11-42	ASTM D2974-87	Sediment	% Solids	1	35	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-23	DS-11-42	ASTM D854-91	Sediment	Specific Gravity	1	2.2				08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	37	mg/kg dry	1.0		08/17/11	08/17/11	08/29/11	08/30/11				
T11H197-23	DS-11-42	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	2300	mg/kg dry	130		08/17/11	08/17/11	08/26/11	08/29/11				
T11H197-23	DS-11-42	EPA 6010B	Sediment	Iron	10	35000	mg/kg dry	28		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-23	DS-11-42	EPA 6010B	Sediment	Phosphorus	1	890	mg/kg dry	5.8		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-23	DS-11-42	EPA 6020	Sediment	Arsenic	10	5.0	mg/kg dry	0.11		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-23	DS-11-42	EPA 6020	Sediment	Barium	100	190	mg/kg dry	2.8		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-23	DS-11-42	EPA 6020	Sediment	Cadmium	10	0.48	mg/kg dry	0.20		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-23	DS-11-42	EPA 6020	Sediment	Chromium	10	40	mg/kg dry	2.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-23	DS-11-42	EPA 6020	Sediment	Copper	10	23	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-23	DS-11-42	EPA 6020	Sediment	Lead	10	30	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-23	DS-11-42	EPA 6020	Sediment	Manganese	200	1900	mg/kg dry	3.7		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-23	DS-11-42	EPA 6020	Sediment	Nickel	10	24	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-23	DS-11-42	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-23	DS-11-42	EPA 6020	Sediment	Silver	10	0.43	mg/kg dry	0.10		08/17/11	08/17/11	08/19/11	09/12/11				
T11H197-23	DS-11-42	EPA 6020	Sediment	Zinc	100	150	mg/kg dry	9.3		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-23	DS-11-42	EPA 7471A	Sediment	Mercury	1	0.22	mg/kg dry	0.050		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Naphthalene	1	<480	ug/kg dry	480		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	2-Methylnaphthalene	1	<480	ug/kg dry	480		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Acenaphthylene	1	<480	ug/kg dry	480		08/17/11	08/17/11	08/22/11	08/24/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-23	DS-11-42	EPA 8270C	Sediment	Acenaphthene	1	<480	ug/kg dry	480		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Fluorene	1	<480	ug/kg dry	480		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Anthracene	1	<480	ug/kg dry	480		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Pyrene	1	<480	ug/kg dry	480		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-23	DS-11-42	EPA 8270C	Sediment	Nitrobenzene-d5	1	56	%			08/17/11	08/17/11	08/22/11	08/24/11	56	%	36	98
T11H197-23	DS-11-42	EPA 8270C	Sediment	2-Fluorobiphenyl	1	51	%			08/17/11	08/17/11	08/22/11	08/24/11	51	%	44	105
T11H197-23	DS-11-42	EPA 8270C	Sediment	Terphenyl-d14	1	47	%			08/17/11	08/17/11	08/22/11	08/24/11	47	%	46	109
T11H197-23	DS-11-42	EPA 9012B	Sediment	Cyanide (total)	1	0.34	mg/kg dry	0.20		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-23	DS-11-42	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1200	mg/kg dry	1200		08/17/11	08/17/11	08/25/11	08/25/11				
T11H197-23	DS-11-42	PLUMB	Sediment	Chemical Oxygen Demand	1	140000	mg/kg dry	820		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-23	DS-11-42	PLUMB	Sediment	Volatile Solids	1	9.7	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-23	DS-11-42	USACE, In-Place Density	Sediment	In-Place Density	1	1.3	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-23	DS-11-42	WALKLEY BLACK	Sediment	Total Organic Carbon	1	40000	mg/kg dry	2000		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-23	DS-11-42	EPA 8082	Sediment	Aroclor-1016	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-23	DS-11-42	EPA 8082	Sediment	Aroclor-1221	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-23	DS-11-42	EPA 8082	Sediment	Aroclor-1232	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-23	DS-11-42	EPA 8082	Sediment	Aroclor-1242	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-23	DS-11-42	EPA 8082	Sediment	Aroclor-1248	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-23	DS-11-42	EPA 8082	Sediment	Aroclor-1254	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-23	DS-11-42	EPA 8082	Sediment	Aroclor-1260	1	<190	ug/kg dry	190		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-23	DS-11-42	EPA 8082	Sediment	Tetrachloro-m-xylene	1	28	%		314.5	08/17/11	08/17/11	08/31/11	09/02/11	28	%	40	113
T11H197-23	DS-11-42	EPA 8082	Sediment	Decachlorobiphenyl	1	27	%		314.5	08/17/11	08/17/11	08/31/11	09/02/11	27	%	32	111
T11H197-24	DS-11-43	ASTM D2974-87	Sediment	% Solids	1	39	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-24	DS-11-43	ASTM D854-91	Sediment	Specific Gravity	1	2.0				08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-24	DS-11-43	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	32	mg/kg dry	1.0		08/17/11	08/17/11	08/29/11	08/30/11				
T11H197-24	DS-11-43	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	2	1200	mg/kg dry	24		08/17/11	08/17/11	08/26/11	08/29/11				
T11H197-24	DS-11-43	EPA 6010B	Sediment	Iron	10	37000	mg/kg dry	27		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-24	DS-11-43	EPA 6010B	Sediment	Phosphorus	1	830	mg/kg dry	5.7		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-24	DS-11-43	EPA 6020	Sediment	Arsenic	10	4.3	mg/kg dry	0.11		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-24	DS-11-43	EPA 6020	Sediment	Barium	100	180	mg/kg dry	2.7		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-24	DS-11-43	EPA 6020	Sediment	Cadmium	10	0.39	mg/kg dry	0.20		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-24	DS-11-43	EPA 6020	Sediment	Chromium	10	38	mg/kg dry	2.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-24	DS-11-43	EPA 6020	Sediment	Copper	10	21	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-24	DS-11-43	EPA 6020	Sediment	Lead	10	26	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-24	DS-11-43	EPA 6020	Sediment	Manganese	500	1400	mg/kg dry	9.1		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-24	DS-11-43	EPA 6020	Sediment	Nickel	10	23	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-24	DS-11-43	EPA 6020	Sediment	Selenium	10	<0.36	mg/kg dry	0.36		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-24	DS-11-43	EPA 6020	Sediment	Silver	10	0.37	mg/kg dry	0.10		08/17/11	08/17/11	08/19/11	09/12/11				
T11H197-24	DS-11-43	EPA 6020	Sediment	Zinc	100	130	mg/kg dry	9.1		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-24	DS-11-43	EPA 7471A	Sediment	Mercury	1	0.16	mg/kg dry	0.050		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-24	DS-11-43	EPA 8082	Sediment	Aroclor-1016	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-24	DS-11-43	EPA 8082	Sediment	Aroclor-1221	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-24	DS-11-43	EPA 8082	Sediment	Aroclor-1232	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-24	DS-11-43	EPA 8082	Sediment	Aroclor-1242	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-24	DS-11-43	EPA 8082	Sediment	Aroclor-1248	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-24	DS-11-43	EPA 8082	Sediment	Aroclor-1254	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-24	DS-11-43	EPA 8082	Sediment	Aroclor-1260	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-24	DS-11-43	EPA 8082	Sediment	Tetrachloro-m-xylene	1	33	%		303	08/17/11	08/17/11	08/23/11	08/25/11	33	%	40	113
T11H197-24	DS-11-43	EPA 8082	Sediment	Decachlorobiphenyl	1	37	%			08/17/11	08/17/11	08/23/11	08/25/11	37	%	32	111
T11H197-24	DS-11-43	EPA 8270C	Sediment	Naphthalene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	2-Methylnaphthalene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Acenaphthylene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Acenaphthene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Fluorene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-24	DS-11-43	EPA 8270C	Sediment	Anthracene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Pyrene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-24	DS-11-43	EPA 8270C	Sediment	Nitrobenzene-d5	1	63	%			08/17/11	08/17/11	08/22/11	08/25/11	63	%	36	98
T11H197-24	DS-11-43	EPA 8270C	Sediment	2-Fluorobiphenyl	1	57	%			08/17/11	08/17/11	08/22/11	08/25/11	57	%	44	105
T11H197-24	DS-11-43	EPA 8270C	Sediment	Terphenyl-d14	1	60	%			08/17/11	08/17/11	08/22/11	08/25/11	60	%	46	109
T11H197-24	DS-11-43	EPA 9012B	Sediment	Cyanide (total)	1	0.37	mg/kg dry	0.20		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-24	DS-11-43	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1100	mg/kg dry	1100		08/17/11	08/17/11	08/25/11	08/25/11				
T11H197-24	DS-11-43	PLUMB	Sediment	Chemical Oxygen Demand	1	96000	mg/kg dry	740		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-24	DS-11-43	PLUMB	Sediment	Volatile Solids	1	9.0	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-24	DS-11-43	USACE, In-Place Density	Sediment	In-Place Density	1	1.6	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-24	DS-11-43	WALKLEY BLACK	Sediment	Total Organic Carbon	1	27000	mg/kg dry	1700		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-25	DS-11-44	ASTM D2974-87	Sediment	% Solids	1	34	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-25	DS-11-44	ASTM D854-91	Sediment	Specific Gravity	1	2.4				08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-25	DS-11-44	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	13	mg/kg dry	1.0		08/17/11	08/17/11	08/29/11	08/30/11				
T11H197-25	DS-11-44	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	1200	mg/kg dry	15		08/17/11	08/17/11	08/26/11	08/29/11				
T11H197-25	DS-11-44	EPA 6010B	Sediment	Iron	10	35000	mg/kg dry	28		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-25	DS-11-44	EPA 6010B	Sediment	Phosphorus	1	880	mg/kg dry	5.9		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-25	DS-11-44	EPA 6020	Sediment	Arsenic	10	5.2	mg/kg dry	0.11		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-25	DS-11-44	EPA 6020	Sediment	Barium	100	180	mg/kg dry	2.8		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-25	DS-11-44	EPA 6020	Sediment	Cadmium	10	0.50	mg/kg dry	0.20		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-25	DS-11-44	EPA 6020	Sediment	Chromium	10	38	mg/kg dry	2.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-25	DS-11-44	EPA 6020	Sediment	Copper	10	24	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-25	DS-11-44	EPA 6020	Sediment	Lead	10	32	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-25	DS-11-44	EPA 6020	Sediment	Manganese	500	1800	mg/kg dry	9.4		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-25	DS-11-44	EPA 6020	Sediment	Nickel	10	25	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-25	DS-11-44	EPA 6020	Sediment	Selenium	10	0.37	mg/kg dry	0.37		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-25	DS-11-44	EPA 6020	Sediment	Silver	10	0.42	mg/kg dry	0.10		08/17/11	08/17/11	08/19/11	09/12/11				
T11H197-25	DS-11-44	EPA 6020	Sediment	Zinc	100	150	mg/kg dry	9.4		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-25	DS-11-44	EPA 7471A	Sediment	Mercury	1	0.20	mg/kg dry	0.050		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Naphthalene	1	<490	ug/kg dry	490		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	2-Methylnaphthalene	1	<490	ug/kg dry	490		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Acenaphthylene	1	<490	ug/kg dry	490		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Acenaphthene	1	<490	ug/kg dry	490		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Fluorene	1	<490	ug/kg dry	490		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Anthracene	1	<490	ug/kg dry	490		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Pyrene	1	<490	ug/kg dry	490		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	EPA 8270C	Sediment	Nitrobenzene-d5	1	65	%			08/17/11	08/17/11	08/22/11	08/25/11	65	%	36	98
T11H197-25	DS-11-44	EPA 8270C	Sediment	2-Fluorobiphenyl	1	56	%			08/17/11	08/17/11	08/22/11	08/25/11	56	%	44	105
T11H197-25	DS-11-44	EPA 8270C	Sediment	Terphenyl-d14	1	56	%			08/17/11	08/17/11	08/22/11	08/25/11	56	%	46	109
T11H197-25	DS-11-44	EPA 9012B	Sediment	Cyanide (total)	1	0.33	mg/kg dry	0.20		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-25	DS-11-44	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1200	mg/kg dry	1200		08/17/11	08/17/11	08/31/11	09/01/11				
T11H197-25	DS-11-44	PLUMB	Sediment	Chemical Oxygen Demand	1	92000	mg/kg dry	840		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-25	DS-11-44	PLUMB	Sediment	Volatile Solids	1	5.4	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-25	DS-11-44	USACE, In-Place Density	Sediment	In-Place Density	1	1.3	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-25	DS-11-44	WALKLEY BLACK	Sediment	Total Organic Carbon	1	37000	mg/kg dry	2000		08/17/11	08/17/11	08/22/11	08/23/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-25	DS-11-44	EPA 8082	Sediment	Aroclor-1016	1	<200	ug/kg dry	200		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-25	DS-11-44	EPA 8082	Sediment	Aroclor-1221	1	<200	ug/kg dry	200		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-25	DS-11-44	EPA 8082	Sediment	Aroclor-1232	1	<200	ug/kg dry	200		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-25	DS-11-44	EPA 8082	Sediment	Aroclor-1242	1	<200	ug/kg dry	200		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-25	DS-11-44	EPA 8082	Sediment	Aroclor-1248	1	<200	ug/kg dry	200		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-25	DS-11-44	EPA 8082	Sediment	Aroclor-1254	1	<200	ug/kg dry	200		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-25	DS-11-44	EPA 8082	Sediment	Aroclor-1260	1	<200	ug/kg dry	200		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-25	DS-11-44	EPA 8082	Sediment	Tetrachloro-m-xylene	1	34	%		303	08/17/11	08/17/11	08/31/11	09/02/11	34	%	40	113
T11H197-25	DS-11-44	EPA 8082	Sediment	Decachlorobiphenyl	1	40	%			08/17/11	08/17/11	08/31/11	09/02/11	40	%	32	111
T11H197-26	DS-11-45	ASTM D2974-87	Sediment	% Solids	1	36	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-26	DS-11-45	ASTM D854-91	Sediment	Specific Gravity	1	2.5				08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-26	DS-11-45	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	57	mg/kg dry	1.0		08/17/11	08/17/11	08/29/11	08/30/11				
T11H197-26	DS-11-45	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	2600	mg/kg dry	140		08/17/11	08/17/11	08/26/11	08/29/11				
T11H197-26	DS-11-45	EPA 6010B	Sediment	Iron	10	41000	mg/kg dry	29		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-26	DS-11-45	EPA 6010B	Sediment	Phosphorus	1	1100	mg/kg dry	6.0		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-26	DS-11-45	EPA 6020	Sediment	Arsenic	10	6.0	mg/kg dry	0.11		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-26	DS-11-45	EPA 6020	Sediment	Barium	100	180	mg/kg dry	2.9		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-26	DS-11-45	EPA 6020	Sediment	Cadmium	10	0.44	mg/kg dry	0.20		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-26	DS-11-45	EPA 6020	Sediment	Chromium	10	38	mg/kg dry	2.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-26	DS-11-45	EPA 6020	Sediment	Copper	10	23	mg/kg dry	1.0	205	08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-26	DS-11-45	EPA 6020	Sediment	Lead	10	29	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-26	DS-11-45	EPA 6020	Sediment	Manganese	500	2300	mg/kg dry	9.5		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-26	DS-11-45	EPA 6020	Sediment	Nickel	10	24	mg/kg dry	1.0	205	08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-26	DS-11-45	EPA 6020	Sediment	Selenium	10	0.42	mg/kg dry	0.38		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-26	DS-11-45	EPA 6020	Sediment	Silver	10	0.32	mg/kg dry	0.10		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-26	DS-11-45	EPA 6020	Sediment	Zinc	100	140	mg/kg dry	9.5		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-26	DS-11-45	EPA 7471A	Sediment	Mercury	1	0.19	mg/kg dry	0.050		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Naphthalene	1	<450	ug/kg dry	450		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	2-Methylnaphthalene	1	<450	ug/kg dry	450		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Acenaphthylene	1	<450	ug/kg dry	450		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Acenaphthene	1	<450	ug/kg dry	450		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Fluorene	1	<450	ug/kg dry	450		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Anthracene	1	<450	ug/kg dry	450		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Pyrene	1	<450	ug/kg dry	450		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	EPA 8270C	Sediment	Nitrobenzene-d5	1	51	%			08/17/11	08/17/11	08/22/11	08/25/11	51	%	36	98
T11H197-26	DS-11-45	EPA 8270C	Sediment	2-Fluorobiphenyl	1	44	%			08/17/11	08/17/11	08/22/11	08/25/11	44	%	44	105
T11H197-26	DS-11-45	EPA 8270C	Sediment	Terphenyl-d14	1	50	%			08/17/11	08/17/11	08/22/11	08/25/11	50	%	46	109
T11H197-26	DS-11-45	EPA 9012B	Sediment	Cyanide (total)	1	0.28	mg/kg dry	0.20		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-26	DS-11-45	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1200	mg/kg dry	1200		08/17/11	08/17/11	08/31/11	09/01/11				
T11H197-26	DS-11-45	PLUMB	Sediment	Chemical Oxygen Demand	1	72000	mg/kg dry	790		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-26	DS-11-45	PLUMB	Sediment	Volatile Solids	1	11	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-26	DS-11-45	USACE, In-Place Density	Sediment	In-Place Density	1	1.7	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-26	DS-11-45	WALKLEY BLACK	Sediment	Total Organic Carbon	1	37000	mg/kg dry	1900		08/17/11	08/17/11	08/24/11	08/25/11				
T11H197-26	DS-11-45	EPA 8082	Sediment	Aroclor-1016	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-26	DS-11-45	EPA 8082	Sediment	Aroclor-1221	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-26	DS-11-45	EPA 8082	Sediment	Aroclor-1232	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-26	DS-11-45	EPA 8082	Sediment	Aroclor-1242	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-26	DS-11-45	EPA 8082	Sediment	Aroclor-1248	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-26	DS-11-45	EPA 8082	Sediment	Aroclor-1254	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-26	DS-11-45	EPA 8082	Sediment	Aroclor-1260	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/31/11	09/02/11				
T11H197-26	DS-11-45	EPA 8082	Sediment	Tetrachloro-m-xylene	1	27	%		314.5	08/17/11	08/17/11	08/31/11	09/02/11	27	%	40	113
T11H197-26	DS-11-45	EPA 8082	Sediment	Decachlorobiphenyl	1	18	%		314.5	08/17/11	08/17/11	08/31/11	09/02/11	18	%	32	111
T11H197-27	DS-11-HI PU	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	13	mg/kg dry	1.0		08/17/11	08/17/11	08/29/11	08/30/11				
T11H197-27	DS-11-HI PU	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	2200	mg/kg dry	140		08/17/11	08/17/11	08/29/11	09/01/11				
T11H197-27	DS-11-HI PU	EPA 6010B	Sediment	Phosphorus	1	950	mg/kg dry	5.9		08/17/11	08/17/11	08/19/11	08/22/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-28	DS-11-46	ASTM D2974-87	Sediment	% Solids	1	46	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-28	DS-11-46	ASTM D854-91	Sediment	Specific Gravity	1	2.0				08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-28	DS-11-46	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	53	mg/kg dry	1.0		08/17/11	08/17/11	08/29/11	08/30/11				
T11H197-28	DS-11-46	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	800	mg/kg dry	15		08/17/11	08/17/11	08/26/11	08/29/11				
T11H197-28	DS-11-46	EPA 6010B	Sediment	Iron	10	27000	mg/kg dry	29		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-28	DS-11-46	EPA 6010B	Sediment	Phosphorus	1	690	mg/kg dry	6.0		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-28	DS-11-46	EPA 6020	Sediment	Arsenic	10	3.0	mg/kg dry	0.11		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-28	DS-11-46	EPA 6020	Sediment	Barium	100	130	mg/kg dry	2.9		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-28	DS-11-46	EPA 6020	Sediment	Cadmium	10	0.31	mg/kg dry	0.20		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-28	DS-11-46	EPA 6020	Sediment	Chromium	10	31	mg/kg dry	2.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-28	DS-11-46	EPA 6020	Sediment	Copper	10	18	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-28	DS-11-46	EPA 6020	Sediment	Lead	10	18	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-28	DS-11-46	EPA 6020	Sediment	Manganese	200	860	mg/kg dry	3.8		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-28	DS-11-46	EPA 6020	Sediment	Nickel	10	21	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-28	DS-11-46	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-28	DS-11-46	EPA 6020	Sediment	Silver	10	0.27	mg/kg dry	0.10		08/17/11	08/17/11	08/19/11	09/12/11				
T11H197-28	DS-11-46	EPA 6020	Sediment	Zinc	100	100	mg/kg dry	9.5		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-28	DS-11-46	EPA 7471A	Sediment	Mercury	1	0.12	mg/kg dry	0.050		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-28	DS-11-46	EPA 8082	Sediment	Aroclor-1016	1	<140	ug/kg dry	140		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-28	DS-11-46	EPA 8082	Sediment	Aroclor-1221	1	<140	ug/kg dry	140		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-28	DS-11-46	EPA 8082	Sediment	Aroclor-1232	1	<140	ug/kg dry	140		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-28	DS-11-46	EPA 8082	Sediment	Aroclor-1242	1	<140	ug/kg dry	140		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-28	DS-11-46	EPA 8082	Sediment	Aroclor-1248	1	<140	ug/kg dry	140		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-28	DS-11-46	EPA 8082	Sediment	Aroclor-1254	1	<140	ug/kg dry	140		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-28	DS-11-46	EPA 8082	Sediment	Aroclor-1260	1	<140	ug/kg dry	140		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-28	DS-11-46	EPA 8082	Sediment	Tetrachloro-m-xylene	1	43	%			08/17/11	08/17/11	08/23/11	08/25/11	43	%	40	113
T11H197-28	DS-11-46	EPA 8082	Sediment	Decachlorobiphenyl	1	41	%			08/17/11	08/17/11	08/23/11	08/25/11	41	%	32	111
T11H197-28	DS-11-46	EPA 8270C	Sediment	Naphthalene	1	<360	ug/kg dry	360		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	2-Methylnaphthalene	1	<360	ug/kg dry	360		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Acenaphthylene	1	<360	ug/kg dry	360		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Acenaphthene	1	<360	ug/kg dry	360		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Fluorene	1	<360	ug/kg dry	360		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Anthracene	1	<360	ug/kg dry	360		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Pyrene	1	<360	ug/kg dry	360		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-28	DS-11-46	EPA 8270C	Sediment	Nitrobenzene-d5	1	59	%			08/17/11	08/17/11	08/22/11	08/26/11	59	%	36	98
T11H197-28	DS-11-46	EPA 8270C	Sediment	2-Fluorobiphenyl	1	53	%			08/17/11	08/17/11	08/22/11	08/26/11	53	%	44	105
T11H197-28	DS-11-46	EPA 8270C	Sediment	Terphenyl-d14	1	59	%			08/17/11	08/17/11	08/22/11	08/26/11	59	%	46	109
T11H197-28	DS-11-46	EPA 9012B	Sediment	Cyanide (total)	1	0.21	mg/kg dry	0.20		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-28	DS-11-46	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<910	mg/kg dry	910		08/17/11	08/17/11	08/31/11	09/01/11				
T11H197-28	DS-11-46	PLUMB	Sediment	Chemical Oxygen Demand	1	58000	mg/kg dry	620		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-28	DS-11-46	PLUMB	Sediment	Volatile Solids	1	10	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-28	DS-11-46	USACE, In-Place Density	Sediment	In-Place Density	1	1.7	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-28	DS-11-46	WALKLEY BLACK	Sediment	Total Organic Carbon	1	30000	mg/kg dry	1500		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-29	DS-11-47	ASTM D2974-87	Sediment	% Solids	1	38	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-29	DS-11-47	ASTM D854-91	Sediment	Specific Gravity	1	2.7				08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-29	DS-11-47	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	52	mg/kg dry	1.0		08/17/11	08/17/11	08/29/11	08/30/11				
T11H197-29	DS-11-47	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	1100	mg/kg dry	15		08/17/11	08/17/11	08/26/11	08/29/11				
T11H197-29	DS-11-47	EPA 6010B	Sediment	Iron	10	31000	mg/kg dry	28		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-29	DS-11-47	EPA 6010B	Sediment	Phosphorus	1	780	mg/kg dry	5.9		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-29	DS-11-47	EPA 6020	Sediment	Arsenic	10	3.2	mg/kg dry	0.11		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-29	DS-11-47	EPA 6020	Sediment	Barium	100	140	mg/kg dry	2.8		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-29	DS-11-47	EPA 6020	Sediment	Cadmium	10	0.34	mg/kg dry	0.20		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-29	DS-11-47	EPA 6020	Sediment	Chromium	10	34	mg/kg dry	2.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-29	DS-11-47	EPA 6020	Sediment	Copper	10	19	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-29	DS-11-47	EPA 6020	Sediment	Lead	10	19	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-29	DS-11-47	EPA 6020	Sediment	Manganese	200	820	mg/kg dry	3.8		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-29	DS-11-47	EPA 6020	Sediment	Nickel	10	21	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-29	DS-11-47	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-29	DS-11-47	EPA 6020	Sediment	Silver	10	0.29	mg/kg dry	0.10		08/17/11	08/17/11	08/19/11	09/12/11				
T11H197-29	DS-11-47	EPA 6020	Sediment	Zinc	100	110	mg/kg dry	9.4		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-29	DS-11-47	EPA 7471A	Sediment	Mercury	1	0.14	mg/kg dry	0.050		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-29	DS-11-47	EPA 8082	Sediment	Aroclor-1016	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-29	DS-11-47	EPA 8082	Sediment	Aroclor-1221	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-29	DS-11-47	EPA 8082	Sediment	Aroclor-1232	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-29	DS-11-47	EPA 8082	Sediment	Aroclor-1242	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-29	DS-11-47	EPA 8082	Sediment	Aroclor-1248	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-29	DS-11-47	EPA 8082	Sediment	Aroclor-1254	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-29	DS-11-47	EPA 8082	Sediment	Aroclor-1260	1	<180	ug/kg dry	180		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-29	DS-11-47	EPA 8082	Sediment	Tetrachloro-m-xylene	1	33	%		303	08/17/11	08/17/11	08/23/11	08/25/11	33	%	40	113
T11H197-29	DS-11-47	EPA 8082	Sediment	Decachlorobiphenyl	1	35	%			08/17/11	08/17/11	08/23/11	08/25/11	35	%	32	111
T11H197-29	DS-11-47	EPA 8270C	Sediment	Naphthalene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	2-Methylnaphthalene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Acenaphthylene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Acenaphthene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Fluorene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Anthracene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Pyrene	1	<430	ug/kg dry	430		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-29	DS-11-47	EPA 8270C	Sediment	Nitrobenzene-d5	1	67	%			08/17/11	08/17/11	08/22/11	08/26/11	67	%	36	98
T11H197-29	DS-11-47	EPA 8270C	Sediment	2-Fluorobiphenyl	1	62	%			08/17/11	08/17/11	08/22/11	08/26/11	62	%	44	105
T11H197-29	DS-11-47	EPA 8270C	Sediment	Terphenyl-d14	1	68	%			08/17/11	08/17/11	08/22/11	08/26/11	68	%	46	109
T11H197-29	DS-11-47	EPA 9012B	Sediment	Cyanide (total)	1	0.24	mg/kg dry	0.20		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-29	DS-11-47	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1100	mg/kg dry	1100		08/17/11	08/17/11	08/31/11	09/01/11				
T11H197-29	DS-11-47	PLUMB	Sediment	Chemical Oxygen Demand	1	77000	mg/kg dry	750		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-29	DS-11-47	PLUMB	Sediment	Volatile Solids	1	8.5	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-29	DS-11-47	USACE, In-Place Density	Sediment	In-Place Density	1	1.6	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-29	DS-11-47	WALKLEY BLACK	Sediment	Total Organic Carbon	1	44000	mg/kg dry	1800		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-30	DS-11-48	ASTM D2974-87	Sediment	% Solids	1	40	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-30	DS-11-48	ASTM D854-91	Sediment	Specific Gravity	1	2.2				08/17/11	08/17/11	08/22/11	08/24/11				
T11H197-30	DS-11-48	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	44	mg/kg dry	1.0		08/17/11	08/17/11	08/29/11	08/30/11				
T11H197-30	DS-11-48	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	2600	mg/kg dry	150		08/17/11	08/17/11	08/26/11	08/29/11				
T11H197-30	DS-11-48	EPA 6010B	Sediment	Iron	10	28000	mg/kg dry	29		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-30	DS-11-48	EPA 6010B	Sediment	Phosphorus	1	730	mg/kg dry	6.1		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-30	DS-11-48	EPA 6020	Sediment	Arsenic	10	3.1	mg/kg dry	0.12		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-30	DS-11-48	EPA 6020	Sediment	Barium	100	130	mg/kg dry	2.9		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-30	DS-11-48	EPA 6020	Sediment	Cadmium	10	0.35	mg/kg dry	0.20		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-30	DS-11-48	EPA 6020	Sediment	Chromium	10	34	mg/kg dry	2.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-30	DS-11-48	EPA 6020	Sediment	Copper	10	19	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-30	DS-11-48	EPA 6020	Sediment	Lead	10	20	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-30	DS-11-48	EPA 6020	Sediment	Manganese	200	800	mg/kg dry	3.9		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-30	DS-11-48	EPA 6020	Sediment	Nickel	10	21	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-30	DS-11-48	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-30	DS-11-48	EPA 6020	Sediment	Silver	10	0.27	mg/kg dry	0.10		08/17/11	08/17/11	08/19/11	09/12/11				
T11H197-30	DS-11-48	EPA 6020	Sediment	Zinc	100	110	mg/kg dry	9.7		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-30	DS-11-48	EPA 7471A	Sediment	Mercury	1	0.14	mg/kg dry	0.050		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-30	DS-11-48	EPA 8082	Sediment	Aroclor-1016	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-30	DS-11-48	EPA 8082	Sediment	Aroclor-1221	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-30	DS-11-48	EPA 8082	Sediment	Aroclor-1232	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-30	DS-11-48	EPA 8082	Sediment	Aroclor-1242	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-30	DS-11-48	EPA 8082	Sediment	Aroclor-1248	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-30	DS-11-48	EPA 8082	Sediment	Aroclor-1254	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-30	DS-11-48	EPA 8082	Sediment	Aroclor-1260	1	<170	ug/kg dry	170		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-30	DS-11-48	EPA 8082	Sediment	Tetrachloro-m-xylene	1	39	%		303	08/17/11	08/17/11	08/23/11	08/25/11	39	%	40	113
T11H197-30	DS-11-48	EPA 8082	Sediment	Decachlorobiphenyl	1	47	%			08/17/11	08/17/11	08/23/11	08/25/11	47	%	32	111
T11H197-30	DS-11-48	EPA 8270C	Sediment	Naphthalene	1	<410	ug/kg dry	410		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	2-Methylnaphthalene	1	<410	ug/kg dry	410		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Acenaphthylene	1	<410	ug/kg dry	410		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Acenaphthene	1	<410	ug/kg dry	410		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Fluorene	1	<410	ug/kg dry	410		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Anthracene	1	<410	ug/kg dry	410		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Pyrene	1	<410	ug/kg dry	410		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-30	DS-11-48	EPA 8270C	Sediment	Nitrobenzene-d5	1	67	%			08/17/11	08/17/11	08/22/11	08/26/11	67	%	36	98
T11H197-30	DS-11-48	EPA 8270C	Sediment	2-Fluorobiphenyl	1	59	%			08/17/11	08/17/11	08/22/11	08/26/11	59	%	44	105
T11H197-30	DS-11-48	EPA 8270C	Sediment	Terphenyl-d14	1	66	%			08/17/11	08/17/11	08/22/11	08/26/11	66	%	46	109
T11H197-30	DS-11-48	EPA 9012B	Sediment	Cyanide (total)	1	0.22	mg/kg dry	0.20		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-30	DS-11-48	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1000	mg/kg dry	1000		08/17/11	08/17/11	08/31/11	09/01/11				
T11H197-30	DS-11-48	PLUMB	Sediment	Chemical Oxygen Demand	1	78000	mg/kg dry	710		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-30	DS-11-48	PLUMB	Sediment	Volatile Solids	1	8.6	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-30	DS-11-48	USACE, In-Place Density	Sediment	In-Place Density	1	1.7	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-30	DS-11-48	WALKLEY BLACK	Sediment	Total Organic Carbon	1	32000	mg/kg dry	1700		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-31	DS-11-21	ASTM D2974-87	Sediment	% Solids	1	44	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-31	DS-11-21	ASTM D854-91	Sediment	Specific Gravity	1	2.4				08/17/11	08/17/11	08/24/11	08/24/11				
T11H197-31	DS-11-21	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	83	mg/kg dry	1.0		08/17/11	08/17/11	08/29/11	08/30/11				
T11H197-31	DS-11-21	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	1100	mg/kg dry	15		08/17/11	08/17/11	08/26/11	08/29/11				
T11H197-31	DS-11-21	EPA 6010B	Sediment	Iron	1	21000	mg/kg dry	5.0		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-31	DS-11-21	EPA 6010B	Sediment	Phosphorus	1	510	mg/kg dry	6.3		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-31	DS-11-21	EPA 6020	Sediment	Arsenic	10	2.6	mg/kg dry	0.12		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-31	DS-11-21	EPA 6020	Sediment	Barium	100	82	mg/kg dry	3.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-31	DS-11-21	EPA 6020	Sediment	Cadmium	10	0.23	mg/kg dry	0.20		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-31	DS-11-21	EPA 6020	Sediment	Chromium	10	23	mg/kg dry	2.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-31	DS-11-21	EPA 6020	Sediment	Copper	10	14	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-31	DS-11-21	EPA 6020	Sediment	Lead	10	15	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-31	DS-11-21	EPA 6020	Sediment	Manganese	200	670	mg/kg dry	4.0		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-31	DS-11-21	EPA 6020	Sediment	Nickel	10	16	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-31	DS-11-21	EPA 6020	Sediment	Selenium	10	<0.40	mg/kg dry	0.40		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-31	DS-11-21	EPA 6020	Sediment	Silver	10	0.29	mg/kg dry	0.10		08/17/11	08/17/11	08/19/11	09/12/11				
T11H197-31	DS-11-21	EPA 6020	Sediment	Zinc	100	78	mg/kg dry	9.9		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-31	DS-11-21	EPA 7471A	Sediment	Mercury	1	0.10	mg/kg dry	0.050		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-31	DS-11-21	EPA 8082	Sediment	Aroclor-1016	1	<150	ug/kg dry	150		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-31	DS-11-21	EPA 8082	Sediment	Aroclor-1221	1	<150	ug/kg dry	150		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-31	DS-11-21	EPA 8082	Sediment	Aroclor-1232	1	<150	ug/kg dry	150		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-31	DS-11-21	EPA 8082	Sediment	Aroclor-1242	1	<150	ug/kg dry	150		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-31	DS-11-21	EPA 8082	Sediment	Aroclor-1248	1	<150	ug/kg dry	150		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-31	DS-11-21	EPA 8082	Sediment	Aroclor-1254	1	<150	ug/kg dry	150		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-31	DS-11-21	EPA 8082	Sediment	Aroclor-1260	1	<150	ug/kg dry	150		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-31	DS-11-21	EPA 8082	Sediment	Tetrachloro-m-xylene	1	45	%			08/17/11	08/17/11	08/23/11	08/25/11	45	%	40	113
T11H197-31	DS-11-21	EPA 8082	Sediment	Decachlorobiphenyl	1	57	%			08/17/11	08/17/11	08/23/11	08/25/11	57	%	32	111
T11H197-31	DS-11-21	EPA 8270C	Sediment	Naphthalene	1	<370	ug/kg dry	370		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	2-Methylnaphthalene	1	<370	ug/kg dry	370		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Acenaphthylene	1	<370	ug/kg dry	370		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Acenaphthene	1	<370	ug/kg dry	370		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Fluorene	1	<370	ug/kg dry	370		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Anthracene	1	<370	ug/kg dry	370		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Pyrene	1	<370	ug/kg dry	370		08/17/11	08/17/11	08/22/11	08/26/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-31	DS-11-21	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-31	DS-11-21	EPA 8270C	Sediment	Nitrobenzene-d5	1	56	%			08/17/11	08/17/11	08/22/11	08/26/11	56	%	36	98
T11H197-31	DS-11-21	EPA 8270C	Sediment	2-Fluorobiphenyl	1	50	%			08/17/11	08/17/11	08/22/11	08/26/11	50	%	44	105
T11H197-31	DS-11-21	EPA 8270C	Sediment	Terphenyl-d14	1	59	%			08/17/11	08/17/11	08/22/11	08/26/11	59	%	46	109
T11H197-31	DS-11-21	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-31	DS-11-21	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<950	mg/kg dry	950		08/17/11	08/17/11	08/31/11	09/01/11				
T11H197-31	DS-11-21	PLUMB	Sediment	Chemical Oxygen Demand	1	33000	mg/kg dry	650		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-31	DS-11-21	PLUMB	Sediment	Volatile Solids	1	5.4	% by Wt.	0.10		08/17/11	08/17/11	08/23/11	08/29/11				
T11H197-31	DS-11-21	USACE, In-Place Density	Sediment	In-Place Density	1	1.7	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-31	DS-11-21	WALKLEY BLACK	Sediment	Total Organic Carbon	1	20000	mg/kg dry	1500		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-32	DS-11-22	ASTM D2974-87	Sediment	% Solids	1	52	% by Wt.	0.10		08/17/11	08/17/11	08/18/11	08/19/11				
T11H197-32	DS-11-22	ASTM D854-91	Sediment	Specific Gravity	1	2.6				08/17/11	08/17/11	08/24/11	08/24/11				
T11H197-32	DS-11-22	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	170	mg/kg dry	1.0		08/17/11	08/17/11	08/29/11	08/30/11				
T11H197-32	DS-11-22	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	2	1100	mg/kg dry	30		08/17/11	08/17/11	08/26/11	08/29/11				
T11H197-32	DS-11-22	EPA 6010B	Sediment	Iron	1	21000	mg/kg dry	5.0		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-32	DS-11-22	EPA 6010B	Sediment	Phosphorus	1	500	mg/kg dry	5.9		08/17/11	08/17/11	08/19/11	08/22/11				
T11H197-32	DS-11-22	EPA 6020	Sediment	Arsenic	10	2.8	mg/kg dry	0.11		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-32	DS-11-22	EPA 6020	Sediment	Barium	100	77	mg/kg dry	2.8		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-32	DS-11-22	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-32	DS-11-22	EPA 6020	Sediment	Chromium	10	23	mg/kg dry	2.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-32	DS-11-22	EPA 6020	Sediment	Copper	10	14	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-32	DS-11-22	EPA 6020	Sediment	Lead	10	14	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-32	DS-11-22	EPA 6020	Sediment	Manganese	200	830	mg/kg dry	3.7		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-32	DS-11-22	EPA 6020	Sediment	Nickel	10	16	mg/kg dry	1.0		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-32	DS-11-22	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/17/11	08/17/11	08/19/11	09/07/11				
T11H197-32	DS-11-22	EPA 6020	Sediment	Silver	10	0.29	mg/kg dry	0.10		08/17/11	08/17/11	08/19/11	09/12/11				
T11H197-32	DS-11-22	EPA 6020	Sediment	Zinc	100	65	mg/kg dry	9.3		08/17/11	08/17/11	08/19/11	09/08/11				
T11H197-32	DS-11-22	EPA 7471A	Sediment	Mercury	1	0.10	mg/kg dry	0.050		08/17/11	08/17/11	08/19/11	08/24/11				
T11H197-32	DS-11-22	EPA 8082	Sediment	Aroclor-1016	1	<130	ug/kg dry	130		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-32	DS-11-22	EPA 8082	Sediment	Aroclor-1221	1	<130	ug/kg dry	130		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-32	DS-11-22	EPA 8082	Sediment	Aroclor-1232	1	<130	ug/kg dry	130		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-32	DS-11-22	EPA 8082	Sediment	Aroclor-1242	1	<130	ug/kg dry	130		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-32	DS-11-22	EPA 8082	Sediment	Aroclor-1248	1	<130	ug/kg dry	130		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-32	DS-11-22	EPA 8082	Sediment	Aroclor-1254	1	<130	ug/kg dry	130		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-32	DS-11-22	EPA 8082	Sediment	Aroclor-1260	1	<130	ug/kg dry	130		08/17/11	08/17/11	08/23/11	08/25/11				
T11H197-32	DS-11-22	EPA 8082	Sediment	Tetrachloro-m-xylene	1	54	%			08/17/11	08/17/11	08/23/11	08/25/11	54	%	40	113
T11H197-32	DS-11-22	EPA 8082	Sediment	Decachlorobiphenyl	1	74	%			08/17/11	08/17/11	08/23/11	08/25/11	74	%	32	111
T11H197-32	DS-11-22	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/17/11	08/17/11	08/22/11	08/26/11				
T11H197-32	DS-11-22	EPA 8270C	Sediment	Nitrobenzene-d5	1	51	%			08/17/11	08/17/11	08/22/11	08/26/11	51	%	36	98
T11H197-32	DS-11-22	EPA 8270C	Sediment	2-Fluorobiphenyl	1	47	%			08/17/11	08/17/11	08/22/11	08/26/11	47	%	44	105
T11H197-32	DS-11-22	EPA 8270C	Sediment	Terphenyl-d14	1	57	%			08/17/11	08/17/11	08/22/11	08/26/11	57	%	46	109
T11H197-32	DS-11-22	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/17/11	08/17/11	08/22/11	08/23/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-32	DS-11-22	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<800	mg/kg dry	800		08/17/11	08/17/11	08/31/11	09/01/11				
T11H197-32	DS-11-22	PLUMB	Sediment	Chemical Oxygen Demand	1	61000	mg/kg dry	550		08/17/11	08/17/11	08/22/11	08/25/11				
T11H197-32	DS-11-22	PLUMB	Sediment	Volatile Solids	1	4.3	% by Wt.	0.10		08/17/11	08/17/11	08/26/11	08/27/11				
T11H197-32	DS-11-22	USACE, In-Place Density	Sediment	In-Place Density	1	1.7	g/mL			08/17/11	08/17/11	08/18/11	08/18/11				
T11H197-32	DS-11-22	WALKLEY BLACK	Sediment	Total Organic Carbon	1	23000	mg/kg dry	1300		08/17/11	08/17/11	08/22/11	08/23/11				
T11H197-33	DS-11-36	ASTM D2974-87	Sediment	% Solids	1	66	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-33	DS-11-36	ASTM D854-91	Sediment	Specific Gravity	1	2.5				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-33	DS-11-36	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	8.3	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/30/11				
T11H197-33	DS-11-36	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	720	mg/kg dry	130		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-33	DS-11-36	EPA 6010B	Sediment	Iron	1	17000	mg/kg dry	5.0		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-33	DS-11-36	EPA 6010B	Sediment	Phosphorus	1	480	mg/kg dry	5.8		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-33	DS-11-36	EPA 6020	Sediment	Arsenic	10	2.6	mg/kg dry	0.11		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-33	DS-11-36	EPA 6020	Sediment	Barium	100	54	mg/kg dry	2.8		08/18/11	08/17/11	09/02/11	09/08/11				
T11H197-33	DS-11-36	EPA 6020	Sediment	Cadmium	10	0.29	mg/kg dry	0.20		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-33	DS-11-36	EPA 6020	Sediment	Chromium	10	18	mg/kg dry	2.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-33	DS-11-36	EPA 6020	Sediment	Copper	10	17	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-33	DS-11-36	EPA 6020	Sediment	Lead	10	9.3	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-33	DS-11-36	EPA 6020	Sediment	Manganese	100	300	mg/kg dry	1.8		08/18/11	08/17/11	09/02/11	09/08/11				
T11H197-33	DS-11-36	EPA 6020	Sediment	Nickel	10	13	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-33	DS-11-36	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-33	DS-11-36	EPA 6020	Sediment	Silver	10	0.12	mg/kg dry	0.10		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-33	DS-11-36	EPA 6020	Sediment	Zinc	10	39	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-33	DS-11-36	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-33	DS-11-36	EPA 8082	Sediment	Aroclor-1016	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-33	DS-11-36	EPA 8082	Sediment	Aroclor-1221	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-33	DS-11-36	EPA 8082	Sediment	Aroclor-1232	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-33	DS-11-36	EPA 8082	Sediment	Aroclor-1242	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-33	DS-11-36	EPA 8082	Sediment	Aroclor-1248	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-33	DS-11-36	EPA 8082	Sediment	Aroclor-1254	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-33	DS-11-36	EPA 8082	Sediment	Aroclor-1260	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-33	DS-11-36	EPA 8082	Sediment	Tetrachloro-m-xylene	1	52	%			08/18/11	08/17/11	08/23/11	08/25/11	52	%	40	113
T11H197-33	DS-11-36	EPA 8082	Sediment	Decachlorobiphenyl	1	74	%			08/18/11	08/17/11	08/23/11	08/25/11	74	%	32	111
T11H197-33	DS-11-36	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-33	DS-11-36	EPA 8270C	Sediment	Nitrobenzene-d5	1	61	%			08/18/11	08/17/11	08/22/11	08/26/11	61	%	36	98
T11H197-33	DS-11-36	EPA 8270C	Sediment	2-Fluorobiphenyl	1	54	%			08/18/11	08/17/11	08/22/11	08/26/11	54	%	44	105
T11H197-33	DS-11-36	EPA 8270C	Sediment	Terphenyl-d14	1	59	%			08/18/11	08/17/11	08/22/11	08/26/11	59	%	46	109
T11H197-33	DS-11-36	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-33	DS-11-36	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<630	mg/kg dry	630		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-33	DS-11-36	PLUMB	Sediment	Chemical Oxygen Demand	1	22000	mg/kg dry	430		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-33	DS-11-36	PLUMB	Sediment	Volatile Solids	1	2.2	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	08/27/11				
T11H197-33	DS-11-36	USACE, In-Place Density	Sediment	In-Place Density	1	1.1	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-33	DS-11-36	WALKLEY BLACK	Sediment	Total Organic Carbon	1	19000	mg/kg dry	1000		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-34	DS-11-37	ASTM D2974-87	Sediment	% Solids	1	68	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-34	DS-11-37	ASTM D854-91	Sediment	Specific Gravity	1	2.4				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-34	DS-11-37	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	1.9	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/30/11				
T11H197-34	DS-11-37	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	170	mg/kg dry	15		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-34	DS-11-37	EPA 6010B	Sediment	Iron	1	14000	mg/kg dry	5.0		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-34	DS-11-37	EPA 6010B	Sediment	Phosphorus	1	430	mg/kg dry	5.8		08/18/11	08/17/11	09/02/11	09/06/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-34	DS-11-37	EPA 6020	Sediment	Arsenic	10	2.0	mg/kg dry	0.11		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-34	DS-11-37	EPA 6020	Sediment	Barium	10	34	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-34	DS-11-37	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-34	DS-11-37	EPA 6020	Sediment	Chromium	10	15	mg/kg dry	2.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-34	DS-11-37	EPA 6020	Sediment	Copper	10	11	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-34	DS-11-37	EPA 6020	Sediment	Lead	10	7.1	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-34	DS-11-37	EPA 6020	Sediment	Manganese	100	240	mg/kg dry	1.8		08/18/11	08/17/11	09/02/11	09/08/11				
T11H197-34	DS-11-37	EPA 6020	Sediment	Nickel	10	10	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-34	DS-11-37	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-34	DS-11-37	EPA 6020	Sediment	Silver	10	0.14	mg/kg dry	0.10		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-34	DS-11-37	EPA 6020	Sediment	Zinc	10	29	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-34	DS-11-37	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-34	DS-11-37	EPA 8082	Sediment	Aroclor-1016	1	<99	ug/kg dry	99		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-34	DS-11-37	EPA 8082	Sediment	Aroclor-1221	1	<99	ug/kg dry	99		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-34	DS-11-37	EPA 8082	Sediment	Aroclor-1232	1	<99	ug/kg dry	99		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-34	DS-11-37	EPA 8082	Sediment	Aroclor-1242	1	<99	ug/kg dry	99		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-34	DS-11-37	EPA 8082	Sediment	Aroclor-1248	1	<99	ug/kg dry	99		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-34	DS-11-37	EPA 8082	Sediment	Aroclor-1254	1	<99	ug/kg dry	99		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-34	DS-11-37	EPA 8082	Sediment	Aroclor-1260	1	<99	ug/kg dry	99		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-34	DS-11-37	EPA 8082	Sediment	Tetrachloro-m-xylene	1	64	%			08/18/11	08/17/11	08/23/11	08/25/11	64	%	40	113
T11H197-34	DS-11-37	EPA 8082	Sediment	Decachlorobiphenyl	1	78	%			08/18/11	08/17/11	08/23/11	08/25/11	78	%	32	111
T11H197-34	DS-11-37	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-34	DS-11-37	EPA 8270C	Sediment	Nitrobenzene-d5	1	57	%			08/18/11	08/17/11	08/22/11	08/26/11	57	%	36	98
T11H197-34	DS-11-37	EPA 8270C	Sediment	2-Fluorobiphenyl	1	49	%			08/18/11	08/17/11	08/22/11	08/26/11	49	%	44	105
T11H197-34	DS-11-37	EPA 8270C	Sediment	Terphenyl-d14	1	49	%			08/18/11	08/17/11	08/22/11	08/26/11	49	%	46	109
T11H197-34	DS-11-37	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-34	DS-11-37	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<620	mg/kg dry	620		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-34	DS-11-37	PLUMB	Sediment	Chemical Oxygen Demand	1	10000	mg/kg dry	420		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-34	DS-11-37	PLUMB	Sediment	Volatile Solids	1	1.5	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	08/27/11				
T11H197-34	DS-11-37	USACE, In-Place Density	Sediment	In-Place Density	1	1.2	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-34	DS-11-37	WALKLEY BLACK	Sediment	Total Organic Carbon	1	9100	mg/kg dry	1000		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-35	DS-11-38	ASTM D2974-87	Sediment	% Solids	1	66	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-35	DS-11-38	ASTM D854-91	Sediment	Specific Gravity	1	2.2				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-35	DS-11-38	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	6.4	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/30/11				
T11H197-35	DS-11-38	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	340	mg/kg dry	15		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-35	DS-11-38	EPA 6010B	Sediment	Iron	1	14000	mg/kg dry	5.0		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-35	DS-11-38	EPA 6010B	Sediment	Phosphorus	1	400	mg/kg dry	5.7		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-35	DS-11-38	EPA 6020	Sediment	Arsenic	10	2.1	mg/kg dry	0.11		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-35	DS-11-38	EPA 6020	Sediment	Barium	10	38	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-35	DS-11-38	EPA 6020	Sediment	Cadmium	10	0.27	mg/kg dry	0.20		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-35	DS-11-38	EPA 6020	Sediment	Chromium	10	15	mg/kg dry	2.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-35	DS-11-38	EPA 6020	Sediment	Copper	10	14	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-35	DS-11-38	EPA 6020	Sediment	Lead	10	9.4	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-35	DS-11-38	EPA 6020	Sediment	Manganese	100	250	mg/kg dry	1.8		08/18/11	08/17/11	09/02/11	09/08/11				
T11H197-35	DS-11-38	EPA 6020	Sediment	Nickel	10	11	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-35	DS-11-38	EPA 6020	Sediment	Selenium	10	<0.36	mg/kg dry	0.36		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-35	DS-11-38	EPA 6020	Sediment	Silver	10	0.10	mg/kg dry	0.10		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-35	DS-11-38	EPA 6020	Sediment	Zinc	10	33	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-35	DS-11-38	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/02/11	09/06/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-35	DS-11-38	EPA 8082	Sediment	Aroclor-1016	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-35	DS-11-38	EPA 8082	Sediment	Aroclor-1221	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-35	DS-11-38	EPA 8082	Sediment	Aroclor-1232	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-35	DS-11-38	EPA 8082	Sediment	Aroclor-1242	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-35	DS-11-38	EPA 8082	Sediment	Aroclor-1248	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-35	DS-11-38	EPA 8082	Sediment	Aroclor-1254	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-35	DS-11-38	EPA 8082	Sediment	Aroclor-1260	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-35	DS-11-38	EPA 8082	Sediment	Tetrachloro-m-xylene	1	54	%			08/18/11	08/17/11	08/23/11	08/25/11	54	%	40	113
T11H197-35	DS-11-38	EPA 8082	Sediment	Decachlorobiphenyl	1	67	%			08/18/11	08/17/11	08/23/11	08/25/11	67	%	32	111
T11H197-35	DS-11-38	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-35	DS-11-38	EPA 8270C	Sediment	Nitrobenzene-d5	1	65	%			08/18/11	08/17/11	08/22/11	08/26/11	65	%	36	98
T11H197-35	DS-11-38	EPA 8270C	Sediment	2-Fluorobiphenyl	1	58	%			08/18/11	08/17/11	08/22/11	08/26/11	58	%	44	105
T11H197-35	DS-11-38	EPA 8270C	Sediment	Terphenyl-d14	1	64	%			08/18/11	08/17/11	08/22/11	08/26/11	64	%	46	109
T11H197-35	DS-11-38	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-35	DS-11-38	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<630	mg/kg dry	630		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-35	DS-11-38	PLUMB	Sediment	Chemical Oxygen Demand	1	27000	mg/kg dry	430		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-35	DS-11-38	PLUMB	Sediment	Volatile Solids	1	2.8	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	08/27/11				
T11H197-35	DS-11-38	USACE, In-Place Density	Sediment	In-Place Density	1	1.4	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-35	DS-11-38	WALKLEY BLACK	Sediment	Total Organic Carbon	1	15000	mg/kg dry	1000		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-36	DS-11-39	ASTM D2974-87	Sediment	% Solids	1	49	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-36	DS-11-39	ASTM D854-91	Sediment	Specific Gravity	1	2.0				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-36	DS-11-39	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	<1.0	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/30/11				
T11H197-36	DS-11-39	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	300	mg/kg dry	15		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-36	DS-11-39	EPA 6010B	Sediment	Iron	1	14000	mg/kg dry	5.0		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-36	DS-11-39	EPA 6010B	Sediment	Phosphorus	1	420	mg/kg dry	5.9		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-36	DS-11-39	EPA 6020	Sediment	Arsenic	10	2.1	mg/kg dry	0.11		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-36	DS-11-39	EPA 6020	Sediment	Barium	10	30	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-36	DS-11-39	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-36	DS-11-39	EPA 6020	Sediment	Chromium	10	14	mg/kg dry	2.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-36	DS-11-39	EPA 6020	Sediment	Copper	10	9.0	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-36	DS-11-39	EPA 6020	Sediment	Lead	10	5.7	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-36	DS-11-39	EPA 6020	Sediment	Manganese	100	330	mg/kg dry	1.9		08/18/11	08/17/11	09/02/11	09/08/11				
T11H197-36	DS-11-39	EPA 6020	Sediment	Nickel	10	9.4	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-36	DS-11-39	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-36	DS-11-39	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-36	DS-11-39	EPA 6020	Sediment	Zinc	10	25	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-36	DS-11-39	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-36	DS-11-39	EPA 8082	Sediment	Aroclor-1016	1	<140	ug/kg dry	140		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-36	DS-11-39	EPA 8082	Sediment	Aroclor-1221	1	<140	ug/kg dry	140		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-36	DS-11-39	EPA 8082	Sediment	Aroclor-1232	1	<140	ug/kg dry	140		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-36	DS-11-39	EPA 8082	Sediment	Aroclor-1242	1	<140	ug/kg dry	140		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-36	DS-11-39	EPA 8082	Sediment	Aroclor-1248	1	<140	ug/kg dry	140		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-36	DS-11-39	EPA 8082	Sediment	Aroclor-1254	1	<140	ug/kg dry	140		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-36	DS-11-39	EPA 8082	Sediment	Aroclor-1260	1	<140	ug/kg dry	140		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-36	DS-11-39	EPA 8082	Sediment	Tetrachloro-m-xylene	1	40	%			08/18/11	08/17/11	08/23/11	08/25/11	40	%	40	113
T11H197-36	DS-11-39	EPA 8082	Sediment	Decachlorobiphenyl	1	51	%			08/18/11	08/17/11	08/23/11	08/25/11	51	%	32	111
T11H197-36	DS-11-39	EPA 8270C	Sediment	Naphthalene	1	<340	ug/kg dry	340		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	2-Methylnaphthalene	1	<340	ug/kg dry	340		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Acenaphthylene	1	<340	ug/kg dry	340		08/18/11	08/17/11	08/22/11	08/26/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-36	DS-11-39	EPA 8270C	Sediment	Acenaphthene	1	<340	ug/kg dry	340		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Fluorene	1	<340	ug/kg dry	340		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Anthracene	1	<340	ug/kg dry	340		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Pyrene	1	<340	ug/kg dry	340		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-36	DS-11-39	EPA 8270C	Sediment	Nitrobenzene-d5	1	64	%			08/18/11	08/17/11	08/22/11	08/26/11	64	%	36	98
T11H197-36	DS-11-39	EPA 8270C	Sediment	2-Fluorobiphenyl	1	55	%			08/18/11	08/17/11	08/22/11	08/26/11	55	%	44	105
T11H197-36	DS-11-39	EPA 8270C	Sediment	Terphenyl-d14	1	61	%			08/18/11	08/17/11	08/22/11	08/26/11	61	%	46	109
T11H197-36	DS-11-39	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-36	DS-11-39	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<850	mg/kg dry	850		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-36	DS-11-39	PLUMB	Sediment	Chemical Oxygen Demand	1	13000	mg/kg dry	580		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-36	DS-11-39	PLUMB	Sediment	Volatile Solids	1	1.6	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	08/27/11				
T11H197-36	DS-11-39	USACE, In-Place Density	Sediment	In-Place Density	1	1.4	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-36	DS-11-39	WALKLEY BLACK	Sediment	Total Organic Carbon	1	4500	mg/kg dry	1400		08/18/11	08/17/11	08/24/11	08/25/11				
T11H197-37	DS-11-40	ASTM D2974-87	Sediment	% Solids	1	58	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-37	DS-11-40	ASTM D854-91	Sediment	Specific Gravity	1	2.1				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-37	DS-11-40	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	<1.0	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/30/11				
T11H197-37	DS-11-40	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	460	mg/kg dry	15		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-37	DS-11-40	EPA 6010B	Sediment	Iron	1	16000	mg/kg dry	5.0		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-37	DS-11-40	EPA 6010B	Sediment	Phosphorus	1	450	mg/kg dry	5.8		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-37	DS-11-40	EPA 6020	Sediment	Arsenic	10	2.0	mg/kg dry	0.11		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-37	DS-11-40	EPA 6020	Sediment	Barium	10	40	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-37	DS-11-40	EPA 6020	Sediment	Cadmium	10	0.23	mg/kg dry	0.20		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-37	DS-11-40	EPA 6020	Sediment	Chromium	10	16	mg/kg dry	2.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-37	DS-11-40	EPA 6020	Sediment	Copper	10	13	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-37	DS-11-40	EPA 6020	Sediment	Lead	10	9.2	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-37	DS-11-40	EPA 6020	Sediment	Manganese	100	240	mg/kg dry	1.8		08/18/11	08/17/11	09/02/11	09/08/11				
T11H197-37	DS-11-40	EPA 6020	Sediment	Nickel	10	12	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-37	DS-11-40	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-37	DS-11-40	EPA 6020	Sediment	Silver	10	0.11	mg/kg dry	0.10		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-37	DS-11-40	EPA 6020	Sediment	Zinc	10	32	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-37	DS-11-40	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-37	DS-11-40	EPA 8082	Sediment	Aroclor-1016	1	<120	ug/kg dry	120		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-37	DS-11-40	EPA 8082	Sediment	Aroclor-1221	1	<120	ug/kg dry	120		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-37	DS-11-40	EPA 8082	Sediment	Aroclor-1232	1	<120	ug/kg dry	120		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-37	DS-11-40	EPA 8082	Sediment	Aroclor-1242	1	<120	ug/kg dry	120		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-37	DS-11-40	EPA 8082	Sediment	Aroclor-1248	1	<120	ug/kg dry	120		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-37	DS-11-40	EPA 8082	Sediment	Aroclor-1254	1	<120	ug/kg dry	120		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-37	DS-11-40	EPA 8082	Sediment	Aroclor-1260	1	<120	ug/kg dry	120		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-37	DS-11-40	EPA 8082	Sediment	Tetrachloro-m-xylene	1	47	%			08/18/11	08/17/11	08/23/11	08/25/11	47	%	40	113
T11H197-37	DS-11-40	EPA 8082	Sediment	Decachlorobiphenyl	1	63	%			08/18/11	08/17/11	08/23/11	08/25/11	63	%	32	111
T11H197-37	DS-11-40	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-37	DS-11-40	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-37	DS-11-40	EPA 8270C	Sediment	Nitrobenzene-d5	1	64	%			08/18/11	08/17/11	08/22/11	08/26/11	64	%	36	98
T11H197-37	DS-11-40	EPA 8270C	Sediment	2-Fluorobiphenyl	1	57	%			08/18/11	08/17/11	08/22/11	08/26/11	57	%	44	105
T11H197-37	DS-11-40	EPA 8270C	Sediment	Terphenyl-d14	1	56	%			08/18/11	08/17/11	08/22/11	08/26/11	56	%	46	109
T11H197-37	DS-11-40	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-37	DS-11-40	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<720	mg/kg dry	720		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-37	DS-11-40	PLUMB	Sediment	Chemical Oxygen Demand	1	34000	mg/kg dry	490		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-37	DS-11-40	PLUMB	Sediment	Volatile Solids	1	3.4	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	08/27/11				
T11H197-37	DS-11-40	USACE, In-Place Density	Sediment	In-Place Density	1	1.5	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-37	DS-11-40	WALKLEY BLACK	Sediment	Total Organic Carbon	1	17000	mg/kg dry	1200		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-38	DS-11-MO PU	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	3.7	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/30/11				
T11H197-38	DS-11-MO PU	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	170	mg/kg dry	15		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-38	DS-11-MO PU	EPA 6010B	Sediment	Phosphorus	1	480	mg/kg dry	6.1		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-39	DS-11-31	ASTM D2974-87	Sediment	% Solids	1	67	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-39	DS-11-31	ASTM D854-91	Sediment	Specific Gravity	1	2.2				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-39	DS-11-31	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	3.9	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/30/11				
T11H197-39	DS-11-31	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	200	mg/kg dry	15		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-39	DS-11-31	EPA 6010B	Sediment	Iron	1	15000	mg/kg dry	5.0		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-39	DS-11-31	EPA 6010B	Sediment	Phosphorus	1	340	mg/kg dry	6.0		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-39	DS-11-31	EPA 6020	Sediment	Arsenic	10	1.8	mg/kg dry	0.11		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-39	DS-11-31	EPA 6020	Sediment	Barium	10	43	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-39	DS-11-31	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-39	DS-11-31	EPA 6020	Sediment	Chromium	10	16	mg/kg dry	2.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-39	DS-11-31	EPA 6020	Sediment	Copper	10	11	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-39	DS-11-31	EPA 6020	Sediment	Lead	10	6.1	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-39	DS-11-31	EPA 6020	Sediment	Manganese	100	230	mg/kg dry	1.9		08/18/11	08/17/11	09/02/11	09/08/11				
T11H197-39	DS-11-31	EPA 6020	Sediment	Nickel	10	10	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-39	DS-11-31	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-39	DS-11-31	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-39	DS-11-31	EPA 6020	Sediment	Zinc	10	27	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-39	DS-11-31	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-39	DS-11-31	EPA 8082	Sediment	Aroclor-1016	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-39	DS-11-31	EPA 8082	Sediment	Aroclor-1221	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-39	DS-11-31	EPA 8082	Sediment	Aroclor-1232	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-39	DS-11-31	EPA 8082	Sediment	Aroclor-1242	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-39	DS-11-31	EPA 8082	Sediment	Aroclor-1248	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-39	DS-11-31	EPA 8082	Sediment	Aroclor-1254	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-39	DS-11-31	EPA 8082	Sediment	Aroclor-1260	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-39	DS-11-31	EPA 8082	Sediment	Tetrachloro-m-xylene	1	53	%			08/18/11	08/17/11	08/23/11	08/25/11	53	%	40	113
T11H197-39	DS-11-31	EPA 8082	Sediment	Decachlorobiphenyl	1	68	%			08/18/11	08/17/11	08/23/11	08/25/11	68	%	32	111
T11H197-39	DS-11-31	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-39	DS-11-31	EPA 8270C	Sediment	Nitrobenzene-d5	1	55	%			08/18/11	08/17/11	08/22/11	08/26/11	55	%	36	98
T11H197-39	DS-11-31	EPA 8270C	Sediment	2-Fluorobiphenyl	1	50	%			08/18/11	08/17/11	08/22/11	08/26/11	50	%	44	105
T11H197-39	DS-11-31	EPA 8270C	Sediment	Terphenyl-d14	1	57	%			08/18/11	08/17/11	08/22/11	08/26/11	57	%	46	109
T11H197-39	DS-11-31	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-39	DS-11-31	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<630	mg/kg dry	630		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-39	DS-11-31	PLUMB	Sediment	Chemical Oxygen Demand	1	<430	mg/kg dry	430		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-39	DS-11-31	PLUMB	Sediment	Volatile Solids	1	2.2	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	09/01/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-39	DS-11-31	USACE, In-Place Density	Sediment	In-Place Density	1	1.4	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-39	DS-11-31	WALKLEY BLACK	Sediment	Total Organic Carbon	1	5600	mg/kg dry	1000		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-40	DS-11-32	ASTM D2974-87	Sediment	% Solids	1	64	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-40	DS-11-32	ASTM D854-91	Sediment	Specific Gravity	1	2.0				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-40	DS-11-32	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	23	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/30/11				
T11H197-40	DS-11-32	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	610	mg/kg dry	15		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-40	DS-11-32	EPA 6010B	Sediment	Iron	1	20000	mg/kg dry	5.0		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-40	DS-11-32	EPA 6010B	Sediment	Phosphorus	1	420	mg/kg dry	6.2		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-40	DS-11-32	EPA 6020	Sediment	Arsenic	10	2.5	mg/kg dry	0.12		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-40	DS-11-32	EPA 6020	Sediment	Barium	100	65	mg/kg dry	3.0		08/18/11	08/17/11	09/02/11	09/08/11				
T11H197-40	DS-11-32	EPA 6020	Sediment	Cadmium	10	0.23	mg/kg dry	0.20		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-40	DS-11-32	EPA 6020	Sediment	Chromium	10	20	mg/kg dry	2.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-40	DS-11-32	EPA 6020	Sediment	Copper	10	15	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-40	DS-11-32	EPA 6020	Sediment	Lead	10	9.1	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-40	DS-11-32	EPA 6020	Sediment	Manganese	100	290	mg/kg dry	2.0		08/18/11	08/17/11	09/02/11	09/08/11				
T11H197-40	DS-11-32	EPA 6020	Sediment	Nickel	10	13	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-40	DS-11-32	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-40	DS-11-32	EPA 6020	Sediment	Silver	10	0.13	mg/kg dry	0.10		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-40	DS-11-32	EPA 6020	Sediment	Zinc	10	37	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-40	DS-11-32	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-40	DS-11-32	EPA 8082	Sediment	Aroclor-1016	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-40	DS-11-32	EPA 8082	Sediment	Aroclor-1221	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-40	DS-11-32	EPA 8082	Sediment	Aroclor-1232	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-40	DS-11-32	EPA 8082	Sediment	Aroclor-1242	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-40	DS-11-32	EPA 8082	Sediment	Aroclor-1248	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-40	DS-11-32	EPA 8082	Sediment	Aroclor-1254	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-40	DS-11-32	EPA 8082	Sediment	Aroclor-1260	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/23/11	08/25/11				
T11H197-40	DS-11-32	EPA 8082	Sediment	Tetrachloro-m-xylene	1	47	%			08/18/11	08/17/11	08/23/11	08/25/11	47	%	40	113
T11H197-40	DS-11-32	EPA 8082	Sediment	Decachlorobiphenyl	1	57	%			08/18/11	08/17/11	08/23/11	08/25/11	57	%	32	111
T11H197-40	DS-11-32	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/26/11				
T11H197-40	DS-11-32	EPA 8270C	Sediment	Nitrobenzene-d5	1	59	%			08/18/11	08/17/11	08/22/11	08/26/11	59	%	36	98
T11H197-40	DS-11-32	EPA 8270C	Sediment	2-Fluorobiphenyl	1	53	%			08/18/11	08/17/11	08/22/11	08/26/11	53	%	44	105
T11H197-40	DS-11-32	EPA 8270C	Sediment	Terphenyl-d14	1	57	%			08/18/11	08/17/11	08/22/11	08/26/11	57	%	46	109
T11H197-40	DS-11-32	EPA 9012B	Sediment	Cyanide (total)	1	0.24	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-40	DS-11-32	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<650	mg/kg dry	650		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-40	DS-11-32	PLUMB	Sediment	Chemical Oxygen Demand	1	7800	mg/kg dry	300		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-40	DS-11-32	PLUMB	Sediment	Volatile Solids	1	4.5	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	09/01/11				
T11H197-40	DS-11-32	USACE, In-Place Density	Sediment	In-Place Density	1	1.4	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-40	DS-11-32	WALKLEY BLACK	Sediment	Total Organic Carbon	1	6800	mg/kg dry	1000		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-41	DS-11-33	ASTM D2974-87	Sediment	% Solids	1	81	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-41	DS-11-33	ASTM D854-91	Sediment	Specific Gravity	1	2.2				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-41	DS-11-33	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	<1.0	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-41	DS-11-33	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	33	mg/kg dry	27		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-41	DS-11-33	EPA 6010B	Sediment	Iron	1	5500	mg/kg dry	5.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 6010B	Sediment	Phosphorus	1	140	mg/kg dry	6.1		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 6020	Sediment	Arsenic	10	0.87	mg/kg dry	0.12		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 6020	Sediment	Barium	10	8.7	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	09/06/11	09/07/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-41	DS-11-33	EPA 6020	Sediment	Chromium	10	4.2	mg/kg dry	2.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 6020	Sediment	Copper	10	2.4	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 6020	Sediment	Lead	10	1.5	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 6020	Sediment	Manganese	100	72	mg/kg dry	1.9		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-41	DS-11-33	EPA 6020	Sediment	Nickel	10	3.1	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 6020	Sediment	Zinc	10	7.1	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-41	DS-11-33	EPA 8082	Sediment	Aroclor-1016	1	<83	ug/kg dry	83		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-41	DS-11-33	EPA 8082	Sediment	Aroclor-1221	1	<83	ug/kg dry	83		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-41	DS-11-33	EPA 8082	Sediment	Aroclor-1232	1	<83	ug/kg dry	83		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-41	DS-11-33	EPA 8082	Sediment	Aroclor-1242	1	<83	ug/kg dry	83		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-41	DS-11-33	EPA 8082	Sediment	Aroclor-1248	1	<83	ug/kg dry	83		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-41	DS-11-33	EPA 8082	Sediment	Aroclor-1254	1	<83	ug/kg dry	83		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-41	DS-11-33	EPA 8082	Sediment	Aroclor-1260	1	<83	ug/kg dry	83		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-41	DS-11-33	EPA 8082	Sediment	Tetrachloro-m-xylene	1	53	%			08/18/11	08/17/11	08/29/11	08/31/11	53	%	40	113
T11H197-41	DS-11-33	EPA 8082	Sediment	Decachlorobiphenyl	1	59	%			08/18/11	08/17/11	08/29/11	08/31/11	59	%	32	111
T11H197-41	DS-11-33	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-41	DS-11-33	EPA 8270C	Sediment	Nitrobenzene-d5	1	54	%			08/18/11	08/17/11	08/26/11	08/29/11	54	%	36	98
T11H197-41	DS-11-33	EPA 8270C	Sediment	2-Fluorobiphenyl	1	51	%			08/18/11	08/17/11	08/26/11	08/29/11	51	%	44	105
T11H197-41	DS-11-33	EPA 8270C	Sediment	Terphenyl-d14	1	54	%			08/18/11	08/17/11	08/26/11	08/29/11	54	%	46	109
T11H197-41	DS-11-33	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/24/11	08/25/11				
T11H197-41	DS-11-33	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<520	mg/kg dry	520		08/18/11	08/17/11	09/06/11	09/06/11				
T11H197-41	DS-11-33	PLUMB	Sediment	Chemical Oxygen Demand	1	2600	mg/kg dry	350		08/18/11	08/17/11	08/22/11	08/24/11				
T11H197-41	DS-11-33	PLUMB	Sediment	Volatile Solids	1	0.31	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	08/27/11				
T11H197-41	DS-11-33	USACE, In-Place Density	Sediment	In-Place Density	1	1.9	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-41	DS-11-33	WALKLEY BLACK	Sediment	Total Organic Carbon	1	<1000	mg/kg dry	1000		08/18/11	08/17/11	08/24/11	08/25/11				
T11H197-42	DS-11-34	ASTM D2974-87	Sediment	% Solids	1	74	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-42	DS-11-34	ASTM D854-91	Sediment	Specific Gravity	1	2.5				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-42	DS-11-34	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	<1.0	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/30/11				
T11H197-42	DS-11-34	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	40	mg/kg dry	15		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-42	DS-11-34	EPA 6010B	Sediment	Iron	1	5100	mg/kg dry	5.0		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-42	DS-11-34	EPA 6010B	Sediment	Phosphorus	1	130	mg/kg dry	6.2		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-42	DS-11-34	EPA 6020	Sediment	Arsenic	10	0.89	mg/kg dry	0.12		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-42	DS-11-34	EPA 6020	Sediment	Barium	10	9.2	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-42	DS-11-34	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-42	DS-11-34	EPA 6020	Sediment	Chromium	10	4.4	mg/kg dry	2.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-42	DS-11-34	EPA 6020	Sediment	Copper	10	2.4	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-42	DS-11-34	EPA 6020	Sediment	Lead	10	1.7	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-42	DS-11-34	EPA 6020	Sediment	Manganese	100	81	mg/kg dry	2.0		08/18/11	08/17/11	09/02/11	09/08/11				
T11H197-42	DS-11-34	EPA 6020	Sediment	Nickel	10	3.2	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-42	DS-11-34	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-42	DS-11-34	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-42	DS-11-34	EPA 6020	Sediment	Zinc	10	7.5	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-42	DS-11-34	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-42	DS-11-34	EPA 8082	Sediment	Aroclor-1016	1	<90	ug/kg dry	90		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-42	DS-11-34	EPA 8082	Sediment	Aroclor-1221	1	<90	ug/kg dry	90		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-42	DS-11-34	EPA 8082	Sediment	Aroclor-1232	1	<90	ug/kg dry	90		08/18/11	08/17/11	08/29/11	08/31/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-42	DS-11-34	EPA 8082	Sediment	Aroclor-1242	1	<90	ug/kg dry	90		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-42	DS-11-34	EPA 8082	Sediment	Aroclor-1248	1	<90	ug/kg dry	90		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-42	DS-11-34	EPA 8082	Sediment	Aroclor-1254	1	<90	ug/kg dry	90		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-42	DS-11-34	EPA 8082	Sediment	Aroclor-1260	1	<90	ug/kg dry	90		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-42	DS-11-34	EPA 8082	Sediment	Tetrachloro-m-xylene	1	62	%			08/18/11	08/17/11	08/29/11	08/31/11	62	%	40	113
T11H197-42	DS-11-34	EPA 8082	Sediment	Decachlorobiphenyl	1	77	%			08/18/11	08/17/11	08/29/11	08/31/11	77	%	32	111
T11H197-42	DS-11-34	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-42	DS-11-34	EPA 8270C	Sediment	Nitrobenzene-d5	1	60	%			08/18/11	08/17/11	08/22/11	08/30/11	60	%	36	98
T11H197-42	DS-11-34	EPA 8270C	Sediment	2-Fluorobiphenyl	1	54	%			08/18/11	08/17/11	08/22/11	08/30/11	54	%	44	105
T11H197-42	DS-11-34	EPA 8270C	Sediment	Terphenyl-d14	1	50	%			08/18/11	08/17/11	08/22/11	08/30/11	50	%	46	109
T11H197-42	DS-11-34	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-42	DS-11-34	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<560	mg/kg dry	560		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-42	DS-11-34	PLUMB	Sediment	Chemical Oxygen Demand	1	<380	mg/kg dry	380		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-42	DS-11-34	PLUMB	Sediment	Volatile Solids	1	0.34	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	09/01/11				
T11H197-42	DS-11-34	USACE, In-Place Density	Sediment	In-Place Density	1	1.9	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-42	DS-11-34	WALKLEY BLACK	Sediment	Total Organic Carbon	1	11000	mg/kg dry	1000		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-43	DS-11-35	ASTM D2974-87	Sediment	% Solids	1	65	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-43	DS-11-35	ASTM D854-91	Sediment	Specific Gravity	1	2.5				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-43	DS-11-35	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	1.6	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/30/11				
T11H197-43	DS-11-35	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	210	mg/kg dry	15		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-43	DS-11-35	EPA 6010B	Sediment	Iron	1	6700	mg/kg dry	5.0		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-43	DS-11-35	EPA 6010B	Sediment	Phosphorus	1	130	mg/kg dry	6.0		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-43	DS-11-35	EPA 6020	Sediment	Arsenic	10	1.0	mg/kg dry	0.11		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-43	DS-11-35	EPA 6020	Sediment	Barium	10	12	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-43	DS-11-35	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-43	DS-11-35	EPA 6020	Sediment	Chromium	10	6.8	mg/kg dry	2.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-43	DS-11-35	EPA 6020	Sediment	Copper	10	3.0	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-43	DS-11-35	EPA 6020	Sediment	Lead	10	2.0	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-43	DS-11-35	EPA 6020	Sediment	Manganese	100	91	mg/kg dry	1.9		08/18/11	08/17/11	09/02/11	09/08/11				
T11H197-43	DS-11-35	EPA 6020	Sediment	Nickel	10	3.8	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-43	DS-11-35	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-43	DS-11-35	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-43	DS-11-35	EPA 6020	Sediment	Zinc	10	8.4	mg/kg dry	1.0		08/18/11	08/17/11	09/02/11	09/07/11				
T11H197-43	DS-11-35	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/02/11	09/06/11				
T11H197-43	DS-11-35	EPA 8082	Sediment	Aroclor-1016	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-43	DS-11-35	EPA 8082	Sediment	Aroclor-1221	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-43	DS-11-35	EPA 8082	Sediment	Aroclor-1232	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-43	DS-11-35	EPA 8082	Sediment	Aroclor-1242	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-43	DS-11-35	EPA 8082	Sediment	Aroclor-1248	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-43	DS-11-35	EPA 8082	Sediment	Aroclor-1254	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-43	DS-11-35	EPA 8082	Sediment	Aroclor-1260	1	<100	ug/kg dry	100		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-43	DS-11-35	EPA 8082	Sediment	Tetrachloro-m-xylene	1	58	%			08/18/11	08/17/11	08/29/11	08/31/11	58	%	40	113
T11H197-43	DS-11-35	EPA 8082	Sediment	Decachlorobiphenyl	1	68	%			08/18/11	08/17/11	08/29/11	08/31/11	68	%	32	111
T11H197-43	DS-11-35	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-43	DS-11-35	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-43	DS-11-35	EPA 8270C	Sediment	Nitrobenzene-d5	1	61	%			08/18/11	08/17/11	08/22/11	08/30/11	61	%	36	98
T11H197-43	DS-11-35	EPA 8270C	Sediment	2-Fluorobiphenyl	1	57	%			08/18/11	08/17/11	08/22/11	08/30/11	57	%	44	105
T11H197-43	DS-11-35	EPA 8270C	Sediment	Terphenyl-d14	1	62	%			08/18/11	08/17/11	08/22/11	08/30/11	62	%	46	109
T11H197-43	DS-11-35	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-43	DS-11-35	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<640	mg/kg dry	640		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-43	DS-11-35	PLUMB	Sediment	Chemical Oxygen Demand	1	2900	mg/kg dry	440		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-43	DS-11-35	PLUMB	Sediment	Volatile Solids	1	1.3	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	09/01/11				
T11H197-43	DS-11-35	USACE, In-Place Density	Sediment	In-Place Density	1	1.9	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-43	DS-11-35	WALKLEY BLACK	Sediment	Total Organic Carbon	1	9600	mg/kg dry	1000		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-44	DS-11-WO PU	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	<1.0	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-44	DS-11-WO PU	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	18	mg/kg dry	15		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-44	DS-11-WO PU	EPA 6010B	Sediment	Phosphorus	1	160	mg/kg dry	6.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	ASTM D2974-87	Sediment	% Solids	1	69	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-45	DS-11-30	ASTM D854-91	Sediment	Specific Gravity	1	2.6				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-45	DS-11-30	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	20	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-45	DS-11-30	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	450	mg/kg dry	15		08/18/11	08/17/11	08/26/11	08/29/11				
T11H197-45	DS-11-30	EPA 6010B	Sediment	Iron	1	17000	mg/kg dry	5.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 6010B	Sediment	Phosphorus	1	330	mg/kg dry	6.3		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 6020	Sediment	Arsenic	10	2.0	mg/kg dry	0.12		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 6020	Sediment	Barium	100	62	mg/kg dry	3.0		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-45	DS-11-30	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 6020	Sediment	Chromium	10	17	mg/kg dry	2.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 6020	Sediment	Copper	10	12	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 6020	Sediment	Lead	10	5.1	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 6020	Sediment	Manganese	100	370	mg/kg dry	2.0		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-45	DS-11-30	EPA 6020	Sediment	Nickel	10	12	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 6020	Sediment	Selenium	10	<0.40	mg/kg dry	0.40		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 6020	Sediment	Zinc	10	29	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-45	DS-11-30	EPA 8082	Sediment	Aroclor-1016	1	<97	ug/kg dry	97		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-45	DS-11-30	EPA 8082	Sediment	Aroclor-1221	1	<97	ug/kg dry	97		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-45	DS-11-30	EPA 8082	Sediment	Aroclor-1232	1	<97	ug/kg dry	97		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-45	DS-11-30	EPA 8082	Sediment	Aroclor-1242	1	<97	ug/kg dry	97		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-45	DS-11-30	EPA 8082	Sediment	Aroclor-1248	1	<97	ug/kg dry	97		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-45	DS-11-30	EPA 8082	Sediment	Aroclor-1254	1	<97	ug/kg dry	97		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-45	DS-11-30	EPA 8082	Sediment	Aroclor-1260	1	<97	ug/kg dry	97		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-45	DS-11-30	EPA 8082	Sediment	Tetrachloro-m-xylene	1	32	%		303	08/18/11	08/17/11	08/29/11	08/31/11	32	%	40	113
T11H197-45	DS-11-30	EPA 8082	Sediment	Decachlorobiphenyl	1	32	%			08/18/11	08/17/11	08/29/11	08/31/11	32	%	32	111
T11H197-45	DS-11-30	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-45	DS-11-30	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-45	DS-11-30	EPA 8270C	Sediment	Nitrobenzene-d5	1	56	%			08/18/11	08/17/11	08/22/11	08/30/11	56	%	36	98
T11H197-45	DS-11-30	EPA 8270C	Sediment	2-Fluorobiphenyl	1	54	%			08/18/11	08/17/11	08/22/11	08/30/11	54	%	44	105
T11H197-45	DS-11-30	EPA 8270C	Sediment	Terphenyl-d14	1	60	%			08/18/11	08/17/11	08/22/11	08/30/11	60	%	46	109
T11H197-45	DS-11-30	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-45	DS-11-30	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<610	mg/kg dry	610		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-45	DS-11-30	PLUMB	Sediment	Chemical Oxygen Demand	1	9500	mg/kg dry	420		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-45	DS-11-30	PLUMB	Sediment	Volatile Solids	1	4.0	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	09/01/11				
T11H197-45	DS-11-30	USACE, In-Place Density	Sediment	In-Place Density	1	1.8	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-45	DS-11-30	WALKLEY BLACK	Sediment	Total Organic Carbon	1	9700	mg/kg dry	1000		08/18/11	08/17/11	08/24/11	08/25/11				
T11H197-46	DS-11-29	ASTM D2974-87	Sediment	% Solids	1	75	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-46	DS-11-29	ASTM D854-91	Sediment	Specific Gravity	1	2.7				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-46	DS-11-29	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	2.4	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-46	DS-11-29	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	120	mg/kg dry	15		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-46	DS-11-29	EPA 6010B	Sediment	Iron	1	11000	mg/kg dry	5.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 6010B	Sediment	Phosphorus	1	220	mg/kg dry	5.9		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 6020	Sediment	Arsenic	10	1.9	mg/kg dry	0.11		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 6020	Sediment	Barium	10	26	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 6020	Sediment	Chromium	10	9.2	mg/kg dry	2.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 6020	Sediment	Copper	10	5.7	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 6020	Sediment	Lead	10	3.0	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 6020	Sediment	Manganese	100	130	mg/kg dry	1.9		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-46	DS-11-29	EPA 6020	Sediment	Nickel	10	6.5	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 6020	Sediment	Silver	10	<0.10	mg/kg dry	0.10		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 6020	Sediment	Zinc	10	15	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-46	DS-11-29	EPA 8082	Sediment	Aroclor-1016	1	<89	ug/kg dry	89		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-46	DS-11-29	EPA 8082	Sediment	Aroclor-1221	1	<89	ug/kg dry	89		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-46	DS-11-29	EPA 8082	Sediment	Aroclor-1232	1	<89	ug/kg dry	89		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-46	DS-11-29	EPA 8082	Sediment	Aroclor-1242	1	<89	ug/kg dry	89		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-46	DS-11-29	EPA 8082	Sediment	Aroclor-1248	1	<89	ug/kg dry	89		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-46	DS-11-29	EPA 8082	Sediment	Aroclor-1254	1	<89	ug/kg dry	89		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-46	DS-11-29	EPA 8082	Sediment	Aroclor-1260	1	<89	ug/kg dry	89		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-46	DS-11-29	EPA 8082	Sediment	Tetrachloro-m-xylene	1	48	%			08/18/11	08/17/11	08/29/11	08/31/11	48	%	40	113
T11H197-46	DS-11-29	EPA 8082	Sediment	Decachlorobiphenyl	1	61	%			08/18/11	08/17/11	08/29/11	08/31/11	61	%	32	111
T11H197-46	DS-11-29	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/22/11	08/30/11				
T11H197-46	DS-11-29	EPA 8270C	Sediment	Nitrobenzene-d5	1	52	%			08/18/11	08/17/11	08/22/11	08/30/11	52	%	36	98
T11H197-46	DS-11-29	EPA 8270C	Sediment	2-Fluorobiphenyl	1	44	%			08/18/11	08/17/11	08/22/11	08/30/11	44	%	44	105
T11H197-46	DS-11-29	EPA 8270C	Sediment	Terphenyl-d14	1	42	%		802	08/18/11	08/17/11	08/22/11	08/30/11	42	%	46	109
T11H197-46	DS-11-29	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-46	DS-11-29	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<560	mg/kg dry	560		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-46	DS-11-29	PLUMB	Sediment	Chemical Oxygen Demand	1	6100	mg/kg dry	380		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-46	DS-11-29	PLUMB	Sediment	Volatile Solids	1	1.0	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	09/01/11				
T11H197-46	DS-11-29	USACE, In-Place Density	Sediment	In-Place Density	1	1.6	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-46	DS-11-29	WALKLEY BLACK	Sediment	Total Organic Carbon	1	6200	mg/kg dry	1600		08/18/11	08/17/11	08/24/11	08/25/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-47	DS-11-28	ASTM D2974-87	Sediment	% Solids	1	60	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-47	DS-11-28	ASTM D854-91	Sediment	Specific Gravity	1	3.0				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-47	DS-11-28	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	87	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-47	DS-11-28	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	1000	mg/kg dry	140		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-47	DS-11-28	EPA 6010B	Sediment	Iron	10	27000	mg/kg dry	28		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-47	DS-11-28	EPA 6010B	Sediment	Phosphorus	1	570	mg/kg dry	5.9		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-47	DS-11-28	EPA 6020	Sediment	Arsenic	10	3.8	mg/kg dry	0.11		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-47	DS-11-28	EPA 6020	Sediment	Barium	100	120	mg/kg dry	2.8		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-47	DS-11-28	EPA 6020	Sediment	Cadmium	10	0.23	mg/kg dry	0.20		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-47	DS-11-28	EPA 6020	Sediment	Chromium	10	25	mg/kg dry	2.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-47	DS-11-28	EPA 6020	Sediment	Copper	10	21	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-47	DS-11-28	EPA 6020	Sediment	Lead	10	13	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-47	DS-11-28	EPA 6020	Sediment	Manganese	200	740	mg/kg dry	3.7		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-47	DS-11-28	EPA 6020	Sediment	Nickel	10	20	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-47	DS-11-28	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-47	DS-11-28	EPA 6020	Sediment	Silver	10	0.23	mg/kg dry	0.10		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-47	DS-11-28	EPA 6020	Sediment	Zinc	100	70	mg/kg dry	9.3		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-47	DS-11-28	EPA 7471A	Sediment	Mercury	1	0.067	mg/kg dry	0.050		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-47	DS-11-28	EPA 8082	Sediment	Aroclor-1016	1	<110	ug/kg dry	110		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-47	DS-11-28	EPA 8082	Sediment	Aroclor-1221	1	<110	ug/kg dry	110		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-47	DS-11-28	EPA 8082	Sediment	Aroclor-1232	1	<110	ug/kg dry	110		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-47	DS-11-28	EPA 8082	Sediment	Aroclor-1242	4	1100	ug/kg dry	440		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-47	DS-11-28	EPA 8082	Sediment	Aroclor-1248	1	<110	ug/kg dry	110		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-47	DS-11-28	EPA 8082	Sediment	Aroclor-1254	1	<110	ug/kg dry	110	900	08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-47	DS-11-28	EPA 8082	Sediment	Aroclor-1260	1	610	ug/kg dry	110		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-47	DS-11-28	EPA 8082	Sediment	Tetrachloro-m-xylene	1	66	%			08/18/11	08/17/11	08/29/11	08/31/11	66	%	40	113
T11H197-47	DS-11-28	EPA 8082	Sediment	Decachlorobiphenyl	1	157	%		304	08/18/11	08/17/11	08/29/11	08/31/11	157	%	32	111
T11H197-47	DS-11-28	EPA 9012B	Sediment	Cyanide (total)	1	0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-47	DS-11-28	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<690	mg/kg dry	690		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-47	DS-11-28	PLUMB	Sediment	Chemical Oxygen Demand	1	32000	mg/kg dry	470		08/18/11	08/17/11	08/22/11	08/25/11				
T11H197-47	DS-11-28	PLUMB	Sediment	Volatile Solids	1	6.2	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	09/01/11				
T11H197-47	DS-11-28	USACE, In-Place Density	Sediment	In-Place Density	1	1.5	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-47	DS-11-28	WALKLEY BLACK	Sediment	Total Organic Carbon	1	32000	mg/kg dry	1100		08/18/11	08/17/11	08/24/11	08/25/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/31/11	08/31/11				
T11H197-47	DS-11-28	EPA 8270C	Sediment	Nitrobenzene-d5	1	47	%			08/18/11	08/17/11	08/31/11	08/31/11	47	%	36	98
T11H197-47	DS-11-28	EPA 8270C	Sediment	2-Fluorobiphenyl	1	48	%			08/18/11	08/17/11	08/31/11	08/31/11	48	%	44	105
T11H197-47	DS-11-28	EPA 8270C	Sediment	Terphenyl-d14	1	47	%			08/18/11	08/17/11	08/31/11	08/31/11	47	%	46	109
T11H197-48	DS-11-49	ASTM D2974-87	Sediment	% Solids	1	43	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-48	DS-11-49	ASTM D854-91	Sediment	Specific Gravity	1	1.9				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-48	DS-11-49	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	53	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-48	DS-11-49	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	1900	mg/kg dry	150		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-48	DS-11-49	EPA 6010B	Sediment	Iron	10	34000	mg/kg dry	28		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-48	DS-11-49	EPA 6010B	Sediment	Phosphorus	1	780	mg/kg dry	5.9		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-48	DS-11-49	EPA 6020	Sediment	Arsenic	10	3.3	mg/kg dry	0.11		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-48	DS-11-49	EPA 6020	Sediment	Barium	100	130	mg/kg dry	2.8		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-48	DS-11-49	EPA 6020	Sediment	Cadmium	10	0.32	mg/kg dry	0.20		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-48	DS-11-49	EPA 6020	Sediment	Chromium	10	33	mg/kg dry	2.0		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-48	DS-11-49	EPA 6020	Sediment	Copper	10	18	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-48	DS-11-49	EPA 6020	Sediment	Lead	10	18	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-48	DS-11-49	EPA 6020	Sediment	Manganese	200	880	mg/kg dry	3.7		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-48	DS-11-49	EPA 6020	Sediment	Nickel	10	21	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-48	DS-11-49	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-48	DS-11-49	EPA 6020	Sediment	Silver	10	0.25	mg/kg dry	0.10		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-48	DS-11-49	EPA 6020	Sediment	Zinc	100	110	mg/kg dry	9.4		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-48	DS-11-49	EPA 7471A	Sediment	Mercury	1	0.15	mg/kg dry	0.050		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-48	DS-11-49	EPA 8082	Sediment	Aroclor-1016	1	<160	ug/kg dry	160		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-48	DS-11-49	EPA 8082	Sediment	Aroclor-1221	1	<160	ug/kg dry	160		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-48	DS-11-49	EPA 8082	Sediment	Aroclor-1232	1	<160	ug/kg dry	160		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-48	DS-11-49	EPA 8082	Sediment	Aroclor-1242	1	<160	ug/kg dry	160		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-48	DS-11-49	EPA 8082	Sediment	Aroclor-1248	1	<160	ug/kg dry	160		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-48	DS-11-49	EPA 8082	Sediment	Aroclor-1254	1	<160	ug/kg dry	160		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-48	DS-11-49	EPA 8082	Sediment	Aroclor-1260	1	<160	ug/kg dry	160		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-48	DS-11-49	EPA 8082	Sediment	Tetrachloro-m-xylene	1	16	%		303	08/18/11	08/17/11	08/29/11	09/01/11	16	%	40	113
T11H197-48	DS-11-49	EPA 8082	Sediment	Decachlorobiphenyl	1	46	%			08/18/11	08/17/11	08/29/11	09/01/11	46	%	32	111
T11H197-48	DS-11-49	EPA 8270C	Sediment	Naphthalene	1	<380	ug/kg dry	380		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	2-Methylnaphthalene	1	<380	ug/kg dry	380		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Acenaphthylene	1	<380	ug/kg dry	380		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Acenaphthene	1	<380	ug/kg dry	380		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Fluorene	1	<380	ug/kg dry	380		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Anthracene	1	<380	ug/kg dry	380		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Pyrene	1	<380	ug/kg dry	380		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/30/11				
T11H197-48	DS-11-49	EPA 8270C	Sediment	Nitrobenzene-d5	1	51	%			08/18/11	08/17/11	08/26/11	08/30/11	51	%	36	98
T11H197-48	DS-11-49	EPA 8270C	Sediment	2-Fluorobiphenyl	1	38	%		802	08/18/11	08/17/11	08/26/11	08/30/11	38	%	44	105
T11H197-48	DS-11-49	EPA 8270C	Sediment	Terphenyl-d14	1	55	%			08/18/11	08/17/11	08/26/11	08/30/11	55	%	46	109
T11H197-48	DS-11-49	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/24/11	08/25/11				
T11H197-48	DS-11-49	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<980	mg/kg dry	980		08/18/11	08/17/11	08/31/11	09/01/11				
T11H197-48	DS-11-49	PLUMB	Sediment	Chemical Oxygen Demand	1	70000	mg/kg dry	670		08/18/11	08/17/11	08/22/11	08/24/11				
T11H197-48	DS-11-49	PLUMB	Sediment	Volatile Solids	1	6.7	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	09/01/11				
T11H197-48	DS-11-49	USACE, In-Place Density	Sediment	In-Place Density	1	1.4	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-48	DS-11-49	WALKLEY BLACK	Sediment	Total Organic Carbon	1	28000	mg/kg dry	1600		08/18/11	08/17/11	08/24/11	08/25/11				
T11H197-49	DS-11-50	ASTM D2974-87	Sediment	% Solids	1	39	% by Wt.	0.10		08/18/11	08/17/11	08/22/11	08/23/11				
T11H197-49	DS-11-50	ASTM D854-91	Sediment	Specific Gravity	1	2.8				08/18/11	08/17/11	08/24/11	08/24/11				
T11H197-49	DS-11-50	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	90	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-49	DS-11-50	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	1300	mg/kg dry	120		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-49	DS-11-50	EPA 6010B	Sediment	Iron	10	27000	mg/kg dry	29		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-49	DS-11-50	EPA 6010B	Sediment	Phosphorus	1	740	mg/kg dry	6.1		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-49	DS-11-50	EPA 6020	Sediment	Arsenic	10	2.9	mg/kg dry	0.12		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-49	DS-11-50	EPA 6020	Sediment	Barium	100	110	mg/kg dry	2.9		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-49	DS-11-50	EPA 6020	Sediment	Cadmium	10	0.30	mg/kg dry	0.20		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-49	DS-11-50	EPA 6020	Sediment	Chromium	10	28	mg/kg dry	2.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-49	DS-11-50	EPA 6020	Sediment	Copper	10	17	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-49	DS-11-50	EPA 6020	Sediment	Lead	10	17	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-49	DS-11-50	EPA 6020	Sediment	Manganese	200	690	mg/kg dry	3.9		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-49	DS-11-50	EPA 6020	Sediment	Nickel	10	18	mg/kg dry	1.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-49	DS-11-50	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-49	DS-11-50	EPA 6020	Sediment	Silver	10	0.21	mg/kg dry	0.10		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-49	DS-11-50	EPA 6020	Sediment	Zinc	100	96	mg/kg dry	9.7		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-49	DS-11-50	EPA 7471A	Sediment	Mercury	1	0.11	mg/kg dry	0.050		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Naphthalene	1	<420	ug/kg dry	420		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	2-Methylnaphthalene	1	<420	ug/kg dry	420		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Acenaphthylene	1	<420	ug/kg dry	420		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Acenaphthene	1	<420	ug/kg dry	420		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Fluorene	1	<420	ug/kg dry	420		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/31/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-49	DS-11-50	EPA 8270C	Sediment	Anthracene	1	<420	ug/kg dry	420		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Pyrene	1	<420	ug/kg dry	420		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/18/11	08/17/11	08/26/11	08/31/11				
T11H197-49	DS-11-50	EPA 8270C	Sediment	Nitrobenzene-d5	1	52	%			08/18/11	08/17/11	08/26/11	08/31/11	52	%	36	98
T11H197-49	DS-11-50	EPA 8270C	Sediment	2-Fluorobiphenyl	1	34	%		802	08/18/11	08/17/11	08/26/11	08/31/11	34	%	44	105
T11H197-49	DS-11-50	EPA 8270C	Sediment	Terphenyl-d14	1	56	%			08/18/11	08/17/11	08/26/11	08/31/11	56	%	46	109
T11H197-49	DS-11-50	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/18/11	08/17/11	08/24/11	08/25/11				
T11H197-49	DS-11-50	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1100	mg/kg dry	1100		08/18/11	08/17/11	09/06/11	09/06/11				
T11H197-49	DS-11-50	PLUMB	Sediment	Chemical Oxygen Demand	1	83000	mg/kg dry	720		08/18/11	08/17/11	08/22/11	08/24/11				
T11H197-49	DS-11-50	PLUMB	Sediment	Volatile Solids	1	7.8	% by Wt.	0.10		08/18/11	08/17/11	08/26/11	09/01/11				
T11H197-49	DS-11-50	USACE, In-Place Density	Sediment	In-Place Density	1	1.3	g/mL			08/18/11	08/17/11	08/22/11	08/22/11				
T11H197-49	DS-11-50	WALKLEY BLACK	Sediment	Total Organic Carbon	1	29000	mg/kg dry	1700		08/18/11	08/17/11	08/24/11	08/25/11				
T11H197-49	DS-11-50	EPA 8082	Sediment	Aroclor-1016	1	<170	ug/kg dry	170		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-49	DS-11-50	EPA 8082	Sediment	Aroclor-1221	1	<170	ug/kg dry	170		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-49	DS-11-50	EPA 8082	Sediment	Aroclor-1232	1	<170	ug/kg dry	170		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-49	DS-11-50	EPA 8082	Sediment	Aroclor-1242	1	<170	ug/kg dry	170		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-49	DS-11-50	EPA 8082	Sediment	Aroclor-1248	1	<170	ug/kg dry	170		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-49	DS-11-50	EPA 8082	Sediment	Aroclor-1254	1	<170	ug/kg dry	170		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-49	DS-11-50	EPA 8082	Sediment	Aroclor-1260	1	<170	ug/kg dry	170		08/18/11	08/17/11	09/06/11	09/08/11				
T11H197-49	DS-11-50	EPA 8082	Sediment	Tetrachloro-m-xylene	1	55	%			08/18/11	08/17/11	09/06/11	09/08/11	55	%	40	113
T11H197-49	DS-11-50	EPA 8082	Sediment	Decachlorobiphenyl	1	56	%			08/18/11	08/17/11	09/06/11	09/08/11	56	%	32	111
T11H197-50	DS-11-II PU	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	91	mg/kg dry	1.0		08/18/11	08/17/11	08/29/11	08/31/11				
T11H197-50	DS-11-II PU	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	1900	mg/kg dry	130		08/18/11	08/17/11	08/29/11	09/01/11				
T11H197-50	DS-11-II PU	EPA 6010B	Sediment	Phosphorus	1	750	mg/kg dry	6.0		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 350.1	Elutriate	Ammonia as N	1	0.63	mg/L	0.010		08/18/11	08/17/11	08/29/11	08/30/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 351.2	Elutriate	Total Kjeldahl Nitrogen	1	1.5	mg/L	0.50		08/18/11	08/17/11	08/30/11	09/01/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 365.2	Elutriate	Phosphorus-Total (as P)	1	0.12	mg/L	0.010		08/18/11	08/17/11	08/30/11	08/30/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6010B	Elutriate	Iron	1	5.6	mg/L	0.20		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6020	Elutriate	Arsenic	5	<0.0050	mg/L	0.0050		08/18/11	08/17/11	09/06/11	09/06/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6020	Elutriate	Barium	5	<0.10	mg/L	0.10		08/18/11	08/17/11	09/06/11	09/06/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6020	Elutriate	Cadmium	5	<0.0010	mg/L	0.0010		08/18/11	08/17/11	09/06/11	09/06/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6020	Elutriate	Chromium	5	<0.010	mg/L	0.010		08/18/11	08/17/11	09/06/11	09/06/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6020	Elutriate	Copper	5	0.0072	mg/L	0.0040		08/18/11	08/17/11	09/06/11	09/06/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6020	Elutriate	Lead	5	0.0042	mg/L	0.0030		08/18/11	08/17/11	09/06/11	09/06/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6020	Elutriate	Manganese	50	2.7	mg/L	0.050		08/18/11	08/17/11	09/06/11	09/07/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6020	Elutriate	Nickel	5	<0.020	mg/L	0.020		08/18/11	08/17/11	09/06/11	09/06/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6020	Elutriate	Selenium	5	<0.0050	mg/L	0.0050		08/18/11	08/17/11	09/06/11	09/06/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6020	Elutriate	Silver	5	<0.00020	mg/L	0.00020		08/18/11	08/17/11	09/06/11	09/12/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 6020	Elutriate	Zinc	5	<0.15	mg/L	0.15		08/18/11	08/17/11	09/06/11	09/06/11				
T11H197-51	DS-11-MU6 Elutriate	EPA 7470A	Elutriate	Mercury	1	<0.00020	mg/L	0.00020		08/18/11	08/17/11	09/02/11	09/02/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-52	DS-11-MU1 Elutriate	EPA 350.1	Elutriate	Ammonia as N	1	0.60	mg/L	0.010		08/19/11	08/17/11	08/29/11	08/30/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 351.2	Elutriate	Total Kjeldahl Nitrogen	1	1.9	mg/L	0.50		08/19/11	08/17/11	08/30/11	09/01/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 365.2	Elutriate	Phosphorus-Total (as P)	1	0.062	mg/L	0.010		08/19/11	08/17/11	08/30/11	08/30/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6010B	Elutriate	Iron	1	2.9	mg/L	0.20		08/19/11	08/17/11	09/06/11	09/07/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6020	Elutriate	Arsenic	5	<0.0050	mg/L	0.0050		08/19/11	08/17/11	09/06/11	09/06/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6020	Elutriate	Barium	5	<0.10	mg/L	0.10		08/19/11	08/17/11	09/06/11	09/06/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6020	Elutriate	Cadmium	5	<0.0010	mg/L	0.0010		08/19/11	08/17/11	09/06/11	09/06/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6020	Elutriate	Chromium	5	<0.010	mg/L	0.010		08/19/11	08/17/11	09/06/11	09/06/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6020	Elutriate	Copper	5	0.0053	mg/L	0.0040		08/19/11	08/17/11	09/06/11	09/06/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6020	Elutriate	Lead	5	<0.0030	mg/L	0.0030		08/19/11	08/17/11	09/06/11	09/06/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6020	Elutriate	Manganese	50	1.1	mg/L	0.050		08/19/11	08/17/11	09/06/11	09/07/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6020	Elutriate	Nickel	5	<0.020	mg/L	0.020		08/19/11	08/17/11	09/06/11	09/06/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6020	Elutriate	Selenium	5	<0.0050	mg/L	0.0050		08/19/11	08/17/11	09/06/11	09/06/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6020	Elutriate	Silver	5	<0.00020	mg/L	0.00020		08/19/11	08/17/11	09/06/11	09/12/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 6020	Elutriate	Zinc	5	<0.15	mg/L	0.15		08/19/11	08/17/11	09/06/11	09/06/11				
T11H197-52	DS-11-MU1 Elutriate	EPA 7470A	Elutriate	Mercury	1	<0.00020	mg/L	0.00020		08/19/11	08/17/11	09/02/11	09/02/11				
T11H197-53	DS-11-23	ASTM D2974-87	Sediment	% Solids	1	31	% by Wt.	0.10		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-53	DS-11-23	ASTM D854-91	Sediment	Specific Gravity	1	2.4				08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-53	DS-11-23	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	47	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-53	DS-11-23	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	2400	mg/kg dry	120		08/20/11	08/17/11	08/29/11	09/01/11				
T11H197-53	DS-11-23	EPA 6010B	Sediment	Iron	10	31000	mg/kg dry	28		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-53	DS-11-23	EPA 6010B	Sediment	Phosphorus	1	840	mg/kg dry	5.9		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-53	DS-11-23	EPA 6020	Sediment	Arsenic	10	4.1	mg/kg dry	0.11		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-53	DS-11-23	EPA 6020	Sediment	Barium	100	140	mg/kg dry	2.8		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-53	DS-11-23	EPA 6020	Sediment	Cadmium	10	0.32	mg/kg dry	0.20		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-53	DS-11-23	EPA 6020	Sediment	Chromium	10	29	mg/kg dry	2.0		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-53	DS-11-23	EPA 6020	Sediment	Copper	10	18	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-53	DS-11-23	EPA 6020	Sediment	Lead	10	23	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-53	DS-11-23	EPA 6020	Sediment	Manganese	500	1400	mg/kg dry	9.3		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-53	DS-11-23	EPA 6020	Sediment	Nickel	10	19	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-53	DS-11-23	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-53	DS-11-23	EPA 6020	Sediment	Silver	10	0.36	mg/kg dry	0.10		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-53	DS-11-23	EPA 6020	Sediment	Zinc	100	110	mg/kg dry	9.3		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-53	DS-11-23	EPA 7471A	Sediment	Mercury	1	0.16	mg/kg dry	0.050		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-53	DS-11-23	EPA 8082	Sediment	Aroclor-1016	1	<220	ug/kg dry	220		08/20/11	08/17/11	08/29/11	09/01/11				
T11H197-53	DS-11-23	EPA 8082	Sediment	Aroclor-1221	1	<220	ug/kg dry	220		08/20/11	08/17/11	08/29/11	09/01/11				
T11H197-53	DS-11-23	EPA 8082	Sediment	Aroclor-1232	1	<220	ug/kg dry	220		08/20/11	08/17/11	08/29/11	09/01/11				
T11H197-53	DS-11-23	EPA 8082	Sediment	Aroclor-1242	1	<220	ug/kg dry	220		08/20/11	08/17/11	08/29/11	09/01/11				
T11H197-53	DS-11-23	EPA 8082	Sediment	Aroclor-1248	1	<220	ug/kg dry	220		08/20/11	08/17/11	08/29/11	09/01/11				
T11H197-53	DS-11-23	EPA 8082	Sediment	Aroclor-1254	1	<220	ug/kg dry	220		08/20/11	08/17/11	08/29/11	09/01/11				
T11H197-53	DS-11-23	EPA 8082	Sediment	Aroclor-1260	1	<220	ug/kg dry	220		08/20/11	08/17/11	08/29/11	09/01/11				
T11H197-53	DS-11-23	EPA 8082	Sediment	Tetrachloro-m-xylene	1	41	%			08/20/11	08/17/11	08/29/11	09/01/11	41	%	40	113
T11H197-53	DS-11-23	EPA 8082	Sediment	Decachlorobiphenyl	1	50	%			08/20/11	08/17/11	08/29/11	09/01/11	50	%	32	111
T11H197-53	DS-11-23	EPA 8270C	Sediment	Naphthalene	1	<540	ug/kg dry	540		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	2-Methylnaphthalene	1	<540	ug/kg dry	540		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Acenaphthylene	1	<540	ug/kg dry	540		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Acenaphthene	1	<540	ug/kg dry	540		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Fluorene	1	<540	ug/kg dry	540		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Anthracene	1	<540	ug/kg dry	540		08/20/11	08/17/11	08/26/11	08/30/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-53	DS-11-23	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Pyrene	1	<540	ug/kg dry	540		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-53	DS-11-23	EPA 8270C	Sediment	Nitrobenzene-d5	1	41	%			08/20/11	08/17/11	08/26/11	08/30/11	41	%	36	98
T11H197-53	DS-11-23	EPA 8270C	Sediment	2-Fluorobiphenyl	1	34	%		802	08/20/11	08/17/11	08/26/11	08/30/11	34	%	44	105
T11H197-53	DS-11-23	EPA 8270C	Sediment	Terphenyl-d14	1	47	%			08/20/11	08/17/11	08/26/11	08/30/11	47	%	46	109
T11H197-53	DS-11-23	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-53	DS-11-23	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1400	mg/kg dry	1400		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-53	DS-11-23	PLUMB	Sediment	Chemical Oxygen Demand	1	110000	mg/kg dry	930		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-53	DS-11-23	PLUMB	Sediment	Volatile Solids	1	7.2	% by Wt.	0.10		08/20/11	08/17/11	08/26/11	09/01/11				
T11H197-53	DS-11-23	USACE, In-Place Density	Sediment	In-Place Density	1	1.5	g/mL			08/20/11	08/17/11	08/24/11	08/24/11				
T11H197-53	DS-11-23	WALKLEY BLACK	Sediment	Total Organic Carbon	1	45000	mg/kg dry	2200		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-54	DS-11-24	ASTM D2974-87	Sediment	% Solids	1	38	% by Wt.	0.10		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-54	DS-11-24	ASTM D854-91	Sediment	Specific Gravity	1	2.7				08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-54	DS-11-24	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	72	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-54	DS-11-24	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	2000	mg/kg dry	150		08/20/11	08/17/11	08/29/11	09/01/11				
T11H197-54	DS-11-24	EPA 6010B	Sediment	Iron	10	43000	mg/kg dry	29		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-54	DS-11-24	EPA 6010B	Sediment	Phosphorus	1	1000	mg/kg dry	6.2		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-54	DS-11-24	EPA 6020	Sediment	Arsenic	10	4.9	mg/kg dry	0.12		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-54	DS-11-24	EPA 6020	Sediment	Barium	100	190	mg/kg dry	2.9		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-54	DS-11-24	EPA 6020	Sediment	Cadmium	10	0.37	mg/kg dry	0.20		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-54	DS-11-24	EPA 6020	Sediment	Chromium	10	42	mg/kg dry	2.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-54	DS-11-24	EPA 6020	Sediment	Copper	10	23	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-54	DS-11-24	EPA 6020	Sediment	Lead	10	27	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-54	DS-11-24	EPA 6020	Sediment	Manganese	500	1600	mg/kg dry	9.8		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-54	DS-11-24	EPA 6020	Sediment	Nickel	10	25	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-54	DS-11-24	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-54	DS-11-24	EPA 6020	Sediment	Silver	10	0.51	mg/kg dry	0.10		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-54	DS-11-24	EPA 6020	Sediment	Zinc	100	130	mg/kg dry	9.8		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-54	DS-11-24	EPA 7471A	Sediment	Mercury	1	0.17	mg/kg dry	0.050		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-54	DS-11-24	EPA 8082	Sediment	Aroclor-1016	1	<180	ug/kg dry	180		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-54	DS-11-24	EPA 8082	Sediment	Aroclor-1221	1	<180	ug/kg dry	180		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-54	DS-11-24	EPA 8082	Sediment	Aroclor-1232	1	<180	ug/kg dry	180		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-54	DS-11-24	EPA 8082	Sediment	Aroclor-1242	1	<180	ug/kg dry	180		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-54	DS-11-24	EPA 8082	Sediment	Aroclor-1248	1	<180	ug/kg dry	180		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-54	DS-11-24	EPA 8082	Sediment	Aroclor-1254	1	<180	ug/kg dry	180		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-54	DS-11-24	EPA 8082	Sediment	Aroclor-1260	1	<180	ug/kg dry	180		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-54	DS-11-24	EPA 8082	Sediment	Tetrachloro-m-xylene	1	23	%		303	08/20/11	08/17/11	08/31/11	09/02/11	23	%	40	113
T11H197-54	DS-11-24	EPA 8082	Sediment	Decachlorobiphenyl	1	40	%			08/20/11	08/17/11	08/31/11	09/02/11	40	%	32	111
T11H197-54	DS-11-24	EPA 8270C	Sediment	Naphthalene	1	<440	ug/kg dry	440		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	2-Methylnaphthalene	1	<440	ug/kg dry	440		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Acenaphthylene	1	<440	ug/kg dry	440		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Acenaphthene	1	<440	ug/kg dry	440		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Fluorene	1	<440	ug/kg dry	440		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Anthracene	1	<440	ug/kg dry	440		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Pyrene	1	<440	ug/kg dry	440		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-54	DS-11-24	EPA 8270C	Sediment	Nitrobenzene-d5	1	65	%			08/20/11	08/17/11	08/26/11	08/30/11	65	%	36	98
T11H197-54	DS-11-24	EPA 8270C	Sediment	2-Fluorobiphenyl	1	61	%			08/20/11	08/17/11	08/26/11	08/30/11	61	%	44	105

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-54	DS-11-24	EPA 8270C	Sediment	Terphenyl-d14	1	71	%			08/20/11	08/17/11	08/26/11	08/30/11	71	%	46	109
T11H197-54	DS-11-24	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-54	DS-11-24	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1100	mg/kg dry	1100		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-54	DS-11-24	PLUMB	Sediment	Chemical Oxygen Demand	1	81000	mg/kg dry	750		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-54	DS-11-24	PLUMB	Sediment	Volatile Solids	1	9.6	% by Wt.	0.10		08/20/11	08/17/11	08/26/11	09/01/11				
T11H197-54	DS-11-24	USACE, In-Place Density	Sediment	In-Place Density	1	1.6	g/mL			08/20/11	08/17/11	08/24/11	08/24/11				
T11H197-54	DS-11-24	WALKLEY BLACK	Sediment	Total Organic Carbon	1	28000	mg/kg dry	1800		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-55	DS-11-25	ASTM D2974-87	Sediment	% Solids	1	28	% by Wt.	0.10		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-55	DS-11-25	ASTM D854-91	Sediment	Specific Gravity	1	2.7				08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-55	DS-11-25	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	40	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-55	DS-11-25	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	2300	mg/kg dry	120		08/20/11	08/17/11	08/29/11	09/01/11				
T11H197-55	DS-11-25	EPA 6010B	Sediment	Iron	10	35000	mg/kg dry	28		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-55	DS-11-25	EPA 6010B	Sediment	Phosphorus	1	810	mg/kg dry	5.8		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-55	DS-11-25	EPA 6020	Sediment	Arsenic	10	4.1	mg/kg dry	0.11		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-55	DS-11-25	EPA 6020	Sediment	Barium	100	140	mg/kg dry	2.8		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-55	DS-11-25	EPA 6020	Sediment	Cadmium	10	0.26	mg/kg dry	0.20		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-55	DS-11-25	EPA 6020	Sediment	Chromium	10	35	mg/kg dry	2.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-55	DS-11-25	EPA 6020	Sediment	Copper	10	18	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-55	DS-11-25	EPA 6020	Sediment	Lead	10	20	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-55	DS-11-25	EPA 6020	Sediment	Manganese	500	1500	mg/kg dry	9.3		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-55	DS-11-25	EPA 6020	Sediment	Nickel	10	20	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-55	DS-11-25	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-55	DS-11-25	EPA 6020	Sediment	Silver	10	0.34	mg/kg dry	0.10		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-55	DS-11-25	EPA 6020	Sediment	Zinc	100	89	mg/kg dry	9.3		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-55	DS-11-25	EPA 7471A	Sediment	Mercury	1	0.13	mg/kg dry	0.050		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-55	DS-11-25	EPA 8082	Sediment	Aroclor-1016	1	<240	ug/kg dry	240		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-55	DS-11-25	EPA 8082	Sediment	Aroclor-1221	1	<240	ug/kg dry	240		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-55	DS-11-25	EPA 8082	Sediment	Aroclor-1232	1	<240	ug/kg dry	240		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-55	DS-11-25	EPA 8082	Sediment	Aroclor-1242	1	<240	ug/kg dry	240		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-55	DS-11-25	EPA 8082	Sediment	Aroclor-1248	1	<240	ug/kg dry	240		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-55	DS-11-25	EPA 8082	Sediment	Aroclor-1254	1	<240	ug/kg dry	240		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-55	DS-11-25	EPA 8082	Sediment	Aroclor-1260	1	<240	ug/kg dry	240		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-55	DS-11-25	EPA 8082	Sediment	Tetrachloro-m-xylene	1	46	%			08/20/11	08/17/11	08/31/11	09/02/11	46	%	40	113
T11H197-55	DS-11-25	EPA 8082	Sediment	Decachlorobiphenyl	1	50	%			08/20/11	08/17/11	08/31/11	09/02/11	50	%	32	111
T11H197-55	DS-11-25	EPA 8270C	Sediment	Naphthalene	1	<590	ug/kg dry	590		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	2-Methylnaphthalene	1	<590	ug/kg dry	590		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Acenaphthylene	1	<590	ug/kg dry	590		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Acenaphthene	1	<590	ug/kg dry	590		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Fluorene	1	<590	ug/kg dry	590		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Anthracene	1	<590	ug/kg dry	590		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Pyrene	1	<590	ug/kg dry	590		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/30/11				
T11H197-55	DS-11-25	EPA 8270C	Sediment	Nitrobenzene-d5	1	62	%			08/20/11	08/17/11	08/26/11	08/30/11	62	%	36	98
T11H197-55	DS-11-25	EPA 8270C	Sediment	2-Fluorobiphenyl	1	52	%			08/20/11	08/17/11	08/26/11	08/30/11	52	%	44	105
T11H197-55	DS-11-25	EPA 8270C	Sediment	Terphenyl-d14	1	69	%			08/20/11	08/17/11	08/26/11	08/30/11	69	%	46	109
T11H197-55	DS-11-25	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-55	DS-11-25	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1500	mg/kg dry	1500		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-55	DS-11-25	PLUMB	Sediment	Chemical Oxygen Demand	1	89000	mg/kg dry	1000		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-55	DS-11-25	PLUMB	Sediment	Volatile Solids	1	9.7	% by Wt.	0.10		08/20/11	08/17/11	08/26/11	09/01/11				
T11H197-55	DS-11-25	USACE, In-Place Density	Sediment	In-Place Density	1	1.5	g/mL			08/20/11	08/17/11	08/24/11	08/24/11				
T11H197-55	DS-11-25	WALKLEY BLACK	Sediment	Total Organic Carbon	1	59000	mg/kg dry	2400		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-56	DS-11-26	ASTM D2974-87	Sediment	% Solids	1	52	% by Wt.	0.10		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-56	DS-11-26	ASTM D854-91	Sediment	Specific Gravity	1	2.5				08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	50	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-56	DS-11-26	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	1	490	mg/kg dry	15		08/20/11	08/17/11	08/29/11	09/01/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-56	DS-11-26	EPA 6010B	Sediment	Iron	10	28000	mg/kg dry	29		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-56	DS-11-26	EPA 6010B	Sediment	Phosphorus	1	570	mg/kg dry	6.1		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-56	DS-11-26	EPA 6020	Sediment	Arsenic	10	4.1	mg/kg dry	0.12		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 6020	Sediment	Barium	100	150	mg/kg dry	2.9		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 6020	Sediment	Chromium	10	28	mg/kg dry	2.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 6020	Sediment	Copper	10	20	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 6020	Sediment	Lead	10	9.5	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 6020	Sediment	Manganese	200	770	mg/kg dry	3.9		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 6020	Sediment	Nickel	10	20	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 6020	Sediment	Silver	10	0.18	mg/kg dry	0.10		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-56	DS-11-26	EPA 6020	Sediment	Zinc	100	65	mg/kg dry	9.7		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-56	DS-11-26	EPA 8270C	Sediment	Nitrobenzene-d5	1	58	%			08/20/11	08/17/11	08/26/11	08/31/11	58	%	36	98
T11H197-56	DS-11-26	EPA 8270C	Sediment	2-Fluorobiphenyl	1	49	%			08/20/11	08/17/11	08/26/11	08/31/11	49	%	44	105
T11H197-56	DS-11-26	EPA 8270C	Sediment	Terphenyl-d14	1	69	%			08/20/11	08/17/11	08/26/11	08/31/11	69	%	46	109
T11H197-56	DS-11-26	EPA 9012B	Sediment	Cyanide (total)	1	1.3	mg/kg dry	0.20		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-56	DS-11-26	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<810	mg/kg dry	810		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-56	DS-11-26	PLUMB	Sediment	Chemical Oxygen Demand	1	43000	mg/kg dry	550		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-56	DS-11-26	PLUMB	Sediment	Volatile Solids	1	5.8	% by Wt.	0.10		08/20/11	08/17/11	08/26/11	09/01/11				
T11H197-56	DS-11-26	USACE, In-Place Density	Sediment	In-Place Density	1	1.5	g/mL			08/20/11	08/17/11	08/24/11	08/24/11				
T11H197-56	DS-11-26	WALKLEY BLACK	Sediment	Total Organic Carbon	1	2100	mg/kg dry	1300		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-56	DS-11-26	EPA 8082	Sediment	Aroclor-1016	1	<130	ug/kg dry	130		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 8082	Sediment	Aroclor-1221	1	<130	ug/kg dry	130		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 8082	Sediment	Aroclor-1232	1	<130	ug/kg dry	130		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 8082	Sediment	Aroclor-1242	1	<130	ug/kg dry	130		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 8082	Sediment	Aroclor-1248	1	<130	ug/kg dry	130		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 8082	Sediment	Aroclor-1254	1	<130	ug/kg dry	130		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 8082	Sediment	Aroclor-1260	1	<130	ug/kg dry	130		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-56	DS-11-26	EPA 8082	Sediment	Tetrachloro-m-xylene	1	54	%			08/20/11	08/17/11	09/06/11	09/08/11	54	%	40	113
T11H197-56	DS-11-26	EPA 8082	Sediment	Decachlorobiphenyl	1	59	%			08/20/11	08/17/11	09/06/11	09/08/11	59	%	32	111
T11H197-57	DS-11-27	ASTM D2974-87	Sediment	% Solids	1	61	% by Wt.	0.10		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-57	DS-11-27	ASTM D854-91	Sediment	Specific Gravity	1	2.4				08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	13	mg/kg dry	1.0		08/20/11	08/17/11	08/31/11	08/31/11				
T11H197-57	DS-11-27	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	800	mg/kg dry	120	203	08/20/11	08/17/11	08/30/11	09/01/11				
T11H197-57	DS-11-27	EPA 6010B	Sediment	Iron	1	18000	mg/kg dry	5.0		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-57	DS-11-27	EPA 6010B	Sediment	Phosphorus	1	400	mg/kg dry	6.1		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-57	DS-11-27	EPA 6020	Sediment	Arsenic	10	2.9	mg/kg dry	0.12		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-57	DS-11-27	EPA 6020	Sediment	Barium	100	91	mg/kg dry	2.9		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-57	DS-11-27	EPA 6020	Sediment	Cadmium	10	<0.20	mg/kg dry	0.20		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-57	DS-11-27	EPA 6020	Sediment	Chromium	10	20	mg/kg dry	2.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-57	DS-11-27	EPA 6020	Sediment	Copper	10	16	mg/kg dry	1.0	205	08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-57	DS-11-27	EPA 6020	Sediment	Lead	10	6.9	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-57	DS-11-27	EPA 6020	Sediment	Manganese	100	400	mg/kg dry	1.9	227	08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-57	DS-11-27	EPA 6020	Sediment	Nickel	10	15	mg/kg dry	1.0	205	08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-57	DS-11-27	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-57	DS-11-27	EPA 6020	Sediment	Silver	10	0.12	mg/kg dry	0.10		08/20/11	08/17/11	09/06/11	09/07/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-57	DS-11-27	EPA 6020	Sediment	Zinc	10	36	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-57	DS-11-27	EPA 7471A	Sediment	Mercury	1	<0.050	mg/kg dry	0.050		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-57	DS-11-27	EPA 8082	Sediment	Aroclor-1016	1	<110	ug/kg dry	110		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-57	DS-11-27	EPA 8082	Sediment	Aroclor-1221	1	<110	ug/kg dry	110		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-57	DS-11-27	EPA 8082	Sediment	Aroclor-1232	1	<110	ug/kg dry	110		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-57	DS-11-27	EPA 8082	Sediment	Aroclor-1242	1	<110	ug/kg dry	110		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-57	DS-11-27	EPA 8082	Sediment	Aroclor-1248	1	<110	ug/kg dry	110		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-57	DS-11-27	EPA 8082	Sediment	Aroclor-1254	1	<110	ug/kg dry	110		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-57	DS-11-27	EPA 8082	Sediment	Aroclor-1260	1	<110	ug/kg dry	110		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-57	DS-11-27	EPA 8082	Sediment	Tetrachloro-m-xylene	1	42	%			08/20/11	08/17/11	08/31/11	09/02/11	42	%	40	113
T11H197-57	DS-11-27	EPA 8082	Sediment	Decachlorobiphenyl	1	43	%			08/20/11	08/17/11	08/31/11	09/02/11	43	%	32	111
T11H197-57	DS-11-27	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-57	DS-11-27	EPA 8270C	Sediment	Nitrobenzene-d5	1	76	%			08/20/11	08/17/11	08/26/11	08/31/11	76	%	36	98
T11H197-57	DS-11-27	EPA 8270C	Sediment	2-Fluorobiphenyl	1	65	%			08/20/11	08/17/11	08/26/11	08/31/11	65	%	44	105
T11H197-57	DS-11-27	EPA 8270C	Sediment	Terphenyl-d14	1	76	%			08/20/11	08/17/11	08/26/11	08/31/11	76	%	46	109
T11H197-57	DS-11-27	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-57	DS-11-27	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<690	mg/kg dry	690		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-57	DS-11-27	PLUMB	Sediment	Chemical Oxygen Demand	1	63000	mg/kg dry	470	205	08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-57	DS-11-27	PLUMB	Sediment	Volatile Solids	1	3.4	% by Wt.	0.10		08/20/11	08/17/11	08/26/11	09/01/11				
T11H197-57	DS-11-27	USACE, In-Place Density	Sediment	In-Place Density	1	1.7	g/mL			08/20/11	08/17/11	08/24/11	08/24/11				
T11H197-57	DS-11-27	WALKLEY BLACK	Sediment	Total Organic Carbon	1	16000	mg/kg dry	1100		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-58	DS-11-MU5	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	120	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-58	DS-11-MU5	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	2300	mg/kg dry	130		08/20/11	08/17/11	08/30/11	09/01/11				
T11H197-58	DS-11-MU5	EPA 6010B	Sediment	Phosphorus	1	760	mg/kg dry	6.2		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 350.1	Elutriate	Ammonia as N	1	0.71	mg/L	0.010		08/20/11	08/17/11	08/29/11	08/30/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 351.2	Elutriate	Total Kjeldahl Nitrogen	1	2.0	mg/L	0.50		08/20/11	08/17/11	08/30/11	09/01/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 365.2	Elutriate	Phosphorus-Total (as P)	1	0.11	mg/L	0.010		08/20/11	08/17/11	08/30/11	08/30/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 6010B	Elutriate	Iron	1	3.6	mg/L	0.20		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 6020	Elutriate	Arsenic	5	<0.0050	mg/L	0.0050		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 6020	Elutriate	Barium	5	<0.10	mg/L	0.10		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 6020	Elutriate	Cadmium	5	<0.0010	mg/L	0.0010		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 6020	Elutriate	Chromium	5	<0.010	mg/L	0.010		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 6020	Elutriate	Copper	5	0.0044	mg/L	0.0040		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 6020	Elutriate	Lead	5	0.0034	mg/L	0.0030		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 6020	Elutriate	Manganese	50	2.5	mg/L	0.050		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 6020	Elutriate	Nickel	5	<0.020	mg/L	0.020		08/20/11	08/17/11	09/06/11	09/06/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-59	DS-11-MU5 Elutriate	EPA 6020	Elutriate	Selenium	5	<0.0050	mg/L	0.0050		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 6020	Elutriate	Silver	5	<0.00020	mg/L	0.00020		08/20/11	08/17/11	09/06/11	09/12/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 6020	Elutriate	Zinc	5	<0.15	mg/L	0.15		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-59	DS-11-MU5 Elutriate	EPA 7470A	Elutriate	Mercury	1	<0.00020	mg/L	0.00020		08/20/11	08/17/11	09/02/11	09/02/11				
T11H197-60	DS-11-MU6	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	67	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-60	DS-11-MU6	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	1100	mg/kg dry	140		08/20/11	08/17/11	08/30/11	09/01/11				
T11H197-60	DS-11-MU6	EPA 6010B	Sediment	Phosphorus	1	430	mg/kg dry	6.0		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-61	DS-11-01	ASTM D2974-87	Sediment	% Solids	1	32	% by Wt.	0.10		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-61	DS-11-01	ASTM D854-91	Sediment	Specific Gravity	1	2.3				08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	33	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-61	DS-11-01	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	3100	mg/kg dry	140		08/20/11	08/17/11	08/30/11	09/01/11				
T11H197-61	DS-11-01	EPA 6010B	Sediment	Iron	10	35000	mg/kg dry	28		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-61	DS-11-01	EPA 6010B	Sediment	Phosphorus	1	870	mg/kg dry	5.9		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-61	DS-11-01	EPA 6020	Sediment	Arsenic	10	4.4	mg/kg dry	0.11		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-61	DS-11-01	EPA 6020	Sediment	Barium	100	200	mg/kg dry	2.8		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-61	DS-11-01	EPA 6020	Sediment	Cadmium	10	0.37	mg/kg dry	0.20		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-61	DS-11-01	EPA 6020	Sediment	Chromium	10	39	mg/kg dry	2.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-61	DS-11-01	EPA 6020	Sediment	Copper	10	18	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-61	DS-11-01	EPA 6020	Sediment	Lead	10	19	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-61	DS-11-01	EPA 6020	Sediment	Manganese	500	2400	mg/kg dry	9.4		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-61	DS-11-01	EPA 6020	Sediment	Nickel	10	21	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-61	DS-11-01	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-61	DS-11-01	EPA 6020	Sediment	Silver	10	0.22	mg/kg dry	0.10		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-61	DS-11-01	EPA 6020	Sediment	Zinc	100	120	mg/kg dry	9.4		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-61	DS-11-01	EPA 7471A	Sediment	Mercury	1	0.12	mg/kg dry	0.050		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-61	DS-11-01	EPA 8082	Sediment	Aroclor-1016	1	<210	ug/kg dry	210		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-61	DS-11-01	EPA 8082	Sediment	Aroclor-1221	1	<210	ug/kg dry	210		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-61	DS-11-01	EPA 8082	Sediment	Aroclor-1232	1	<210	ug/kg dry	210		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-61	DS-11-01	EPA 8082	Sediment	Aroclor-1242	1	<210	ug/kg dry	210		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-61	DS-11-01	EPA 8082	Sediment	Aroclor-1248	1	<210	ug/kg dry	210		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-61	DS-11-01	EPA 8082	Sediment	Aroclor-1254	1	<210	ug/kg dry	210		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-61	DS-11-01	EPA 8082	Sediment	Aroclor-1260	1	<210	ug/kg dry	210		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-61	DS-11-01	EPA 8082	Sediment	Tetrachloro-m-xylene	1	54	%			08/20/11	08/17/11	08/31/11	09/02/11	54	%	40	113
T11H197-61	DS-11-01	EPA 8082	Sediment	Decachlorobiphenyl	1	68	%			08/20/11	08/17/11	08/31/11	09/02/11	68	%	32	111
T11H197-61	DS-11-01	EPA 8270C	Sediment	Naphthalene	1	<510	ug/kg dry	510		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	2-Methylnaphthalene	1	<510	ug/kg dry	510		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Acenaphthylene	1	<510	ug/kg dry	510		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Acenaphthene	1	<510	ug/kg dry	510		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Fluorene	1	<510	ug/kg dry	510		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Anthracene	1	<510	ug/kg dry	510		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Pyrene	1	<510	ug/kg dry	510		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-61	DS-11-01	EPA 8270C	Sediment	Nitrobenzene-d5	1	61	%			08/20/11	08/17/11	08/26/11	08/31/11	61	%	36	98
T11H197-61	DS-11-01	EPA 8270C	Sediment	2-Fluorobiphenyl	1	47	%			08/20/11	08/17/11	08/26/11	08/31/11	47	%	44	105
T11H197-61	DS-11-01	EPA 8270C	Sediment	Terphenyl-d14	1	65	%			08/20/11	08/17/11	08/26/11	08/31/11	65	%	46	109
T11H197-61	DS-11-01	EPA 9012B	Sediment	Cyanide (total)	1	0.24	mg/kg dry	0.20		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-61	DS-11-01	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1300	mg/kg dry	1300		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-61	DS-11-01	PLUMB	Sediment	Chemical Oxygen Demand	1	120000	mg/kg dry	880		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-61	DS-11-01	PLUMB	Sediment	Volatile Solids	1	10	% by Wt.	0.10		08/20/11	08/17/11	08/26/11	09/01/11				
T11H197-61	DS-11-01	USACE, In-Place Density	Sediment	In-Place Density	1	1.8	g/mL			08/20/11	08/17/11	08/24/11	08/24/11				
T11H197-61	DS-11-01	WALKLEY BLACK	Sediment	Total Organic Carbon	1	63000	mg/kg dry	2100		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-62	DS-11-02	ASTM D2974-87	Sediment	% Solids	1	40	% by Wt.	0.10		08/20/11	08/17/11	08/24/11	08/25/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-62	DS-11-02	ASTM D854-91	Sediment	Specific Gravity	1	2.7				08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	46	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-62	DS-11-02	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	1800	mg/kg dry	120		08/20/11	08/17/11	08/30/11	09/01/11				
T11H197-62	DS-11-02	EPA 6010B	Sediment	Iron	10	35000	mg/kg dry	29		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-62	DS-11-02	EPA 6010B	Sediment	Phosphorus	1	800	mg/kg dry	6.0		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-62	DS-11-02	EPA 6020	Sediment	Arsenic	10	4.3	mg/kg dry	0.11		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-62	DS-11-02	EPA 6020	Sediment	Barium	100	170	mg/kg dry	2.9		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-62	DS-11-02	EPA 6020	Sediment	Cadmium	10	0.39	mg/kg dry	0.20		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-62	DS-11-02	EPA 6020	Sediment	Chromium	10	39	mg/kg dry	2.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-62	DS-11-02	EPA 6020	Sediment	Copper	10	18	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-62	DS-11-02	EPA 6020	Sediment	Lead	10	20	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-62	DS-11-02	EPA 6020	Sediment	Manganese	500	1900	mg/kg dry	9.5		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-62	DS-11-02	EPA 6020	Sediment	Nickel	10	21	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-62	DS-11-02	EPA 6020	Sediment	Selenium	10	<0.38	mg/kg dry	0.38		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-62	DS-11-02	EPA 6020	Sediment	Silver	10	0.21	mg/kg dry	0.10		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-62	DS-11-02	EPA 6020	Sediment	Zinc	100	120	mg/kg dry	9.5		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-62	DS-11-02	EPA 7471A	Sediment	Mercury	1	0.13	mg/kg dry	0.050		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-62	DS-11-02	EPA 8082	Sediment	Aroclor-1016	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-62	DS-11-02	EPA 8082	Sediment	Aroclor-1221	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-62	DS-11-02	EPA 8082	Sediment	Aroclor-1232	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-62	DS-11-02	EPA 8082	Sediment	Aroclor-1242	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-62	DS-11-02	EPA 8082	Sediment	Aroclor-1248	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-62	DS-11-02	EPA 8082	Sediment	Aroclor-1254	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-62	DS-11-02	EPA 8082	Sediment	Aroclor-1260	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-62	DS-11-02	EPA 8082	Sediment	Tetrachloro-m-xylene	1	35	%		303	08/20/11	08/17/11	08/31/11	09/02/11	35	%	40	113
T11H197-62	DS-11-02	EPA 8082	Sediment	Decachlorobiphenyl	1	34	%			08/20/11	08/17/11	08/31/11	09/02/11	34	%	32	111
T11H197-62	DS-11-02	EPA 8270C	Sediment	Naphthalene	1	<410	ug/kg dry	410		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	2-Methylnaphthalene	1	<410	ug/kg dry	410		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Acenaphthylene	1	<410	ug/kg dry	410		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Acenaphthene	1	<410	ug/kg dry	410		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Fluorene	1	<410	ug/kg dry	410		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Anthracene	1	<410	ug/kg dry	410		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Pyrene	1	<410	ug/kg dry	410		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-62	DS-11-02	EPA 8270C	Sediment	Nitrobenzene-d5	1	61	%			08/20/11	08/17/11	08/26/11	08/31/11	61	%	36	98
T11H197-62	DS-11-02	EPA 8270C	Sediment	2-Fluorobiphenyl	1	59	%			08/20/11	08/17/11	08/26/11	08/31/11	59	%	44	105
T11H197-62	DS-11-02	EPA 8270C	Sediment	Terphenyl-d14	1	61	%			08/20/11	08/17/11	08/26/11	08/31/11	61	%	46	109
T11H197-62	DS-11-02	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-62	DS-11-02	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1000	mg/kg dry	1000		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-62	DS-11-02	PLUMB	Sediment	Chemical Oxygen Demand	1	86000	mg/kg dry	710		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-62	DS-11-02	PLUMB	Sediment	Volatile Solids	1	10	% by Wt.	0.10		08/20/11	08/17/11	08/26/11	09/01/11				
T11H197-62	DS-11-02	USACE, In-Place Density	Sediment	In-Place Density	1	1.6	g/mL			08/20/11	08/17/11	08/24/11	08/24/11				
T11H197-62	DS-11-02	WALKLEY BLACK	Sediment	Total Organic Carbon	1	46000	mg/kg dry	1700		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-63	DS-11-03	ASTM D2974-87	Sediment	% Solids	1	38	% by Wt.	0.10		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-63	DS-11-03	ASTM D854-91	Sediment	Specific Gravity	1	2.3				08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	26	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-63	DS-11-03	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	2800	mg/kg dry	120		08/20/11	08/17/11	08/30/11	09/01/11				
T11H197-63	DS-11-03	EPA 6010B	Sediment	Iron	10	34000	mg/kg dry	29		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-63	DS-11-03	EPA 6010B	Sediment	Phosphorus	1	760	mg/kg dry	6.1		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-63	DS-11-03	EPA 6020	Sediment	Arsenic	10	3.9	mg/kg dry	0.12		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-63	DS-11-03	EPA 6020	Sediment	Barium	100	160	mg/kg dry	2.9		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-63	DS-11-03	EPA 6020	Sediment	Cadmium	10	0.41	mg/kg dry	0.20		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-63	DS-11-03	EPA 6020	Sediment	Chromium	10	34	mg/kg dry	2.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-63	DS-11-03	EPA 6020	Sediment	Copper	10	17	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-63	DS-11-03	EPA 6020	Sediment	Lead	10	22	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-63	DS-11-03	EPA 6020	Sediment	Manganese	500	1800	mg/kg dry	9.7		08/20/11	08/17/11	09/06/11	09/08/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-63	DS-11-03	EPA 6020	Sediment	Nickel	10	20	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-63	DS-11-03	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-63	DS-11-03	EPA 6020	Sediment	Silver	10	0.25	mg/kg dry	0.10		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-63	DS-11-03	EPA 6020	Sediment	Zinc	100	120	mg/kg dry	9.7		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-63	DS-11-03	EPA 7471A	Sediment	Mercury	1	0.15	mg/kg dry	0.050		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-63	DS-11-03	EPA 8082	Sediment	Aroclor-1016	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-63	DS-11-03	EPA 8082	Sediment	Aroclor-1221	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-63	DS-11-03	EPA 8082	Sediment	Aroclor-1232	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-63	DS-11-03	EPA 8082	Sediment	Aroclor-1242	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-63	DS-11-03	EPA 8082	Sediment	Aroclor-1248	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-63	DS-11-03	EPA 8082	Sediment	Aroclor-1254	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-63	DS-11-03	EPA 8082	Sediment	Aroclor-1260	1	<170	ug/kg dry	170		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-63	DS-11-03	EPA 8082	Sediment	Tetrachloro-m-xylene	1	52	%			08/20/11	08/17/11	08/31/11	09/02/11	52	%	40	113
T11H197-63	DS-11-03	EPA 8082	Sediment	Decachlorobiphenyl	1	56	%			08/20/11	08/17/11	08/31/11	09/02/11	56	%	32	111
T11H197-63	DS-11-03	EPA 8270C	Sediment	Naphthalene	1	<430	ug/kg dry	430		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	2-Methylnaphthalene	1	<430	ug/kg dry	430		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Acenaphthylene	1	<430	ug/kg dry	430		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Acenaphthene	1	<430	ug/kg dry	430		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Fluorene	1	<430	ug/kg dry	430		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Anthracene	1	<430	ug/kg dry	430		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Pyrene	1	<430	ug/kg dry	430		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-63	DS-11-03	EPA 8270C	Sediment	Nitrobenzene-d5	1	61	%			08/20/11	08/17/11	08/26/11	08/31/11	61	%	36	98
T11H197-63	DS-11-03	EPA 8270C	Sediment	2-Fluorobiphenyl	1	54	%			08/20/11	08/17/11	08/26/11	08/31/11	54	%	44	105
T11H197-63	DS-11-03	EPA 8270C	Sediment	Terphenyl-d14	1	66	%			08/20/11	08/17/11	08/26/11	08/31/11	66	%	46	109
T11H197-63	DS-11-03	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-63	DS-11-03	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<1100	mg/kg dry	1100		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-63	DS-11-03	PLUMB	Sediment	Chemical Oxygen Demand	1	130000	mg/kg dry	750		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-63	DS-11-03	PLUMB	Sediment	Volatile Solids	1	12	% by Wt.	0.10		08/20/11	08/17/11	08/26/11	09/01/11				
T11H197-63	DS-11-03	USACE, In-Place Density	Sediment	In-Place Density	1	1.7	g/mL			08/20/11	08/17/11	08/24/11	08/24/11				
T11H197-63	DS-11-03	WALKLEY BLACK	Sediment	Total Organic Carbon	1	16000	mg/kg dry	1800		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-64	DS-11-04	ASTM D2974-87	Sediment	% Solids	1	43	% by Wt.	0.10		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-64	DS-11-04	ASTM D854-91	Sediment	Specific Gravity	1	2.2				08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	31	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-64	DS-11-04	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	1900	mg/kg dry	130		08/20/11	08/17/11	08/30/11	09/01/11				
T11H197-64	DS-11-04	EPA 6010B	Sediment	Iron	10	26000	mg/kg dry	29		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-64	DS-11-04	EPA 6010B	Sediment	Phosphorus	1	650	mg/kg dry	6.1		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-64	DS-11-04	EPA 6020	Sediment	Arsenic	10	3.1	mg/kg dry	0.12		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 6020	Sediment	Barium	100	120	mg/kg dry	2.9		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 6020	Sediment	Cadmium	10	0.29	mg/kg dry	0.20		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 6020	Sediment	Chromium	10	29	mg/kg dry	2.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 6020	Sediment	Copper	10	14	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 6020	Sediment	Lead	10	16	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 6020	Sediment	Manganese	200	1100	mg/kg dry	3.9		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 6020	Sediment	Nickel	10	17	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 6020	Sediment	Selenium	10	<0.39	mg/kg dry	0.39		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 6020	Sediment	Silver	10	0.17	mg/kg dry	0.10		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-64	DS-11-04	EPA 6020	Sediment	Zinc	100	89	mg/kg dry	9.6		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 7471A	Sediment	Mercury	1	0.11	mg/kg dry	0.050		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Naphthalene	1	<380	ug/kg dry	380		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	2-Methylnaphthalene	1	<380	ug/kg dry	380		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Acenaphthylene	1	<380	ug/kg dry	380		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Acenaphthene	1	<380	ug/kg dry	380		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Fluorene	1	<380	ug/kg dry	380		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Anthracene	1	<380	ug/kg dry	380		08/20/11	08/17/11	08/26/11	08/31/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-64	DS-11-04	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Pyrene	1	<380	ug/kg dry	380		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-64	DS-11-04	EPA 8270C	Sediment	Nitrobenzene-d5	1	71	%			08/20/11	08/17/11	08/26/11	08/31/11	71	%	36	98
T11H197-64	DS-11-04	EPA 8270C	Sediment	2-Fluorobiphenyl	1	66	%			08/20/11	08/17/11	08/26/11	08/31/11	66	%	44	105
T11H197-64	DS-11-04	EPA 8270C	Sediment	Terphenyl-d14	1	75	%			08/20/11	08/17/11	08/26/11	08/31/11	75	%	46	109
T11H197-64	DS-11-04	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-64	DS-11-04	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<980	mg/kg dry	980		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-64	DS-11-04	PLUMB	Sediment	Chemical Oxygen Demand	1	78000	mg/kg dry	670		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-64	DS-11-04	PLUMB	Sediment	Volatile Solids	1	8.4	% by Wt.	0.10		08/20/11	08/17/11	08/26/11	09/01/11				
T11H197-64	DS-11-04	USACE, In-Place Density	Sediment	In-Place Density	1	1.7	g/mL			08/20/11	08/17/11	08/24/11	08/24/11				
T11H197-64	DS-11-04	WALKLEY BLACK	Sediment	Total Organic Carbon	1	120000	mg/kg dry	1600		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-64	DS-11-04	EPA 8082	Sediment	Aroclor-1016	1	<160	ug/kg dry	160		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 8082	Sediment	Aroclor-1221	1	<160	ug/kg dry	160		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 8082	Sediment	Aroclor-1232	1	<160	ug/kg dry	160		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 8082	Sediment	Aroclor-1242	1	<160	ug/kg dry	160		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 8082	Sediment	Aroclor-1248	1	<160	ug/kg dry	160		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 8082	Sediment	Aroclor-1254	1	<160	ug/kg dry	160		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 8082	Sediment	Aroclor-1260	1	<160	ug/kg dry	160		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-64	DS-11-04	EPA 8082	Sediment	Tetrachloro-m-xylene	1	47	%			08/20/11	08/17/11	09/06/11	09/08/11	47	%	40	113
T11H197-64	DS-11-04	EPA 8082	Sediment	Decachlorobiphenyl	1	53	%			08/20/11	08/17/11	09/06/11	09/08/11	53	%	32	111
T11H197-65	DS-11-05	ASTM D2974-87	Sediment	% Solids	1	51	% by Wt.	0.10		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-65	DS-11-05	ASTM D854-91	Sediment	Specific Gravity	1	2.4				08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	25	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-65	DS-11-05	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	1500	mg/kg dry	110		08/20/11	08/17/11	08/30/11	09/01/11				
T11H197-65	DS-11-05	EPA 6010B	Sediment	Iron	1	22000	mg/kg dry	5.0		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-65	DS-11-05	EPA 6010B	Sediment	Phosphorus	1	580	mg/kg dry	5.9		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-65	DS-11-05	EPA 6020	Sediment	Arsenic	10	2.7	mg/kg dry	0.11		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-65	DS-11-05	EPA 6020	Sediment	Barium	100	89	mg/kg dry	2.8		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-65	DS-11-05	EPA 6020	Sediment	Cadmium	10	0.22	mg/kg dry	0.20		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-65	DS-11-05	EPA 6020	Sediment	Chromium	10	25	mg/kg dry	2.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-65	DS-11-05	EPA 6020	Sediment	Copper	10	12	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-65	DS-11-05	EPA 6020	Sediment	Lead	10	13	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-65	DS-11-05	EPA 6020	Sediment	Manganese	200	810	mg/kg dry	3.7		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-65	DS-11-05	EPA 6020	Sediment	Nickel	10	14	mg/kg dry	1.0		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-65	DS-11-05	EPA 6020	Sediment	Selenium	10	<0.37	mg/kg dry	0.37		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-65	DS-11-05	EPA 6020	Sediment	Silver	10	0.13	mg/kg dry	0.10		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-65	DS-11-05	EPA 6020	Sediment	Zinc	100	68	mg/kg dry	9.3		08/20/11	08/17/11	09/06/11	09/08/11				
T11H197-65	DS-11-05	EPA 7471A	Sediment	Mercury	1	0.084	mg/kg dry	0.050		08/20/11	08/17/11	09/06/11	09/07/11				
T11H197-65	DS-11-05	EPA 8082	Sediment	Aroclor-1016	1	<130	ug/kg dry	130		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-65	DS-11-05	EPA 8082	Sediment	Aroclor-1221	1	<130	ug/kg dry	130		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-65	DS-11-05	EPA 8082	Sediment	Aroclor-1232	1	<130	ug/kg dry	130		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-65	DS-11-05	EPA 8082	Sediment	Aroclor-1242	1	<130	ug/kg dry	130		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-65	DS-11-05	EPA 8082	Sediment	Aroclor-1248	1	<130	ug/kg dry	130		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-65	DS-11-05	EPA 8082	Sediment	Aroclor-1254	1	<130	ug/kg dry	130		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-65	DS-11-05	EPA 8082	Sediment	Aroclor-1260	1	<130	ug/kg dry	130		08/20/11	08/17/11	08/31/11	09/02/11				
T11H197-65	DS-11-05	EPA 8082	Sediment	Tetrachloro-m-xylene	1	45	%			08/20/11	08/17/11	08/31/11	09/02/11	45	%	40	113
T11H197-65	DS-11-05	EPA 8082	Sediment	Decachlorobiphenyl	1	53	%			08/20/11	08/17/11	08/31/11	09/02/11	53	%	32	111
T11H197-65	DS-11-05	EPA 8270C	Sediment	Naphthalene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	2-Methylnaphthalene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Acenaphthylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Acenaphthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Fluorene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Phenanthrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Benzo (a) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				

APPENDIX H

Table 12: Trace Analysis Summary Data Table

TRACE ID	SAMPLE ID	ANALYSIS METHOD	MATRIX	PARAMETER	DILTN	RESULT	UNITS	RDL	QUALIFIER	SAMPLE DATE	RECEIVED DATE	PREP DATE	ANALYSIS DATE	SPIKE RECOVERY	SPIKE RECOVERY UNITS	LOWER CONTROL LIMIT	UPPER CONTROL LIMIT
T11H197-65	DS-11-05	EPA 8270C	Sediment	Chrysene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Benzo (b) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Benzo (k) fluoranthene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Benzo (a) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Indeno (1,2,3-cd) pyrene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Dibenz (a,h) anthracene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Benzo (g,h,i) perylene	1	<330	ug/kg dry	330		08/20/11	08/17/11	08/26/11	08/31/11				
T11H197-65	DS-11-05	EPA 8270C	Sediment	Nitrobenzene-d5	1	60	%			08/20/11	08/17/11	08/26/11	08/31/11	60	%	36	98
T11H197-65	DS-11-05	EPA 8270C	Sediment	2-Fluorobiphenyl	1	59	%			08/20/11	08/17/11	08/26/11	08/31/11	59	%	44	105
T11H197-65	DS-11-05	EPA 8270C	Sediment	Terphenyl-d14	1	65	%			08/20/11	08/17/11	08/26/11	08/31/11	65	%	46	109
T11H197-65	DS-11-05	EPA 9012B	Sediment	Cyanide (total)	1	<0.20	mg/kg dry	0.20		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-65	DS-11-05	EPA 9071B	Sediment	Oil & Grease (HEM)	1	<820	mg/kg dry	820		08/20/11	08/17/11	09/06/11	09/06/11				
T11H197-65	DS-11-05	PLUMB	Sediment	Chemical Oxygen Demand	1	100000	mg/kg dry	560		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-65	DS-11-05	PLUMB	Sediment	Volatile Solids	1	7.0	% by Wt.	0.10		08/20/11	08/17/11	08/26/11	09/01/11				
T11H197-65	DS-11-05	USACE, In-Place Density	Sediment	In-Place Density	1	1.6	g/mL			08/20/11	08/17/11	08/24/11	08/24/11				
T11H197-65	DS-11-05	WALKLEY BLACK	Sediment	Total Organic Carbon	1	30000	mg/kg dry	1300		08/20/11	08/17/11	08/24/11	08/25/11				
T11H197-66	DS-11-MU1	EPA 350.1 Rev. 2.0	Sediment	Ammonia as N	1	24	mg/kg dry	1.0		08/20/11	08/17/11	08/29/11	08/31/11				
T11H197-66	DS-11-MU1	EPA 351.2 Rev. 2.0	Sediment	Total Kjeldahl Nitrogen	10	1700	mg/kg dry	130		08/20/11	08/17/11	08/30/11	09/01/11				
T11H197-66	DS-11-MU1	EPA 6010B	Sediment	Phosphorus	1	730	mg/kg dry	6.1		08/20/11	08/17/11	09/06/11	09/07/11				

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September 15, 2011

Ms. Mariah Hope
FutureNet Group, Inc.
12801 Auburn Street
Detroit, MI 48223

Phone: (313) 544-7117
Fax: (313) 544-7111

RE: Trace Project T11H197
Client Project Duluth MN/Superior, WI / 11652-0036

Dear Ms. Hope:

Enclosed are your analytical results. The results of this report relate only to the samples listed in the body of this report. **Please see the amended chain of custodies at the end of the report for date changes. The dates have been amended in the body of the report but not amended on the Grain Size reports.**

All reports were examined through Trace's validation process to ensure that requirements for quality and completeness were satisfied. All reported analytical results were obtained in accordance with the methods referenced on the reports. Every practical effort was made to meet the reporting limit specifications for this work, however, some results may have raised reporting limits to correct for percent solids.

For clients that require NELAC Accreditation, Trace certifies that these test results meet all requirements of the NELAC Standard, except for those analytes with a "N" notation. These analytes have not been evaluated by NELAC at Trace's discretion and will not be reported unless requested by client.

If you have questions concerning this report, please contact me at 231.773.5998 or by email at jmink@trace-labs.com.

Sincerely,

Jon Mink
Project Manager

Enclosures

ACCREDITED IN ACCORDANCE WITH nelac

NJDEP Accreditation No. MI008 PADEP Accreditation No. 68-04471

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SAMPLE SUMMARY

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID	Sample ID	Matrix	Collected By	Date Collected	Date Received
T11H197-01	DS-11-16	Sediment	mh	08/15/11 10:00	08/17/11 10:27
T11H197-02	DS-11-17	Sediment	mh	08/15/11 11:30	08/17/11 10:27
T11H197-03	DS-11-18	Sediment	mh	08/15/11 13:30	08/17/11 10:27
T11H197-04	DS-11-19	Sediment	mh	08/16/11 08:30	08/17/11 10:27
T11H197-05	DS-11-20	Sediment	mh	08/16/11 09:45	08/17/11 10:27
T11H197-06	DS-11-MU4	Sediment	mh	08/16/11 10:00	08/17/11 10:27
T11H197-07	DS-11-10	Sediment	mh	08/15/11 16:15	08/17/11 10:27
T11H197-08	DS-11-09	Sediment	mh	08/15/11 17:10	08/17/11 10:27
T11H197-09	DS-11-08	Sediment	mh	08/15/11 18:00	08/17/11 10:27
T11H197-10	DS-11-06	Sediment	mh	08/16/11 10:30	08/17/11 10:27
T11H197-11	DS-11-07	Sediment	mh	08/16/11 11:45	08/17/11 10:27
T11H197-12	DS-11-MU2	Sediment	mh	08/15/11 16:35	08/17/11 10:27
T11H197-13	DS-11-11	Sediment	mh	08/16/11 15:30	08/17/11 10:27
T11H197-14	DS-11-12	Sediment	mh	08/16/11 16:00	08/17/11 10:27
T11H197-15	DS-11-MU4 Elutriate	Elutriate	mh	08/16/11 09:00	08/17/11 10:27
T11H197-16	DS-11-MU2 Elutriate	Elutriate	mh	08/16/11 12:00	08/17/11 10:27
T11H197-17	DS-11-13	Sediment	mh	08/17/11 08:00	08/18/11 10:30
T11H197-18	DS-11-14	Sediment	mh	08/17/11 09:00	08/18/11 10:30
T11H197-19	DS-11-15	Sediment	mh	08/17/11 10:00	08/18/11 10:30
T11H197-20	DS-11-MU3	Sediment	mh	08/17/11 10:30	08/18/11 10:30
T11H197-21	DS-11-MU3 Elutriate	Elutriate	mh	08/17/11 10:30	08/18/11 10:30
T11H197-22	DS-11-41	Sediment	mh	08/17/11 11:45	08/18/11 10:30
T11H197-23	DS-11-42	Sediment	mh	08/17/11 12:00	08/18/11 10:30
T11H197-24	DS-11-43	Sediment	mh	08/17/11 12:15	08/18/11 10:30
T11H197-25	DS-11-44	Sediment	mh	08/17/11 12:00	08/18/11 10:30
T11H197-26	DS-11-45	Sediment	mh	08/17/11 12:50	08/18/11 10:30
T11H197-27	DS-11-HI PU	Sediment	mh	08/17/11 13:00	08/18/11 10:30
T11H197-28	DS-11-46	Sediment	mh	08/17/11 16:30	08/18/11 10:30
T11H197-29	DS-11-47	Sediment	mh	08/17/11 16:45	08/18/11 10:30
T11H197-30	DS-11-48	Sediment	mh	08/17/11 17:00	08/18/11 10:30
T11H197-31	DS-11-21	Sediment	mh	08/17/11 14:30	08/18/11 10:30
T11H197-32	DS-11-22	Sediment	mh	08/17/11 15:45	08/18/11 10:30
T11H197-33	DS-11-36	Sediment	mh	08/18/11 08:00	08/20/11 10:30
T11H197-34	DS-11-37	Sediment	mh	08/18/11 08:30	08/20/11 10:30
T11H197-35	DS-11-38	Sediment	mh	08/18/11 08:50	08/20/11 10:30
T11H197-36	DS-11-39	Sediment	mh	08/18/11 09:00	08/20/11 10:30
T11H197-37	DS-11-40	Sediment	mh	08/18/11 09:20	08/20/11 10:30

CERTIFICATE OF ANALYSIS

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T11H197-38	DS-11-MO PU	Sediment	mh	08/18/11 09:20	08/20/11 10:30
T11H197-39	DS-11-31	Sediment	mh	08/18/11 10:45	08/20/11 10:30
T11H197-40	DS-11-32	Sediment	mh	08/18/11 11:20	08/20/11 10:30
T11H197-41	DS-11-33	Sediment	mh	08/18/11 11:40	08/20/11 10:30
T11H197-42	DS-11-34	Sediment	mh	08/18/11 12:00	08/20/11 10:30
T11H197-43	DS-11-35	Sediment	mh	08/18/11 12:55	08/20/11 10:30
T11H197-44	DS-11-WO PU	Sediment	mh	08/18/11 12:45	08/20/11 10:30
T11H197-45	DS-11-30	Sediment	mh	08/18/11 14:30	08/20/11 10:30
T11H197-46	DS-11-29	Sediment	mh	08/18/11 16:45	08/20/11 10:30
T11H197-47	DS-11-28	Sediment	mh	08/18/11 17:30	08/20/11 10:30
T11H197-48	DS-11-49	Sediment	mh	08/18/11 18:45	08/20/11 10:30
T11H197-49	DS-11-50	Sediment	mh	08/18/11 19:00	08/20/11 10:30
T11H197-50	DS-11-II PU	Sediment	mh	08/18/11 19:00	08/20/11 10:30
T11H197-51	DS-11-MU6 Elutriate	Elutriate	mh	08/18/11 17:00	08/20/11 10:30
T11H197-52	DS-11-MU1 Elutriate	Elutriate	mh	08/19/11 08:00	08/20/11 10:30
T11H197-53	DS-11-23	Sediment	mh	08/20/11 07:00	08/23/11 10:47
T11H197-54	DS-11-24	Sediment	mh	08/20/11 07:25	08/23/11 10:47
T11H197-55	DS-11-25	Sediment	mh	08/20/11 08:00	08/23/11 10:47
T11H197-56	DS-11-26	Sediment	mh	08/20/11 08:45	08/23/11 10:47
T11H197-57	DS-11-27	Sediment	mh	08/20/11 09:00	08/23/11 10:47
T11H197-58	DS-11-MU5	Sediment	mh	08/20/11 08:00	08/23/11 10:47
T11H197-59	DS-11-MU5 Elutriate	Elutriate	mh	08/20/11 08:00	08/23/11 10:47
T11H197-60	DS-11-MU6	Sediment	mh	08/20/11 09:00	08/23/11 10:47
T11H197-61	DS-11-01	Sediment	mh	08/20/11 10:40	08/23/11 10:47
T11H197-62	DS-11-02	Sediment	mh	08/20/11 11:00	08/23/11 10:47
T11H197-63	DS-11-03	Sediment	mh	08/20/11 11:25	08/23/11 10:47
T11H197-64	DS-11-04	Sediment	mh	08/20/11 11:40	08/23/11 10:47
T11H197-65	DS-11-05	Sediment	mh	08/20/11 12:00	08/23/11 10:47
T11H197-66	DS-11-MU1	Sediment	mh	08/20/11 12:00	08/23/11 10:47

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AN EXPLANATION OF TERMS AND SYMBOLS WHICH MAY OCCUR IN THIS REPORT

DEFINITIONS

LCS	Laboratory Control Sample
LCSD	Laboratory Control Sample Duplicate
MS	Matrix Spike
MSD	Matrix Spike Duplicate
RPD	Relative Percent Difference
DUP	Matrix Duplicate
RDL	Reporting Detection Limit
MCL	Maximum Contamination Limit
TIC	Tentatively Identified Compound
<, ND or U	Indicates the compound was analyzed for but not detected
*	Indicates a result that exceeds its associated MCL or Surrogate control limits
N	Indicates that the compound has not been evaluated by NELAC
NA	Indicates that the compound is not available.

DATA QUALIFIERS

Trace ID: T024765-MS2

Analysis: EPA 8270C

2-Fluorobiphenyl	Note 802 : One of the base/neutral surrogate recoveries was outside the control limits. Since the other two base/neutral surrogates were within the control limits, no data require qualification.
Benzo (a) pyrene	Note 208 : The MS recovery was out of control. Because the MSD recovery and the RPD between the MS and the MSD were in control, no data require qualification.
Phenanthrene	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024765-MSD2

Analysis: EPA 8270C

2-Fluorobiphenyl	Note 802 : One of the base/neutral surrogate recoveries was outside the control limits. Since the other two base/neutral surrogates were within the control limits, no data require qualification.
Benzo (a) pyrene	Note 208 : The MS recovery was out of control. Because the MSD recovery and the RPD between the MS and the MSD were in control, no data require qualification.
Phenanthrene	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024778-MS1

Analysis: EPA 6010B

Iron	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

Analysis: EPA 6020

Copper	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

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Manganese	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.
Nickel	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024778-MSD1

Analysis: EPA 6010B

Iron	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

Analysis: EPA 6020

Barium	Note 209 : The MSD recovery was out of control. Because the MS recovery and the RPD between the MS and the MSD were in control, no data require qualification.
Chromium	Note 209 : The MSD recovery was out of control. Because the MS recovery and the RPD between the MS and the MSD were in control, no data require qualification.
Copper	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Manganese	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.
Nickel	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024794-MS1

Analysis: EPA 6010B

Iron	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

Analysis: EPA 6020

Manganese	Note 226 : The MS recovery was out of control, resulting in an out of control RPD between the MS and MSD. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

Trace ID: T024794-MSD1

Analysis: EPA 6010B

Iron	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

Analysis: EPA 6020

Manganese	Note 226 : The MS recovery was out of control, resulting in an out of control RPD between the MS and MSD. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

Trace ID: T024822-MS1

Analysis: WALKLEY BLACK

Total Organic Carbon	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024822-MSD1

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Analysis: WALKLEY BLACK

Total Organic Carbon	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024823-MS1

Analysis: PLUMB

Chemical Oxygen Demand	Note 202 : The MS recovery was out of control low, resulting in an out of control RPD between the MS and the MSD. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024823-MSD1

Analysis: PLUMB

Chemical Oxygen Demand	Note 202 : The MS recovery was out of control low, resulting in an out of control RPD between the MS and the MSD. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024824-MSD1

Analysis: PLUMB

Chemical Oxygen Demand	Note 207 : The RPD between the MS and the MSD was out of control. Because both spike recoveries were in control, no data require qualification.

Trace ID: T024877-MS1

Analysis: PLUMB

Chemical Oxygen Demand	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024877-MSD1

Analysis: PLUMB

Chemical Oxygen Demand	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024894-MS2

Analysis: EPA 350.1 Rev. 2.0

Ammonia as N	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024894-MSD2

Analysis: EPA 350.1 Rev. 2.0

Ammonia as N	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024913-MSD2

Analysis: EPA 8270C

Benzo (a) pyrene	Note 207 : The RPD between the MS and the MSD was out of control. Because both spike recoveries were in control, no data require qualification.
Benzo (g,h,i) perylene	Note 207 : The RPD between the MS and the MSD was out of control. Because both spike recoveries were in control, no data require qualification.
Indeno (1,2,3-cd) pyrene	Note 207 : The RPD between the MS and the MSD was out of control. Because both spike recoveries were in control, no data require qualification.

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Phenanthrene	Note 207 : The RPD between the MS and the MSD was out of control. Because both spike recoveries were in control, no data require qualification.
Pyrene	Note 207 : The RPD between the MS and the MSD was out of control. Because both spike recoveries were in control, no data require qualification.

Trace ID: T024917-MSD2

Analysis: EPA 351.2 Rev. 2.0

Total Kjeldahl Nitrogen	Note 207 : The RPD between the MS and the MSD was out of control. Because both spike recoveries were in control, no data require qualification.

Trace ID: T024921-MSD2

Analysis: EPA 351.2 Rev. 2.0

Total Kjeldahl Nitrogen	Note 207 : The RPD between the MS and the MSD was out of control. Because both spike recoveries were in control, no data require qualification.

Trace ID: T024976-MS1

Analysis: EPA 350.1

Ammonia as N	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024976-MSD1

Analysis: EPA 350.1

Ammonia as N	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T024977-MSD1

Analysis: EPA 351.2 Rev. 2.0

Total Kjeldahl Nitrogen	Note 203 : The MSD recovery was out of control high, resulting in an out of control RPD between the MS and the MSD. The result for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T025033-MS1

Analysis: EPA 6010B

Iron	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

Analysis: EPA 6020

Chromium	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Copper	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Manganese	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.
Nickel	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Selenium	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

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Analysis: EPA 7471A

Mercury	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T025033-MSD1

Analysis: EPA 6010B

Iron	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.
Phosphorus	Note 209 : The MSD recovery was out of control. Because the MS recovery and the RPD between the MS and the MSD were in control, no data require qualification.

Analysis: EPA 6020

Arsenic	Note 209 : The MSD recovery was out of control. Because the MS recovery and the RPD between the MS and the MSD were in control, no data require qualification.
Barium	Note 207 : The RPD between the MS and the MSD was out of control. Because both spike recoveries were in control, no data require qualification.
Chromium	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Copper	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Manganese	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.
Nickel	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Selenium	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Zinc	Note 207 : The RPD between the MS and the MSD was out of control. Because both spike recoveries were in control, no data require qualification.

Analysis: EPA 7471A

Mercury	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T025072-MS1

Analysis: EPA 6010B

Iron	Note 227 : The MSD recovery was out of control, resulting in an out of control RPD between the MS and MSD. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

Trace ID: T025072-MSD1

Analysis: EPA 6010B

Iron	Note 227 : The MSD recovery was out of control, resulting in an out of control RPD between the MS and MSD. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

Trace ID: T025076-MS1

Analysis: EPA 6010B

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Iron	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

Analysis: EPA 6020

Copper	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Nickel	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T025076-MSD1

Analysis: EPA 6010B

Iron	Note 223 : The MS and MSD recoveries and the RPD were out of control. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.

Analysis: EPA 6020

Barium	Note 207 : The RPD between the MS and the MSD was out of control. Because both spike recoveries were in control, no data require qualification.
Chromium	Note 209 : The MSD recovery was out of control. Because the MS recovery and the RPD between the MS and the MSD were in control, no data require qualification.
Copper	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Manganese	Note 227 : The MSD recovery was out of control, resulting in an out of control RPD between the MS and MSD. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.
Nickel	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Zinc	Note 209 : The MSD recovery was out of control. Because the MS recovery and the RPD between the MS and the MSD were in control, no data require qualification.

Trace ID: T11H197-03

Analysis: EPA 8270C

2-Fluorobiphenyl	Note 802 : One of the base/neutral surrogate recoveries was outside the control limits. Since the other two base/neutral surrogates were within the control limits, no data require qualification.

Trace ID: T11H197-08RE1

Analysis: EPA 8082

Decachlorobiphenyl	Note 314.5 : The surrogate was out of control low in the initial analysis and reanalysis. The results and reporting limits must be considered estimated.
Tetrachloro-m-xylene	Note 314.5 : The surrogate was out of control low in the initial analysis and reanalysis. The results and reporting limits must be considered estimated.

Trace ID: T11H197-10

Analysis: EPA 350.1 Rev. 2.0

Ammonia as N	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Analysis: EPA 6020

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Chromium	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Copper	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Nickel	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Selenium	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Analysis: EPA 7471A	
Mercury	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Analysis: EPA 8270C	
2-Fluorobiphenyl	Note 802 : One of the base/neutral surrogate recoveries was outside the control limits. Since the other two base/neutral surrogates were within the control limits, no data require qualification.
Phenanthrene	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Analysis: PLUMB	
Chemical Oxygen Demand	Note 202 : The MS recovery was out of control low, resulting in an out of control RPD between the MS and the MSD. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Analysis: WALKLEY BLACK	
Total Organic Carbon	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T11H197-15

Analysis: EPA 350.1

Ammonia as N	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T11H197-22

Analysis: EPA 8270C

2-Fluorobiphenyl	Note 802 : One of the base/neutral surrogate recoveries was outside the control limits. Since the other two base/neutral surrogates were within the control limits, no data require qualification.

Trace ID: T11H197-23RE1

Analysis: EPA 8082

Decachlorobiphenyl	Note 314.5 : The surrogate was out of control low in the initial analysis and reanalysis. The results and reporting limits must be considered estimated.
Tetrachloro-m-xylene	Note 314.5 : The surrogate was out of control low in the initial analysis and reanalysis. The results and reporting limits must be considered estimated.

Trace ID: T11H197-24

Analysis: EPA 8082

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Tetrachloro-m-xylene	Note 303 : The secondary surrogate (tetrachloro-m-xylene) recovery for this sample fell outside the laboratory established control limits. The primary surrogate (decachlorobiphenyl) recovery was in control. No data require qualification.

Trace ID: T11H197-25RE1

Analysis: EPA 8082

Tetrachloro-m-xylene	Note 303 : The secondary surrogate (tetrachloro-m-xylene) recovery for this sample fell outside the laboratory established control limits. The primary surrogate (decachlorobiphenyl) recovery was in control. No data require qualification.

Trace ID: T11H197-26

Analysis: EPA 6020

Copper	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Nickel	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T11H197-26RE1

Analysis: EPA 8082

Decachlorobiphenyl	Note 314.5 : The surrogate was out of control low in the initial analysis and reanalysis. The results and reporting limits must be considered estimated.
Tetrachloro-m-xylene	Note 314.5 : The surrogate was out of control low in the initial analysis and reanalysis. The results and reporting limits must be considered estimated.

Trace ID: T11H197-29

Analysis: EPA 8082

Tetrachloro-m-xylene	Note 303 : The secondary surrogate (tetrachloro-m-xylene) recovery for this sample fell outside the laboratory established control limits. The primary surrogate (decachlorobiphenyl) recovery was in control. No data require qualification.

Trace ID: T11H197-30

Analysis: EPA 8082

Tetrachloro-m-xylene	Note 303 : The secondary surrogate (tetrachloro-m-xylene) recovery for this sample fell outside the laboratory established control limits. The primary surrogate (decachlorobiphenyl) recovery was in control. No data require qualification.

Trace ID: T11H197-45

Analysis: EPA 8082

Tetrachloro-m-xylene	Note 303 : The secondary surrogate (tetrachloro-m-xylene) recovery for this sample fell outside the laboratory established control limits. The primary surrogate (decachlorobiphenyl) recovery was in control. No data require qualification.

Trace ID: T11H197-46

Analysis: EPA 8270C

Terphenyl-d14	Note 802 : One of the base/neutral surrogate recoveries was outside the control limits. Since the other two base/neutral surrogates were within the control limits, no data require qualification.

Trace ID: T11H197-47

Analysis: EPA 8082

Aroclor-1254	Note 900 : Sample had PCB peaks present throughout the entire aroclor range. Arochor 1254 potentially present but quantitification is not possible due to peak overlaps.

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Decachlorobiphenyl	Note 304 : The primary surrogate (decachlorobiphenyl) recovery for this sample fell outside the laboratory established control limits. The secondary surrogate (tetrachloro-m-xylene) recovery was in control. No data require qualification.

Trace ID: T11H197-48

Analysis: EPA 8082

Tetrachloro-m-xylene	Note 303 : The secondary surrogate (tetrachloro-m-xylene) recovery for this sample fell outside the laboratory established control limits. The primary surrogate (decachlorobiphenyl) recovery was in control. No data require qualification.

Analysis: EPA 8270C

2-Fluorobiphenyl	Note 802 : One of the base/neutral surrogate recoveries was outside the control limits. Since the other two base/neutral surrogates were within the control limits, no data require qualification.

Trace ID: T11H197-49

Analysis: EPA 8270C

2-Fluorobiphenyl	Note 802 : One of the base/neutral surrogate recoveries was outside the control limits. Since the other two base/neutral surrogates were within the control limits, no data require qualification.

Trace ID: T11H197-53

Analysis: EPA 8270C

2-Fluorobiphenyl	Note 802 : One of the base/neutral surrogate recoveries was outside the control limits. Since the other two base/neutral surrogates were within the control limits, no data require qualification.

Trace ID: T11H197-54

Analysis: EPA 8082

Tetrachloro-m-xylene	Note 303 : The secondary surrogate (tetrachloro-m-xylene) recovery for this sample fell outside the laboratory established control limits. The primary surrogate (decachlorobiphenyl) recovery was in control. No data require qualification.

Trace ID: T11H197-57

Analysis: EPA 351.2 Rev. 2.0

Total Kjeldahl Nitrogen	Note 203 : The MSD recovery was out of control high, resulting in an out of control RPD between the MS and the MSD. The result for this analyte, in the non-spiked version of the sample, must be considered estimated.

Analysis: EPA 6020

Copper	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.
Manganese	Note 227 : The MSD recovery was out of control, resulting in an out of control RPD between the MS and MSD. Because the background concentration of this analyte is greater than four times the spike amount, no data require qualification.
Nickel	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Analysis: PLUMB

Chemical Oxygen Demand	Note 205 : The MS and MSD recoveries were out of control low. The result and reporting limit for this analyte, in the non-spiked version of the sample, must be considered estimated.

Trace ID: T11H197-62

Analysis: EPA 8082

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Tetrachloro-m-xylene	Note 303 : The secondary surrogate (tetrachloro-m-xylene) recovery for this sample fell outside the laboratory established control limits. The primary surrogate (decachlorobiphenyl) recovery was in control. No data require qualification.

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-01 | Date Collected: 08/15/11 10:00 | Matrix: Sediment
Sample ID: DS-11-16 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluorene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Surrogates:										
Nitrobenzene-d5	57	%	36-98	1	08/18/11	kb	08/22/11	gmr		
2-Fluorobiphenyl	53	%	44-105	1	08/18/11	kb	08/22/11	gmr		
Terphenyl-d14	64	%	46-109	1	08/18/11	kb	08/22/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024727										
Aroclor-1016	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1221	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1232	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1242	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1248	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1254	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1260	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Surrogates:										
Tetrachloro-m-xylene	41	%	40-113	1	08/18/11	kb	08/24/11	tim	N	
Decachlorobiphenyl	57	%	32-111	1	08/18/11	kb	08/24/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-01 | Date Collected: 08/15/11 10:00 | Matrix: Sediment
Sample ID: DS-11-16 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024794										
Iron	**17000**	**mg/kg dry**	**5.0**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**480**	**mg/kg dry**	**5.7**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024794										
Arsenic	**2.1**	**mg/kg dry**	**0.11**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Barium	**45**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	08/22/11	ns	09/07/11	jd		
Chromium	**18**	**mg/kg dry**	**2.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Copper	**9.4**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Lead	**9.1**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Manganese	**540**	**mg/kg dry**	**1.8**	**100**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Nickel	**11**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.36	mg/kg dry	0.36	10	08/22/11	ns	09/07/11	jd		
Silver	**0.14**	**mg/kg dry**	**0.10**	**10**	**08/22/11**	**ns**	**09/12/11**	**jd**		
Zinc	**37**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024794										
Mercury	<0.050	mg/kg dry	0.050	1	08/22/11	ns	08/24/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024706										
% Solids	**60**	**% by Wt.**	**0.10**	**1**	**08/17/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024732										
Specific Gravity	**2.6**			**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	**39**	**mg/kg dry**	**1.0**	**1**	**08/25/11**	**sm**	**08/26/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-01 | Date Collected: 08/15/11 10:00 | Matrix: Sediment
Sample ID: DS-11-16 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**580**	**mg/kg dry**	**15**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	**0.31**	**mg/kg dry**	**0.20**	**1**	**08/18/11**	**bd**	**08/19/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**30000**	**mg/kg dry**	**480**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**3.8**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024704										
In-Place Density	**1.9**	**g/mL**		**1**	**08/17/11**	**as**	**08/17/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024736										
Total Organic Carbon	**16000**	**mg/kg dry**	**1100**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<700	mg/kg dry	700	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-02 | Date Collected: 08/15/11 11:30 | Matrix: Sediment
Sample ID: DS-11-17 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluorene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Surrogates:										
Nitrobenzene-d5	55	%	36-98	1	08/18/11	kb	08/22/11	gmr		
2-Fluorobiphenyl	52	%	44-105	1	08/18/11	kb	08/22/11	gmr		
Terphenyl-d14	61	%	46-109	1	08/18/11	kb	08/22/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024971										
Aroclor-1016	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1221	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1232	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1242	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1248	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1254	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1260	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Surrogates:										
Tetrachloro-m-xylene	47	%	40-113	1	08/29/11	kb	08/31/11	tim	N	
Decachlorobiphenyl	53	%	32-111	1	08/29/11	kb	08/31/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-02 | Date Collected: 08/15/11 11:30 | Matrix: Sediment
Sample ID: DS-11-17 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024794										
Iron	**18000**	**mg/kg dry**	**5.0**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**500**	**mg/kg dry**	**5.8**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024794										
Arsenic	**2.6**	**mg/kg dry**	**0.11**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Barium	**67**	**mg/kg dry**	**2.8**	**100**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.20**	**mg/kg dry**	**0.20**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Chromium	**20**	**mg/kg dry**	**2.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Copper	**15**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Lead	**15**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Manganese	**750**	**mg/kg dry**	**3.7**	**200**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Nickel	**14**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	08/22/11	ns	09/07/11	jd		
Silver	**0.25**	**mg/kg dry**	**0.10**	**10**	**08/22/11**	**ns**	**09/12/11**	**jd**		
Zinc	**60**	**mg/kg dry**	**9.3**	**100**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024794										
Mercury	**0.091**	**mg/kg dry**	**0.050**	**1**	**08/22/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024706										
% Solids	**56**	**% by Wt.**	**0.10**	**1**	**08/17/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024732										
Specific Gravity	**2.5**			**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	**100**	**mg/kg dry**	**1.1**	**1**	**08/25/11**	**sm**	**08/26/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										
Total Kjeldahl Nitrogen	**1200**	**mg/kg dry**	**30**	**2**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-02 | Date Collected: 08/15/11 11:30 | Matrix: Sediment
Sample ID: DS-11-17 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	**0.27**	**mg/kg dry**	**0.20**	**1**	**08/18/11**	**bd**	**08/19/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**51000**	**mg/kg dry**	**510**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**5.8**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024704										
In-Place Density	**1.6**	**g/mL**		**1**	**08/17/11**	**as**	**08/17/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024736										
Total Organic Carbon	**24000**	**mg/kg dry**	**1200**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<750	mg/kg dry	750	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-03 | Date Collected: 08/15/11 13:30 | Matrix: Sediment
Sample ID: DS-11-18 | Date Received: 08/17/11 10:27

PARAMETERS		RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS											
Analysis Method: EPA 8270C											
Batch: T024765											
Naphthalene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
2-Methylnaphthalene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthylene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluorene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Phenanthrene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Anthracene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluoranthene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Pyrene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) anthracene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Chrysene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (b) fluoranthene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (k) fluoranthene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) pyrene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Indeno (1,2,3-cd) pyrene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Dibenz (a,h) anthracene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (g,h,i) perylene		<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Surrogates:											
Nitrobenzene-d5		48	%	36-98	1	08/18/11	kb	08/22/11	gmr		
2-Fluorobiphenyl	*	**40**	%	44-105	1	08/18/11	kb	08/22/11	gmr	802	
Terphenyl-d14		58	%	46-109	1	08/18/11	kb	08/22/11	gmr		
PESTICIDES/PCBS											
Analysis Method: EPA 8082											
Batch: T024971											
Aroclor-1016		<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim		
Aroclor-1221		<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim		
Aroclor-1232		<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim		
Aroclor-1242		<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim		
Aroclor-1248		<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim		
Aroclor-1254		<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim		
Aroclor-1260		<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim		
Surrogates:											
Tetrachloro-m-xylene		52	%	40-113	1	08/29/11	kb	08/31/11	tim	N	
Decachlorobiphenyl		58	%	32-111	1	08/29/11	kb	08/31/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-03 | Date Collected: 08/15/11 13:30 | Matrix: Sediment
Sample ID: DS-11-18 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024794										
Iron	**17000**	**mg/kg dry**	**5.0**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**450**	**mg/kg dry**	**5.8**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024794										
Arsenic	**1.9**	**mg/kg dry**	**0.11**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Barium	**34**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	08/22/11	ns	09/07/11	jd		
Chromium	**16**	**mg/kg dry**	**2.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Copper	**7.8**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Lead	**6.5**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Manganese	**450**	**mg/kg dry**	**1.8**	**100**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Nickel	**9.4**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	08/22/11	ns	09/07/11	jd		
Silver	**0.11**	**mg/kg dry**	**0.10**	**10**	**08/22/11**	**ns**	**09/12/11**	**jd**		
Zinc	**30**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024794										
Mercury	<0.050	mg/kg dry	0.050	1	08/22/11	ns	08/24/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024706										
% Solids	**62**	**% by Wt.**	**0.10**	**1**	**08/17/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024732										
Specific Gravity	**2.6**			**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	**40**	**mg/kg dry**	**1.0**	**1**	**08/25/11**	**sm**	**08/26/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										
Total Kjeldahl Nitrogen	**470**	**mg/kg dry**	**21**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-03 | Date Collected: 08/15/11 13:30 | Matrix: Sediment
Sample ID: DS-11-18 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	**0.28**	**mg/kg dry**	**0.20**	**1**	**08/18/11**	**bd**	**08/19/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**28000**	**mg/kg dry**	**460**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**3.5**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024704										
In-Place Density	**1.5**	**g/mL**		**1**	**08/17/11**	**as**	**08/17/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024736										
Total Organic Carbon	**15000**	**mg/kg dry**	**1100**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<680	mg/kg dry	680	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-04 | Date Collected: 08/16/11 08:30 | Matrix: Sediment
Sample ID: DS-11-19 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluorene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Surrogates:										
Nitrobenzene-d5	57	%	36-98	1	08/18/11	kb	08/22/11	gmr		
2-Fluorobiphenyl	55	%	44-105	1	08/18/11	kb	08/22/11	gmr		
Terphenyl-d14	69	%	46-109	1	08/18/11	kb	08/22/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024727										
Aroclor-1016	<81	ug/kg dry	81	1	08/18/11	kb	08/24/11	tim		
Aroclor-1221	<81	ug/kg dry	81	1	08/18/11	kb	08/24/11	tim		
Aroclor-1232	<81	ug/kg dry	81	1	08/18/11	kb	08/24/11	tim		
Aroclor-1242	<81	ug/kg dry	81	1	08/18/11	kb	08/24/11	tim		
Aroclor-1248	<81	ug/kg dry	81	1	08/18/11	kb	08/24/11	tim		
Aroclor-1254	<81	ug/kg dry	81	1	08/18/11	kb	08/24/11	tim		
Aroclor-1260	<81	ug/kg dry	81	1	08/18/11	kb	08/24/11	tim		
Surrogates:										
Tetrachloro-m-xylene	48	%	40-113	1	08/18/11	kb	08/24/11	tim	N	
Decachlorobiphenyl	73	%	32-111	1	08/18/11	kb	08/24/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-04 | Date Collected: 08/16/11 08:30 | Matrix: Sediment
Sample ID: DS-11-19 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024794										
Iron	**8400**	**mg/kg dry**	**5.0**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**250**	**mg/kg dry**	**6.0**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024794										
Arsenic	**1.1**	**mg/kg dry**	**0.11**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Barium	**12**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	08/22/11	ns	09/07/11	jd		
Chromium	**9.7**	**mg/kg dry**	**2.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Copper	**16**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Lead	**2.6**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Manganese	**120**	**mg/kg dry**	**1.9**	**100**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Nickel	**8.8**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	08/22/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	08/22/11	ns	09/12/11	jd		
Zinc	**14**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024794										
Mercury	<0.050	mg/kg dry	0.050	1	08/22/11	ns	08/24/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024706										
% Solids	**82**	**% by Wt.**	**0.10**	**1**	**08/17/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024732										
Specific Gravity	**2.7**			**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	<1.0	mg/kg dry	1.0	1	08/25/11	sm	08/26/11	sm	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-04 | Date Collected: 08/16/11 08:30 | Matrix: Sediment
Sample ID: DS-11-19 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**44**	**mg/kg dry**	**18**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/18/11	bd	08/19/11	da	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**2000**	**mg/kg dry**	**350**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**0.55**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024704										
In-Place Density	**2.3**	**g/mL**		**1**	**08/17/11**	**as**	**08/17/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024736										
Total Organic Carbon	**1800**	**mg/kg dry**	**1000**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<510	mg/kg dry	510	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-05 | Date Collected: 08/16/11 09:45 | Matrix: Sediment
Sample ID: DS-11-20 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluorene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Surrogates:										
Nitrobenzene-d5	67	%	36-98	1	08/18/11	kb	08/22/11	gmr		
2-Fluorobiphenyl	64	%	44-105	1	08/18/11	kb	08/22/11	gmr		
Terphenyl-d14	67	%	46-109	1	08/18/11	kb	08/22/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024727										
Aroclor-1016	<85	ug/kg dry	85	1	08/18/11	kb	08/24/11	tim		
Aroclor-1221	<85	ug/kg dry	85	1	08/18/11	kb	08/24/11	tim		
Aroclor-1232	<85	ug/kg dry	85	1	08/18/11	kb	08/24/11	tim		
Aroclor-1242	<85	ug/kg dry	85	1	08/18/11	kb	08/24/11	tim		
Aroclor-1248	<85	ug/kg dry	85	1	08/18/11	kb	08/24/11	tim		
Aroclor-1254	<85	ug/kg dry	85	1	08/18/11	kb	08/24/11	tim		
Aroclor-1260	<85	ug/kg dry	85	1	08/18/11	kb	08/24/11	tim		
Surrogates:										
Tetrachloro-m-xylene	71	%	40-113	1	08/18/11	kb	08/24/11	tim	N	
Decachlorobiphenyl	86	%	32-111	1	08/18/11	kb	08/24/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-05 | Date Collected: 08/16/11 09:45 | Matrix: Sediment
Sample ID: DS-11-20 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024794										
Iron	**9000**	**mg/kg dry**	**5.0**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**230**	**mg/kg dry**	**6.1**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024794										
Arsenic	**1.1**	**mg/kg dry**	**0.12**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Barium	**10**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	08/22/11	ns	09/07/11	jd		
Chromium	**8.2**	**mg/kg dry**	**2.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Copper	**4.0**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Lead	**2.6**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Manganese	**140**	**mg/kg dry**	**1.9**	**100**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Nickel	**6.0**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	08/22/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	08/22/11	ns	09/12/11	jd		
Zinc	**12**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024794										
Mercury	<0.050	mg/kg dry	0.050	1	08/22/11	ns	08/24/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024706										
% Solids	**79**	**% by Wt.**	**0.10**	**1**	**08/17/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024732										
Specific Gravity	**2.6**			**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	<1.0	mg/kg dry	1.0	1	08/25/11	sm	08/26/11	sm	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-05 | Date Collected: 08/16/11 09:45 | Matrix: Sediment
Sample ID: DS-11-20 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**50**	**mg/kg dry**	**15**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/18/11	bd	08/19/11	da	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**4500**	**mg/kg dry**	**360**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**0.69**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024704										
In-Place Density	**2.7**	**g/mL**		**1**	**08/17/11**	**as**	**08/17/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024736										
Total Organic Carbon	**2700**	**mg/kg dry**	**1000**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<530	mg/kg dry	530	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-06 | Date Collected: 08/16/11 10:00 | Matrix: Sediment
Sample ID: DS-11-MU4 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Phosphorus	**390**	**mg/kg dry**	**6.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
WET CHEMISTRY										
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T025020										
Ammonia as N	**44**	**mg/kg dry**	**1.0**	**1**	**08/31/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024977										
Total Kjeldahl Nitrogen	**350**	**mg/kg dry**	**15**	**1**	**08/31/11**	**da**	**09/01/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-07 | Date Collected: 08/15/11 16:15 | Matrix: Sediment
Sample ID: DS-11-10 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluorene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Surrogates:										
Nitrobenzene-d5	55	%	36-98	1	08/18/11	kb	08/22/11	gmr		
2-Fluorobiphenyl	50	%	44-105	1	08/18/11	kb	08/22/11	gmr		
Terphenyl-d14	65	%	46-109	1	08/18/11	kb	08/22/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024971										
Aroclor-1016	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1221	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1232	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1242	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1248	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1254	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Aroclor-1260	<120	ug/kg dry	120	1	08/29/11	kb	08/31/11	tim		
Surrogates:										
Tetrachloro-m-xylene	45	%	40-113	1	08/29/11	kb	08/31/11	tim	N	
Decachlorobiphenyl	50	%	32-111	1	08/29/11	kb	08/31/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-07 | Date Collected: 08/15/11 16:15 | Matrix: Sediment
Sample ID: DS-11-10 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024794										
Iron	**19000**	**mg/kg dry**	**5.0**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**620**	**mg/kg dry**	**5.8**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024794										
Arsenic	**2.9**	**mg/kg dry**	**0.11**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Barium	**88**	**mg/kg dry**	**2.7**	**100**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.30**	**mg/kg dry**	**0.20**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Chromium	**22**	**mg/kg dry**	**2.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Copper	**22**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Lead	**31**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Manganese	**660**	**mg/kg dry**	**3.7**	**200**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Nickel	**17**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	08/22/11	ns	09/07/11	jd		
Silver	**0.26**	**mg/kg dry**	**0.10**	**10**	**08/22/11**	**ns**	**09/12/11**	**jd**		
Zinc	**95**	**mg/kg dry**	**9.1**	**100**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024794										
Mercury	**0.13**	**mg/kg dry**	**0.050**	**1**	**08/22/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024706										
% Solids	**54**	**% by Wt.**	**0.10**	**1**	**08/17/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024732										
Specific Gravity	**2.5**			**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	**160**	**mg/kg dry**	**1.0**	**1**	**08/25/11**	**sm**	**08/26/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										
Total Kjeldahl Nitrogen	**1300**	**mg/kg dry**	**24**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-07 | Date Collected: 08/15/11 16:15 | Matrix: Sediment
Sample ID: DS-11-10 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	**0.23**	**mg/kg dry**	**0.20**	**1**	**08/18/11**	**bd**	**08/19/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**66000**	**mg/kg dry**	**530**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**7.0**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024704										
In-Place Density	**1.5**	**g/mL**		**1**	**08/17/11**	**as**	**08/17/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024736										
Total Organic Carbon	<1300	mg/kg dry	1300	1	08/18/11	bd	08/18/11	bd	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<780	mg/kg dry	780	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-08 | Date Collected: 08/15/11 17:10 | Matrix: Sediment
Sample ID: DS-11-09 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<350	ug/kg dry	350	1	08/18/11	kb	08/22/11	gmr		
2-Methylnaphthalene	<350	ug/kg dry	350	1	08/18/11	kb	08/22/11	gmr		
Acenaphthylene	<350	ug/kg dry	350	1	08/18/11	kb	08/22/11	gmr		
Acenaphthene	<350	ug/kg dry	350	1	08/18/11	kb	08/22/11	gmr		
Fluorene	<350	ug/kg dry	350	1	08/18/11	kb	08/22/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Anthracene	<350	ug/kg dry	350	1	08/18/11	kb	08/22/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Pyrene	<350	ug/kg dry	350	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Surrogates:										
Nitrobenzene-d5	59	%	36-98	1	08/18/11	kb	08/22/11	gmr		
2-Fluorobiphenyl	49	%	44-105	1	08/18/11	kb	08/22/11	gmr		
Terphenyl-d14	62	%	46-109	1	08/18/11	kb	08/22/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024971										
Aroclor-1016	<140	ug/kg dry	140	1	08/29/11	kb	08/31/11	tim		
Aroclor-1221	<140	ug/kg dry	140	1	08/29/11	kb	08/31/11	tim		
Aroclor-1232	<140	ug/kg dry	140	1	08/29/11	kb	08/31/11	tim		
Aroclor-1242	<140	ug/kg dry	140	1	08/29/11	kb	08/31/11	tim		
Aroclor-1248	<140	ug/kg dry	140	1	08/29/11	kb	08/31/11	tim		
Aroclor-1254	<140	ug/kg dry	140	1	08/29/11	kb	08/31/11	tim		
Aroclor-1260	<140	ug/kg dry	140	1	08/29/11	kb	08/31/11	tim		
Surrogates:										
Tetrachloro-m-xylene	* **22**	%	40-113	1	08/29/11	kb	08/31/11	tim	314.5, N	
Decachlorobiphenyl	* **24**	%	32-111	1	08/29/11	kb	08/31/11	tim	314.5, N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-08 | Date Collected: 08/15/11 17:10 | Matrix: Sediment
Sample ID: DS-11-09 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024794										
Iron	**30000**	**mg/kg dry**	**28**	**10**	**08/22/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**800**	**mg/kg dry**	**6.0**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024794										
Arsenic	**3.6**	**mg/kg dry**	**0.11**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Barium	**140**	**mg/kg dry**	**2.8**	**100**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.53**	**mg/kg dry**	**0.20**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Chromium	**35**	**mg/kg dry**	**2.0**	**10**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Copper	**24**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Lead	**29**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Manganese	**550**	**mg/kg dry**	**3.8**	**200**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Nickel	**23**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	08/22/11	ns	09/07/11	jd		
Silver	**0.74**	**mg/kg dry**	**0.10**	**10**	**08/22/11**	**ns**	**09/12/11**	**jd**		
Zinc	**140**	**mg/kg dry**	**9.5**	**100**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024794										
Mercury	**0.21**	**mg/kg dry**	**0.050**	**1**	**08/22/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024706										
% Solids	**47**	**% by Wt.**	**0.10**	**1**	**08/17/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024732										
Specific Gravity	**2.2**			**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	**16**	**mg/kg dry**	**1.0**	**1**	**08/25/11**	**sm**	**08/26/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										
Total Kjeldahl Nitrogen	**1900**	**mg/kg dry**	**44**	**2**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-08 | Date Collected: 08/15/11 17:10 | Matrix: Sediment
Sample ID: DS-11-09 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	**0.25**	**mg/kg dry**	**0.20**	**1**	**08/18/11**	**bd**	**08/19/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**96000**	**mg/kg dry**	**610**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**16**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024704										
In-Place Density	**1.4**	**g/mL**		**1**	**08/17/11**	**as**	**08/17/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024736										
Total Organic Carbon	**48000**	**mg/kg dry**	**1400**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<890	mg/kg dry	890	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-09 | Date Collected: 08/15/11 18:00 | Matrix: Sediment
Sample ID: DS-11-08 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<410	ug/kg dry	410	1	08/18/11	kb	08/22/11	gmr		
2-Methylnaphthalene	<410	ug/kg dry	410	1	08/18/11	kb	08/22/11	gmr		
Acenaphthylene	<410	ug/kg dry	410	1	08/18/11	kb	08/22/11	gmr		
Acenaphthene	<410	ug/kg dry	410	1	08/18/11	kb	08/22/11	gmr		
Fluorene	<410	ug/kg dry	410	1	08/18/11	kb	08/22/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Anthracene	<410	ug/kg dry	410	1	08/18/11	kb	08/22/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Pyrene	<410	ug/kg dry	410	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Surrogates:										
Nitrobenzene-d5	59	%	36-98	1	08/18/11	kb	08/22/11	gmr		
2-Fluorobiphenyl	58	%	44-105	1	08/18/11	kb	08/22/11	gmr		
Terphenyl-d14	69	%	46-109	1	08/18/11	kb	08/22/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024727										
Aroclor-1016	<160	ug/kg dry	160	1	08/18/11	kb	08/24/11	tim		
Aroclor-1221	<160	ug/kg dry	160	1	08/18/11	kb	08/24/11	tim		
Aroclor-1232	<160	ug/kg dry	160	1	08/18/11	kb	08/24/11	tim		
Aroclor-1242	<160	ug/kg dry	160	1	08/18/11	kb	08/24/11	tim		
Aroclor-1248	<160	ug/kg dry	160	1	08/18/11	kb	08/24/11	tim		
Aroclor-1254	<160	ug/kg dry	160	1	08/18/11	kb	08/24/11	tim		
Aroclor-1260	<160	ug/kg dry	160	1	08/18/11	kb	08/24/11	tim		
Surrogates:										
Tetrachloro-m-xylene	58	%	40-113	1	08/18/11	kb	08/24/11	tim	N	
Decachlorobiphenyl	63	%	32-111	1	08/18/11	kb	08/24/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-09 | Date Collected: 08/15/11 18:00 | Matrix: Sediment
Sample ID: DS-11-08 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024794										
Iron	**11000**	**mg/kg dry**	**5.0**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**340**	**mg/kg dry**	**5.9**	**1**	**08/22/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024794										
Arsenic	**1.6**	**mg/kg dry**	**0.11**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Barium	**30**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	08/22/11	ns	09/07/11	jd		
Chromium	**11**	**mg/kg dry**	**2.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Copper	**7.2**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Lead	**5.3**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Manganese	**350**	**mg/kg dry**	**1.9**	**100**	**08/22/11**	**ns**	**09/08/11**	**jd**		
Nickel	**8.9**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	08/22/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	08/22/11	ns	09/07/11	jd		
Zinc	**24**	**mg/kg dry**	**1.0**	**10**	**08/22/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024794										
Mercury	<0.050	mg/kg dry	0.050	1	08/22/11	ns	08/24/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024706										
% Solids	**41**	**% by Wt.**	**0.10**	**1**	**08/17/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024732										
Specific Gravity	**2.7**			**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	**24**	**mg/kg dry**	**1.0**	**1**	**08/25/11**	**sm**	**08/26/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-09 | Date Collected: 08/15/11 18:00 | Matrix: Sediment
Sample ID: DS-11-08 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**550**	**mg/kg dry**	**23**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	**0.26**	**mg/kg dry**	**0.20**	**1**	**08/18/11**	**bd**	**08/19/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**43000**	**mg/kg dry**	**700**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**4.5**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024704										
In-Place Density	**1.8**	**g/mL**		**1**	**08/17/11**	**as**	**08/17/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024736										
Total Organic Carbon	**16000**	**mg/kg dry**	**1700**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<1000	mg/kg dry	1000	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-10 | Date Collected: 08/16/11 10:30 | Matrix: Sediment
Sample ID: DS-11-06 | Date Received: 08/17/11 10:27

PARAMETERS		RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS											
Analysis Method: EPA 8270C											
Batch: T024765											
Naphthalene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
2-Methylnaphthalene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthylene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluorene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Phenanthrene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr	205	
Anthracene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluoranthene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Pyrene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) anthracene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Chrysene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (b) fluoranthene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (k) fluoranthene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) pyrene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Indeno (1,2,3-cd) pyrene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Dibenz (a,h) anthracene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (g,h,i) perylene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Surrogates:											
Nitrobenzene-d5		54	%	36-98	1	08/18/11	kb	08/23/11	gmr		
2-Fluorobiphenyl	*	**41**	%	44-105	1	08/18/11	kb	08/23/11	gmr	802	
Terphenyl-d14		55	%	46-109	1	08/18/11	kb	08/23/11	gmr		
PESTICIDES/PCBS											
Analysis Method: EPA 8082											
Batch: T024727											
Aroclor-1016		<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1221		<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1232		<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1242		<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1248		<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1254		<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1260		<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Surrogates:											
Tetrachloro-m-xylene		56	%	40-113	1	08/18/11	kb	08/24/11	tim	N	
Decachlorobiphenyl		60	%	32-111	1	08/18/11	kb	08/24/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-10 | Date Collected: 08/16/11 10:30 | Matrix: Sediment
Sample ID: DS-11-06 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**20000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**580**	**mg/kg dry**	**6.1**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**2.9**	**mg/kg dry**	**0.12**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**100**	**mg/kg dry**	**2.9**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.42**	**mg/kg dry**	**0.20**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Chromium	**26**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**	205	
Copper	**18**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**	205	
Lead	**28**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**500**	**mg/kg dry**	**1.9**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**17**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**	205	
Selenium	<0.39	mg/kg dry	0.39	10	09/02/11	ns	09/07/11	jd	205	
Silver	**0.36**	**mg/kg dry**	**0.10**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Zinc	**100**	**mg/kg dry**	**9.7**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	**0.17**	**mg/kg dry**	**0.050**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	205	
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**61**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.5**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	**75**	**mg/kg dry**	**1.0**	**1**	**08/25/11**	**sm**	**08/26/11**	**sm**	205, N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-10 | Date Collected: 08/16/11 10:30 | Matrix: Sediment
Sample ID: DS-11-06 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**490**	**mg/kg dry**	**68**	**5**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	**0.53**	**mg/kg dry**	**0.20**	**1**	**08/18/11**	**da**	**08/19/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**62000**	**mg/kg dry**	**470**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	202, N	
Volatile Solids	**4.1**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.7**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**22000**	**mg/kg dry**	**1100**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	205, N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<690	mg/kg dry	690	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-11 | Date Collected: 08/16/11 11:45 | Matrix: Sediment
Sample ID: DS-11-07 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Acenaphthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluorene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/22/11	gmr		
Surrogates:										
Nitrobenzene-d5	63	%	36-98	1	08/18/11	kb	08/22/11	gmr		
2-Fluorobiphenyl	46	%	44-105	1	08/18/11	kb	08/22/11	gmr		
Terphenyl-d14	60	%	46-109	1	08/18/11	kb	08/22/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024727										
Aroclor-1016	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1221	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1232	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1242	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1248	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1254	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Aroclor-1260	<110	ug/kg dry	110	1	08/18/11	kb	08/24/11	tim		
Surrogates:										
Tetrachloro-m-xylene	51	%	40-113	1	08/18/11	kb	08/24/11	tim	N	
Decachlorobiphenyl	74	%	32-111	1	08/18/11	kb	08/24/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-11 | Date Collected: 08/16/11 11:45 | Matrix: Sediment
Sample ID: DS-11-07 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**19000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**510**	**mg/kg dry**	**6.2**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**2.6**	**mg/kg dry**	**0.12**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**100**	**mg/kg dry**	**2.9**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.22**	**mg/kg dry**	**0.20**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Chromium	**22**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**14**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**14**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**1000**	**mg/kg dry**	**3.9**	**200**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**15**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	09/02/11	ns	09/07/11	jd		
Silver	**0.18**	**mg/kg dry**	**0.10**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Zinc	**74**	**mg/kg dry**	**9.8**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	**0.083**	**mg/kg dry**	**0.050**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024706										
% Solids	**63**	**% by Wt.**	**0.10**	**1**	**08/17/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024732										
Specific Gravity	**2.7**			**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	**56**	**mg/kg dry**	**1.0**	**1**	**08/25/11**	**sm**	**08/26/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-11 | Date Collected: 08/16/11 11:45 | Matrix: Sediment
Sample ID: DS-11-07 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**680**	**mg/kg dry**	**16**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/18/11	bd	08/19/11	da	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**52000**	**mg/kg dry**	**450**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**5.0**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024704										
In-Place Density	**2.0**	**g/mL**		**1**	**08/17/11**	**as**	**08/17/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024736										
Total Organic Carbon	**22000**	**mg/kg dry**	**1100**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<660	mg/kg dry	660	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-12 | Date Collected: 08/15/11 16:35 | Matrix: Sediment
Sample ID: DS-11-MU2 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Phosphorus	**370**	**mg/kg dry**	**5.9**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
WET CHEMISTRY										
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T025020										
Ammonia as N	**59**	**mg/kg dry**	**1.0**	**1**	**08/31/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024977										
Total Kjeldahl Nitrogen	**850**	**mg/kg dry**	**140**	**10**	**08/31/11**	**da**	**09/01/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-13 | Date Collected: 08/16/11 15:30 | Matrix: Sediment
Sample ID: DS-11-11 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthylene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluorene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Surrogates:										
Nitrobenzene-d5	52	%	36-98	1	08/18/11	kb	08/23/11	gmr		
2-Fluorobiphenyl	52	%	44-105	1	08/18/11	kb	08/23/11	gmr		
Terphenyl-d14	61	%	46-109	1	08/18/11	kb	08/23/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024727										
Aroclor-1016	<92	ug/kg dry	92	1	08/18/11	kb	08/24/11	tim		
Aroclor-1221	<92	ug/kg dry	92	1	08/18/11	kb	08/24/11	tim		
Aroclor-1232	<92	ug/kg dry	92	1	08/18/11	kb	08/24/11	tim		
Aroclor-1242	<92	ug/kg dry	92	1	08/18/11	kb	08/24/11	tim		
Aroclor-1248	<92	ug/kg dry	92	1	08/18/11	kb	08/24/11	tim		
Aroclor-1254	<92	ug/kg dry	92	1	08/18/11	kb	08/24/11	tim		
Aroclor-1260	<92	ug/kg dry	92	1	08/18/11	kb	08/24/11	tim		
Surrogates:										
Tetrachloro-m-xylene	55	%	40-113	1	08/18/11	kb	08/24/11	tim	N	
Decachlorobiphenyl	87	%	32-111	1	08/18/11	kb	08/24/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-13 | Date Collected: 08/16/11 15:30 | Matrix: Sediment
Sample ID: DS-11-11 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**8700**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**260**	**mg/kg dry**	**6.2**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**1.5**	**mg/kg dry**	**0.12**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**19**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/02/11	ns	09/07/11	jd		
Chromium	**9.7**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**5.9**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**5.2**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**290**	**mg/kg dry**	**2.0**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**7.1**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	09/02/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	09/02/11	ns	09/07/11	jd		
Zinc	**42**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024706										
% Solids	**73**	**% by Wt.**	**0.10**	**1**	**08/17/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024732										
Specific Gravity	**2.7**			**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	<1.0	mg/kg dry	1.0	1	08/25/11	sm	08/26/11	sm	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-13 | Date Collected: 08/16/11 15:30 | Matrix: Sediment
Sample ID: DS-11-11 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**260**	**mg/kg dry**	**18**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/18/11	bd	08/19/11	da	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**20000**	**mg/kg dry**	**390**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**2.5**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024704										
In-Place Density	**1.9**	**g/mL**		**1**	**08/17/11**	**as**	**08/17/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024736										
Total Organic Carbon	**6100**	**mg/kg dry**	**1000**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<580	mg/kg dry	580	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-14 | Date Collected: 08/16/11 16:00 | Matrix: Sediment
Sample ID: DS-11-12 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthylene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluorene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Surrogates:										
Nitrobenzene-d5	54	%	36-98	1	08/18/11	kb	08/23/11	gmr		
2-Fluorobiphenyl	57	%	44-105	1	08/18/11	kb	08/23/11	gmr		
Terphenyl-d14	62	%	46-109	1	08/18/11	kb	08/23/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024727										
Aroclor-1016	<100	ug/kg dry	100	1	08/18/11	kb	08/24/11	tim		
Aroclor-1221	<100	ug/kg dry	100	1	08/18/11	kb	08/24/11	tim		
Aroclor-1232	<100	ug/kg dry	100	1	08/18/11	kb	08/24/11	tim		
Aroclor-1242	<100	ug/kg dry	100	1	08/18/11	kb	08/24/11	tim		
Aroclor-1248	<100	ug/kg dry	100	1	08/18/11	kb	08/24/11	tim		
Aroclor-1254	<100	ug/kg dry	100	1	08/18/11	kb	08/24/11	tim		
Aroclor-1260	<100	ug/kg dry	100	1	08/18/11	kb	08/24/11	tim		
Surrogates:										
Tetrachloro-m-xylene	43	%	40-113	1	08/18/11	kb	08/24/11	tim	N	
Decachlorobiphenyl	67	%	32-111	1	08/18/11	kb	08/24/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-14 | Date Collected: 08/16/11 16:00 | Matrix: Sediment
Sample ID: DS-11-12 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**11000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**350**	**mg/kg dry**	**6.1**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**1.8**	**mg/kg dry**	**0.12**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**25**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/02/11	ns	09/07/11	jd		
Chromium	**12**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**7.6**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**6.5**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**370**	**mg/kg dry**	**1.9**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**8.0**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	09/02/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	09/02/11	ns	09/07/11	jd		
Zinc	**24**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024706										
% Solids	**63**	**% by Wt.**	**0.10**	**1**	**08/17/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024732										
Specific Gravity	**2.7**			**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	<1.0	mg/kg dry	1.0	1	08/25/11	sm	08/26/11	sm	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-14 | Date Collected: 08/16/11 16:00 | Matrix: Sediment
Sample ID: DS-11-12 | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**360**	**mg/kg dry**	**19**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	**0.39**	**mg/kg dry**	**0.20**	**1**	**08/18/11**	**bd**	**08/19/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**23000**	**mg/kg dry**	**450**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**1.4**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024704										
In-Place Density	**2.0**	**g/mL**		**1**	**08/17/11**	**as**	**08/17/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024736										
Total Organic Carbon	**8500**	**mg/kg dry**	**1100**	**1**	**08/18/11**	**bd**	**08/18/11**	**bd**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024703										
Grain Size without Hydrometer, see attached report	0.0			1	08/17/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<660	mg/kg dry	660	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-15 | Date Collected: 08/16/11 09:00 | Matrix: Elutriate
Sample ID: DS-11-MU4 Elutriate | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T025050										
Mercury	<0.00020	mg/L	0.00020	1	09/02/11	ns	09/02/11	jlm		
METALS, ELUTRIATE										
Analysis Method: EPA 6010B										
Batch: T025070										
Iron	**4.8**	**mg/L**	**0.20**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Analysis Method: EPA 6020										
Batch: T025070										
Arsenic	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Barium	<0.10	mg/L	0.10	5	09/06/11	ns	09/06/11	jd		
Cadmium	<0.0010	mg/L	0.0010	5	09/06/11	ns	09/06/11	jd		
Chromium	<0.010	mg/L	0.010	5	09/06/11	ns	09/06/11	jd		
Copper	**0.010**	**mg/L**	**0.0040**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Lead	**0.0058**	**mg/L**	**0.0030**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Manganese	**2.4**	**mg/L**	**0.050**	**50**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Nickel	<0.020	mg/L	0.020	5	09/06/11	ns	09/06/11	jd		
Selenium	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Silver	**0.00020**	**mg/L**	**0.00020**	**5**	**09/06/11**	**ns**	**09/12/11**	**jd**		
Zinc	<0.15	mg/L	0.15	5	09/06/11	ns	09/06/11	jd		
WET CHEMISTRY										
Analysis Method: EPA 350.1										
Batch: T024976										
Ammonia as N	**1.6**	**mg/L**	**0.010**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	205, N	
Analysis Method: EPA 351.2										
Batch: T024978										
Total Kjeldahl Nitrogen	**2.2**	**mg/L**	**0.50**	**1**	**08/30/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 365.2										
Batch: T024982										
Phosphorus-Total (as P)	**0.13**	**mg/L**	**0.010**	**1**	**08/30/11**	**bd**	**08/30/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-16 | Date Collected: 08/16/11 12:00 | Matrix: Elutriate
Sample ID: DS-11-MU2 Elutriate | Date Received: 08/17/11 10:27

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T025050										
Mercury	<0.00020	mg/L	0.00020	1	09/02/11	ns	09/02/11	jlm		
METALS, ELUTRIATE										
Analysis Method: EPA 6010B										
Batch: T025070										
Iron	**7.6**	**mg/L**	**0.20**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Analysis Method: EPA 6020										
Batch: T025070										
Arsenic	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Barium	<0.10	mg/L	0.10	5	09/06/11	ns	09/06/11	jd		
Cadmium	<0.0010	mg/L	0.0010	5	09/06/11	ns	09/06/11	jd		
Chromium	**0.010**	**mg/L**	**0.010**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Copper	**0.014**	**mg/L**	**0.0040**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Lead	**0.011**	**mg/L**	**0.0030**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Manganese	**1.4**	**mg/L**	**0.050**	**50**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Nickel	<0.020	mg/L	0.020	5	09/06/11	ns	09/06/11	jd		
Selenium	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Silver	**0.00030**	**mg/L**	**0.00020**	**5**	**09/06/11**	**ns**	**09/12/11**	**jd**		
Zinc	<0.15	mg/L	0.15	5	09/06/11	ns	09/06/11	jd		
WET CHEMISTRY										
Analysis Method: EPA 350.1										
Batch: T024976										
Ammonia as N	**1.2**	**mg/L**	**0.010**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2										
Batch: T024978										
Total Kjeldahl Nitrogen	**2.3**	**mg/L**	**0.50**	**1**	**08/30/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 365.2										
Batch: T024982										
Phosphorus-Total (as P)	**0.20**	**mg/L**	**0.010**	**1**	**08/30/11**	**bd**	**08/30/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-17 | Date Collected: 08/17/11 08:00 | Matrix: Sediment
Sample ID: DS-11-13 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthylene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluorene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Surrogates:										
Nitrobenzene-d5	57	%	36-98	1	08/18/11	kb	08/23/11	gmr		
2-Fluorobiphenyl	54	%	44-105	1	08/18/11	kb	08/23/11	gmr		
Terphenyl-d14	57	%	46-109	1	08/18/11	kb	08/23/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<110	ug/kg dry	110	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<110	ug/kg dry	110	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<110	ug/kg dry	110	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<110	ug/kg dry	110	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<110	ug/kg dry	110	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<110	ug/kg dry	110	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<110	ug/kg dry	110	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	70	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	83	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-17 | Date Collected: 08/17/11 08:00 | Matrix: Sediment
Sample ID: DS-11-13 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**11000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**320**	**mg/kg dry**	**5.9**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**1.5**	**mg/kg dry**	**0.11**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**23**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/02/11	ns	09/07/11	jd		
Chromium	**12**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**6.8**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**6.1**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**320**	**mg/kg dry**	**1.9**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**8.3**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	09/02/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	09/02/11	ns	09/07/11	jd		
Zinc	**23**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**61**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.6**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	**110**	**mg/kg dry**	**1.0**	**1**	**08/25/11**	**sm**	**08/26/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-17 | Date Collected: 08/17/11 08:00 | Matrix: Sediment
Sample ID: DS-11-13 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**360**	**mg/kg dry**	**15**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/18/11	da	08/19/11	da	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**29000**	**mg/kg dry**	**470**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**1.4**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.8**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**5400**	**mg/kg dry**	**1100**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<690	mg/kg dry	690	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-18 | Date Collected: 08/17/11 09:00 | Matrix: Sediment
Sample ID: DS-11-14 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthylene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluorene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Surrogates:										
Nitrobenzene-d5	57	%	36-98	1	08/18/11	kb	08/23/11	gmr		
2-Fluorobiphenyl	58	%	44-105	1	08/18/11	kb	08/23/11	gmr		
Terphenyl-d14	68	%	46-109	1	08/18/11	kb	08/23/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<94	ug/kg dry	94	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<94	ug/kg dry	94	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<94	ug/kg dry	94	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<94	ug/kg dry	94	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<94	ug/kg dry	94	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<94	ug/kg dry	94	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<94	ug/kg dry	94	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	48	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	58	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-18 | Date Collected: 08/17/11 09:00 | Matrix: Sediment
Sample ID: DS-11-14 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**15000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**390**	**mg/kg dry**	**6.3**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**1.8**	**mg/kg dry**	**0.12**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**40**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/02/11	ns	09/07/11	jd		
Chromium	**16**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**11**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**11**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**310**	**mg/kg dry**	**2.0**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**11**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.40	mg/kg dry	0.40	10	09/02/11	ns	09/07/11	jd		
Silver	**0.15**	**mg/kg dry**	**0.10**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Zinc	**40**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	**0.068**	**mg/kg dry**	**0.050**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**71**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.5**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	<1.0	mg/kg dry	1.0	1	08/25/11	sm	08/26/11	sm	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-18 | Date Collected: 08/17/11 09:00 | Matrix: Sediment
Sample ID: DS-11-14 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**610**	**mg/kg dry**	**23**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/18/11	da	08/19/11	da	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**33000**	**mg/kg dry**	**400**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**2.5**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.6**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**12000**	**mg/kg dry**	**1000**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<590	mg/kg dry	590	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-19 | Date Collected: 08/17/11 10:00 | Matrix: Sediment
Sample ID: DS-11-15 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024765										
Naphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthylene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Acenaphthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluorene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Phenanthrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Chrysene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Surrogates:										
Nitrobenzene-d5	58	%	36-98	1	08/18/11	kb	08/23/11	gmr		
2-Fluorobiphenyl	58	%	44-105	1	08/18/11	kb	08/23/11	gmr		
Terphenyl-d14	60	%	46-109	1	08/18/11	kb	08/23/11	gmr		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<91	ug/kg dry	91	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<91	ug/kg dry	91	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<91	ug/kg dry	91	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<91	ug/kg dry	91	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<91	ug/kg dry	91	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<91	ug/kg dry	91	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<91	ug/kg dry	91	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	65	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	78	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-19 | Date Collected: 08/17/11 10:00 | Matrix: Sediment
Sample ID: DS-11-15 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**12000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**370**	**mg/kg dry**	**6.2**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**1.6**	**mg/kg dry**	**0.12**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**24**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/02/11	ns	09/07/11	jd		
Chromium	**12**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**6.9**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**5.7**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**380**	**mg/kg dry**	**2.0**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**8.7**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	09/02/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	09/02/11	ns	09/07/11	jd		
Zinc	**24**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**73**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.6**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	<1.0	mg/kg dry	1.0	1	08/25/11	sm	08/26/11	sm	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-19 | Date Collected: 08/17/11 10:00 | Matrix: Sediment
Sample ID: DS-11-15 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**510**	**mg/kg dry**	**16**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/18/11	da	08/19/11	da	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**34000**	**mg/kg dry**	**390**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**1.4**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.9**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**8800**	**mg/kg dry**	**1000**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<580	mg/kg dry	580	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-20 | Date Collected: 08/17/11 10:30 | Matrix: Sediment
Sample ID: DS-11-MU3 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Phosphorus	**370**	**mg/kg dry**	**6.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
WET CHEMISTRY										
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	**30**	**mg/kg dry**	**1.0**	**1**	**08/25/11**	**sm**	**08/26/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										
Total Kjeldahl Nitrogen	**560**	**mg/kg dry**	**15**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-21 | Date Collected: 08/17/11 10:30 | Matrix: Elutriate
Sample ID: DS-11-MU3 Elutriate | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T025050										
Mercury	<0.00020	mg/L	0.00020	1	09/02/11	ns	09/02/11	jlm		
METALS, ELUTRIATE										
Analysis Method: EPA 6010B										
Batch: T025070										
Iron	**3.2**	**mg/L**	**0.20**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Analysis Method: EPA 6020										
Batch: T025070										
Arsenic	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Barium	<0.10	mg/L	0.10	5	09/06/11	ns	09/06/11	jd		
Cadmium	<0.0010	mg/L	0.0010	5	09/06/11	ns	09/06/11	jd		
Chromium	<0.010	mg/L	0.010	5	09/06/11	ns	09/06/11	jd		
Copper	**0.0052**	**mg/L**	**0.0040**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Lead	**0.0036**	**mg/L**	**0.0030**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Manganese	**2.9**	**mg/L**	**0.050**	**50**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Nickel	<0.020	mg/L	0.020	5	09/06/11	ns	09/06/11	jd		
Selenium	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Silver	<0.00020	mg/L	0.00020	5	09/06/11	ns	09/12/11	jd		
Zinc	<0.15	mg/L	0.15	5	09/06/11	ns	09/06/11	jd		
WET CHEMISTRY										
Analysis Method: EPA 350.1										
Batch: T024976										
Ammonia as N	**1.5**	**mg/L**	**0.010**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2										
Batch: T024978										
Total Kjeldahl Nitrogen	**2.9**	**mg/L**	**0.50**	**1**	**08/30/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 365.2										
Batch: T024982										
Phosphorus-Total (as P)	**0.11**	**mg/L**	**0.010**	**1**	**08/30/11**	**bd**	**08/30/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-22 | Date Collected: 08/17/11 11:45 | Matrix: Sediment
Sample ID: DS-11-41 | Date Received: 08/18/11 10:30

PARAMETERS		RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS											
Analysis Method: EPA 8270C											
Batch: T024765											
Naphthalene		<460	ug/kg dry	460	1	08/18/11	kb	08/23/11	gmr		
2-Methylnaphthalene		<460	ug/kg dry	460	1	08/18/11	kb	08/23/11	gmr		
Acenaphthylene		<460	ug/kg dry	460	1	08/18/11	kb	08/23/11	gmr		
Acenaphthene		<460	ug/kg dry	460	1	08/18/11	kb	08/23/11	gmr		
Fluorene		<460	ug/kg dry	460	1	08/18/11	kb	08/23/11	gmr		
Phenanthrene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Anthracene		<460	ug/kg dry	460	1	08/18/11	kb	08/23/11	gmr		
Fluoranthene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Pyrene		<460	ug/kg dry	460	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) anthracene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Chrysene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (b) fluoranthene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (k) fluoranthene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (a) pyrene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Indeno (1,2,3-cd) pyrene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Dibenz (a,h) anthracene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Benzo (g,h,i) perylene		<330	ug/kg dry	330	1	08/18/11	kb	08/23/11	gmr		
Surrogates:											
Nitrobenzene-d5		46	%	36-98	1	08/18/11	kb	08/23/11	gmr		
2-Fluorobiphenyl	*	**40**	%	44-105	1	08/18/11	kb	08/23/11	gmr	802	
Terphenyl-d14		47	%	46-109	1	08/18/11	kb	08/23/11	gmr		
PESTICIDES/PCBS											
Analysis Method: EPA 8082											
Batch: T024845											
Aroclor-1016		<190	ug/kg dry	190	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221		<190	ug/kg dry	190	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232		<190	ug/kg dry	190	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242		<190	ug/kg dry	190	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248		<190	ug/kg dry	190	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254		<190	ug/kg dry	190	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260		<190	ug/kg dry	190	1	08/23/11	kb	08/25/11	tim		
Surrogates:											
Tetrachloro-m-xylene		53	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl		66	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-22 | Date Collected: 08/17/11 11:45 | Matrix: Sediment
Sample ID: DS-11-41 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024778										
Iron	**25000**	**mg/kg dry**	**29**	**10**	**08/19/11**	**ns**	**08/22/11**	**jlm**		
Phosphorus	**660**	**mg/kg dry**	**6.1**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024778										
Arsenic	**3.6**	**mg/kg dry**	**0.12**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Barium	**100**	**mg/kg dry**	**2.9**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.33**	**mg/kg dry**	**0.20**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Chromium	**29**	**mg/kg dry**	**2.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Copper	**19**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Lead	**22**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Manganese	**1100**	**mg/kg dry**	**3.9**	**200**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Nickel	**18**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	08/19/11	ns	09/07/11	jd		
Silver	**0.29**	**mg/kg dry**	**0.10**	**10**	**08/19/11**	**ns**	**09/12/11**	**jd**		
Zinc	**92**	**mg/kg dry**	**9.7**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024778										
Mercury	**0.15**	**mg/kg dry**	**0.050**	**1**	**08/19/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**36**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.1**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024894										
Ammonia as N	**15**	**mg/kg dry**	**1.0**	**1**	**08/25/11**	**sm**	**08/26/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024800										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-22 | Date Collected: 08/17/11 11:45 | Matrix: Sediment
Sample ID: DS-11-41 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**2300**	**mg/kg dry**	**44**	**2**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	**2.1**	**mg/kg dry**	**0.20**	**1**	**08/18/11**	**da**	**08/19/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**210000**	**mg/kg dry**	**790**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**12**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.3**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**61000**	**mg/kg dry**	**1900**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<1200	mg/kg dry	1200	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-23 | Date Collected: 08/17/11 12:00 | Matrix: Sediment
Sample ID: DS-11-42 | Date Received: 08/18/11 10:30

PARAMETERS		RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS											
Analysis Method: EPA 8270C											
Batch: T024818											
Naphthalene		<480	ug/kg dry	480	1	08/22/11	kb	08/24/11	gmr		
2-Methylnaphthalene		<480	ug/kg dry	480	1	08/22/11	kb	08/24/11	gmr		
Acenaphthylene		<480	ug/kg dry	480	1	08/22/11	kb	08/24/11	gmr		
Acenaphthene		<480	ug/kg dry	480	1	08/22/11	kb	08/24/11	gmr		
Fluorene		<480	ug/kg dry	480	1	08/22/11	kb	08/24/11	gmr		
Phenanthrene		<330	ug/kg dry	330	1	08/22/11	kb	08/24/11	gmr		
Anthracene		<480	ug/kg dry	480	1	08/22/11	kb	08/24/11	gmr		
Fluoranthene		<330	ug/kg dry	330	1	08/22/11	kb	08/24/11	gmr		
Pyrene		<480	ug/kg dry	480	1	08/22/11	kb	08/24/11	gmr		
Benzo (a) anthracene		<330	ug/kg dry	330	1	08/22/11	kb	08/24/11	gmr		
Chrysene		<330	ug/kg dry	330	1	08/22/11	kb	08/24/11	gmr		
Benzo (b) fluoranthene		<330	ug/kg dry	330	1	08/22/11	kb	08/24/11	gmr		
Benzo (k) fluoranthene		<330	ug/kg dry	330	1	08/22/11	kb	08/24/11	gmr		
Benzo (a) pyrene		<330	ug/kg dry	330	1	08/22/11	kb	08/24/11	gmr		
Indeno (1,2,3-cd) pyrene		<330	ug/kg dry	330	1	08/22/11	kb	08/24/11	gmr		
Dibenz (a,h) anthracene		<330	ug/kg dry	330	1	08/22/11	kb	08/24/11	gmr		
Benzo (g,h,i) perylene		<330	ug/kg dry	330	1	08/22/11	kb	08/24/11	gmr		
Surrogates:											
Nitrobenzene-d5		56	%	36-98	1	08/22/11	kb	08/24/11	gmr		
2-Fluorobiphenyl		51	%	44-105	1	08/22/11	kb	08/24/11	gmr		
Terphenyl-d14		47	%	46-109	1	08/22/11	kb	08/24/11	gmr		
PESTICIDES/PCBS											
Analysis Method: EPA 8082											
Batch: T025011											
Aroclor-1016		<190	ug/kg dry	190	1	08/31/11	kb	09/02/11	tim		
Aroclor-1221		<190	ug/kg dry	190	1	08/31/11	kb	09/02/11	tim		
Aroclor-1232		<190	ug/kg dry	190	1	08/31/11	kb	09/02/11	tim		
Aroclor-1242		<190	ug/kg dry	190	1	08/31/11	kb	09/02/11	tim		
Aroclor-1248		<190	ug/kg dry	190	1	08/31/11	kb	09/02/11	tim		
Aroclor-1254		<190	ug/kg dry	190	1	08/31/11	kb	09/02/11	tim		
Aroclor-1260		<190	ug/kg dry	190	1	08/31/11	kb	09/02/11	tim		
Surrogates:											
Tetrachloro-m-xylene	*	**28**	%	40-113	1	08/31/11	kb	09/02/11	tim	314.5, N	
Decachlorobiphenyl	*	**27**	%	32-111	1	08/31/11	kb	09/02/11	tim	314.5, N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-23 | Date Collected: 08/17/11 12:00 | Matrix: Sediment
Sample ID: DS-11-42 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024778										
Iron	**35000**	**mg/kg dry**	**28**	**10**	**08/19/11**	**ns**	**08/22/11**	**jlm**		
Phosphorus	**890**	**mg/kg dry**	**5.8**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024778										
Arsenic	**5.0**	**mg/kg dry**	**0.11**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Barium	**190**	**mg/kg dry**	**2.8**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.48**	**mg/kg dry**	**0.20**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Chromium	**40**	**mg/kg dry**	**2.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Copper	**23**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Lead	**30**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Manganese	**1900**	**mg/kg dry**	**3.7**	**200**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Nickel	**24**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	08/19/11	ns	09/07/11	jd		
Silver	**0.43**	**mg/kg dry**	**0.10**	**10**	**08/19/11**	**ns**	**09/12/11**	**jd**		
Zinc	**150**	**mg/kg dry**	**9.3**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024778										
Mercury	**0.22**	**mg/kg dry**	**0.050**	**1**	**08/19/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**35**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.2**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**37**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										
Total Kjeldahl Nitrogen	**2300**	**mg/kg dry**	**130**	**10**	**08/26/11**	**da**	**08/29/11**	**sm**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-23 | Date Collected: 08/17/11 12:00 | Matrix: Sediment
Sample ID: DS-11-42 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 9012B										
Batch: T024754										
Cyanide (total)	**0.34**	**mg/kg dry**	**0.20**	**1**	**08/18/11**	**da**	**08/19/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**140000**	**mg/kg dry**	**820**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**9.7**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.3**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**40000**	**mg/kg dry**	**2000**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<1200	mg/kg dry	1200	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-24 | Date Collected: 08/17/11 12:15 | Matrix: Sediment
Sample ID: DS-11-43 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<430	ug/kg dry	430	1	08/22/11	kb	08/25/11	avl		
2-Methylnaphthalene	<430	ug/kg dry	430	1	08/22/11	kb	08/25/11	avl		
Acenaphthylene	<430	ug/kg dry	430	1	08/22/11	kb	08/25/11	avl		
Acenaphthene	<430	ug/kg dry	430	1	08/22/11	kb	08/25/11	avl		
Fluorene	<430	ug/kg dry	430	1	08/22/11	kb	08/25/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Anthracene	<430	ug/kg dry	430	1	08/22/11	kb	08/25/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Pyrene	<430	ug/kg dry	430	1	08/22/11	kb	08/25/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Surrogates:										
Nitrobenzene-d5	63	%	36-98	1	08/22/11	kb	08/25/11	avl		
2-Fluorobiphenyl	57	%	44-105	1	08/22/11	kb	08/25/11	avl		
Terphenyl-d14	60	%	46-109	1	08/22/11	kb	08/25/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	* **33**	%	40-113	1	08/23/11	kb	08/25/11	tim	303, N	
Decachlorobiphenyl	37	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-24 | Date Collected: 08/17/11 12:15 | Matrix: Sediment
Sample ID: DS-11-43 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024778										
Iron	**37000**	**mg/kg dry**	**27**	**10**	**08/19/11**	**ns**	**08/22/11**	**jlm**		
Phosphorus	**830**	**mg/kg dry**	**5.7**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024778										
Arsenic	**4.3**	**mg/kg dry**	**0.11**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Barium	**180**	**mg/kg dry**	**2.7**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.39**	**mg/kg dry**	**0.20**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Chromium	**38**	**mg/kg dry**	**2.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Copper	**21**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Lead	**26**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Manganese	**1400**	**mg/kg dry**	**9.1**	**500**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Nickel	**23**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.36	mg/kg dry	0.36	10	08/19/11	ns	09/07/11	jd		
Silver	**0.37**	**mg/kg dry**	**0.10**	**10**	**08/19/11**	**ns**	**09/12/11**	**jd**		
Zinc	**130**	**mg/kg dry**	**9.1**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024778										
Mercury	**0.16**	**mg/kg dry**	**0.050**	**1**	**08/19/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**39**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.0**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**32**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-24 | Date Collected: 08/17/11 12:15 | Matrix: Sediment
Sample ID: DS-11-43 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**1200**	**mg/kg dry**	**24**	**2**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	**0.37**	**mg/kg dry**	**0.20**	**1**	**08/22/11**	**bd**	**08/23/11**	**bd**	N	
Analysis Method: PLUMB										
Batch: T024771										
Chemical Oxygen Demand	**96000**	**mg/kg dry**	**740**	**1**	**08/19/11**	**bd**	**08/22/11**	**bd**	N	
Volatile Solids	**9.0**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.6**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**27000**	**mg/kg dry**	**1700**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T024906										
Oil & Grease (HEM)	<1100	mg/kg dry	1100	1	08/25/11	kb	08/25/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-25 | Date Collected: 08/17/11 12:00 | Matrix: Sediment
Sample ID: DS-11-44 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<490	ug/kg dry	490	1	08/22/11	kb	08/25/11	avl		
2-Methylnaphthalene	<490	ug/kg dry	490	1	08/22/11	kb	08/25/11	avl		
Acenaphthylene	<490	ug/kg dry	490	1	08/22/11	kb	08/25/11	avl		
Acenaphthene	<490	ug/kg dry	490	1	08/22/11	kb	08/25/11	avl		
Fluorene	<490	ug/kg dry	490	1	08/22/11	kb	08/25/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Anthracene	<490	ug/kg dry	490	1	08/22/11	kb	08/25/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Pyrene	<490	ug/kg dry	490	1	08/22/11	kb	08/25/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Surrogates:										
Nitrobenzene-d5	65	%	36-98	1	08/22/11	kb	08/25/11	avl		
2-Fluorobiphenyl	56	%	44-105	1	08/22/11	kb	08/25/11	avl		
Terphenyl-d14	56	%	46-109	1	08/22/11	kb	08/25/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T025011										
Aroclor-1016	<200	ug/kg dry	200	1	08/31/11	kb	09/02/11	tim		
Aroclor-1221	<200	ug/kg dry	200	1	08/31/11	kb	09/02/11	tim		
Aroclor-1232	<200	ug/kg dry	200	1	08/31/11	kb	09/02/11	tim		
Aroclor-1242	<200	ug/kg dry	200	1	08/31/11	kb	09/02/11	tim		
Aroclor-1248	<200	ug/kg dry	200	1	08/31/11	kb	09/02/11	tim		
Aroclor-1254	<200	ug/kg dry	200	1	08/31/11	kb	09/02/11	tim		
Aroclor-1260	<200	ug/kg dry	200	1	08/31/11	kb	09/02/11	tim		
Surrogates:										
Tetrachloro-m-xylene	* **34**	%	40-113	1	08/31/11	kb	09/02/11	tim	303, N	
Decachlorobiphenyl	40	%	32-111	1	08/31/11	kb	09/02/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-25 | Date Collected: 08/17/11 12:00 | Matrix: Sediment
Sample ID: DS-11-44 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024778										
Iron	**35000**	**mg/kg dry**	**28**	**10**	**08/19/11**	**ns**	**08/22/11**	**jlm**		
Phosphorus	**880**	**mg/kg dry**	**5.9**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024778										
Arsenic	**5.2**	**mg/kg dry**	**0.11**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Barium	**180**	**mg/kg dry**	**2.8**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.50**	**mg/kg dry**	**0.20**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Chromium	**38**	**mg/kg dry**	**2.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Copper	**24**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Lead	**32**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Manganese	**1800**	**mg/kg dry**	**9.4**	**500**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Nickel	**25**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Selenium	**0.37**	**mg/kg dry**	**0.37**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Silver	**0.42**	**mg/kg dry**	**0.10**	**10**	**08/19/11**	**ns**	**09/12/11**	**jd**		
Zinc	**150**	**mg/kg dry**	**9.4**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024778										
Mercury	**0.20**	**mg/kg dry**	**0.050**	**1**	**08/19/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**34**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.4**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**13**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										
Total Kjeldahl Nitrogen	**1200**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-25 | Date Collected: 08/17/11 12:00 | Matrix: Sediment
Sample ID: DS-11-44 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	**0.33**	**mg/kg dry**	**0.20**	**1**	**08/22/11**	**bd**	**08/23/11**	**bd**	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**92000**	**mg/kg dry**	**840**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**5.4**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.3**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**37000**	**mg/kg dry**	**2000**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<1200	mg/kg dry	1200	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-26 | Date Collected: 08/17/11 12:50 | Matrix: Sediment
Sample ID: DS-11-45 | Date Received: 08/18/11 10:30

PARAMETERS		RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS											
Analysis Method: EPA 8270C											
Batch: T024818											
Naphthalene		<450	ug/kg dry	450	1	08/22/11	kb	08/25/11	avl		
2-Methylnaphthalene		<450	ug/kg dry	450	1	08/22/11	kb	08/25/11	avl		
Acenaphthylene		<450	ug/kg dry	450	1	08/22/11	kb	08/25/11	avl		
Acenaphthene		<450	ug/kg dry	450	1	08/22/11	kb	08/25/11	avl		
Fluorene		<450	ug/kg dry	450	1	08/22/11	kb	08/25/11	avl		
Phenanthrene		<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Anthracene		<450	ug/kg dry	450	1	08/22/11	kb	08/25/11	avl		
Fluoranthene		<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Pyrene		<450	ug/kg dry	450	1	08/22/11	kb	08/25/11	avl		
Benzo (a) anthracene		<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Chrysene		<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (b) fluoranthene		<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (k) fluoranthene		<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (a) pyrene		<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Indeno (1,2,3-cd) pyrene		<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Dibenz (a,h) anthracene		<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Benzo (g,h,i) perylene		<330	ug/kg dry	330	1	08/22/11	kb	08/25/11	avl		
Surrogates:											
Nitrobenzene-d5		51	%	36-98	1	08/22/11	kb	08/25/11	avl		
2-Fluorobiphenyl		44	%	44-105	1	08/22/11	kb	08/25/11	avl		
Terphenyl-d14		50	%	46-109	1	08/22/11	kb	08/25/11	avl		
PESTICIDES/PCBS											
Analysis Method: EPA 8082											
Batch: T025011											
Aroclor-1016		<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1221		<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1232		<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1242		<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1248		<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1254		<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1260		<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Surrogates:											
Tetrachloro-m-xylene	*	**27**	%	40-113	1	08/31/11	kb	09/02/11	tim	314.5, N	
Decachlorobiphenyl	*	**18**	%	32-111	1	08/31/11	kb	09/02/11	tim	314.5, N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-26 | Date Collected: 08/17/11 12:50 | Matrix: Sediment
Sample ID: DS-11-45 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024778										
Iron	**41000**	**mg/kg dry**	**29**	**10**	**08/19/11**	**ns**	**08/22/11**	**jlm**		
Phosphorus	**1100**	**mg/kg dry**	**6.0**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024778										
Arsenic	**6.0**	**mg/kg dry**	**0.11**	**10**	**08/19/11**	**ns**	**08/24/11**	**jd**		
Barium	**180**	**mg/kg dry**	**2.9**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.44**	**mg/kg dry**	**0.20**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Chromium	**38**	**mg/kg dry**	**2.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Copper	**23**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**	205	
Lead	**29**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Manganese	**2300**	**mg/kg dry**	**9.5**	**500**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Nickel	**24**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**	205	
Selenium	**0.42**	**mg/kg dry**	**0.38**	**10**	**08/19/11**	**ns**	**08/24/11**	**jd**		
Silver	**0.32**	**mg/kg dry**	**0.10**	**10**	**08/19/11**	**ns**	**08/24/11**	**jd**		
Zinc	**140**	**mg/kg dry**	**9.5**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024778										
Mercury	**0.19**	**mg/kg dry**	**0.050**	**1**	**08/19/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**36**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.5**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**57**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										
Total Kjeldahl Nitrogen	**2600**	**mg/kg dry**	**140**	**10**	**08/26/11**	**da**	**08/29/11**	**sm**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-26 | Date Collected: 08/17/11 12:50 | Matrix: Sediment
Sample ID: DS-11-45 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	**0.28**	**mg/kg dry**	**0.20**	**1**	**08/22/11**	**bd**	**08/23/11**	**bd**	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**72000**	**mg/kg dry**	**790**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**11**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.7**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**37000**	**mg/kg dry**	**1900**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<1200	mg/kg dry	1200	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-27 | Date Collected: 08/17/11 13:00 | Matrix: Sediment
Sample ID: DS-11-HI PU | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024778										
Phosphorus	**950**	**mg/kg dry**	**5.9**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**	N	
WET CHEMISTRY										
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**13**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										
Total Kjeldahl Nitrogen	**2200**	**mg/kg dry**	**140**	**10**	**08/29/11**	**da**	**09/01/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-28 | Date Collected: 08/17/11 16:30 | Matrix: Sediment
Sample ID: DS-11-46 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<360	ug/kg dry	360	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<360	ug/kg dry	360	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<360	ug/kg dry	360	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<360	ug/kg dry	360	1	08/22/11	kb	08/26/11	avl		
Fluorene	<360	ug/kg dry	360	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<360	ug/kg dry	360	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<360	ug/kg dry	360	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	59	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	53	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	59	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	43	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	41	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-28 | Date Collected: 08/17/11 16:30 | Matrix: Sediment
Sample ID: DS-11-46 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024778										
Iron	**27000**	**mg/kg dry**	**29**	**10**	**08/19/11**	**ns**	**08/22/11**	**jlm**		
Phosphorus	**690**	**mg/kg dry**	**6.0**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024778										
Arsenic	**3.0**	**mg/kg dry**	**0.11**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Barium	**130**	**mg/kg dry**	**2.9**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.31**	**mg/kg dry**	**0.20**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Chromium	**31**	**mg/kg dry**	**2.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Copper	**18**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Lead	**18**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Manganese	**860**	**mg/kg dry**	**3.8**	**200**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Nickel	**21**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	08/19/11	ns	09/07/11	jd		
Silver	**0.27**	**mg/kg dry**	**0.10**	**10**	**08/19/11**	**ns**	**09/12/11**	**jd**		
Zinc	**100**	**mg/kg dry**	**9.5**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024778										
Mercury	**0.12**	**mg/kg dry**	**0.050**	**1**	**08/19/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**46**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.0**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**53**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-28 | Date Collected: 08/17/11 16:30 | Matrix: Sediment
Sample ID: DS-11-46 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**800**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	**0.21**	**mg/kg dry**	**0.20**	**1**	**08/22/11**	**bd**	**08/23/11**	**bd**	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**58000**	**mg/kg dry**	**620**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**10**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.7**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**30000**	**mg/kg dry**	**1500**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<910	mg/kg dry	910	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-29 | Date Collected: 08/17/11 16:45 | Matrix: Sediment
Sample ID: DS-11-47 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<430	ug/kg dry	430	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<430	ug/kg dry	430	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<430	ug/kg dry	430	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<430	ug/kg dry	430	1	08/22/11	kb	08/26/11	avl		
Fluorene	<430	ug/kg dry	430	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<430	ug/kg dry	430	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<430	ug/kg dry	430	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	67	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	62	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	68	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<180	ug/kg dry	180	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<180	ug/kg dry	180	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<180	ug/kg dry	180	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<180	ug/kg dry	180	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<180	ug/kg dry	180	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<180	ug/kg dry	180	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<180	ug/kg dry	180	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	* **33**	%	40-113	1	08/23/11	kb	08/25/11	tim	303, N	
Decachlorobiphenyl	35	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-29 | Date Collected: 08/17/11 16:45 | Matrix: Sediment
Sample ID: DS-11-47 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024778										
Iron	**31000**	**mg/kg dry**	**28**	**10**	**08/19/11**	**ns**	**08/22/11**	**jlm**		
Phosphorus	**780**	**mg/kg dry**	**5.9**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024778										
Arsenic	**3.2**	**mg/kg dry**	**0.11**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Barium	**140**	**mg/kg dry**	**2.8**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.34**	**mg/kg dry**	**0.20**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Chromium	**34**	**mg/kg dry**	**2.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Copper	**19**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Lead	**19**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Manganese	**820**	**mg/kg dry**	**3.8**	**200**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Nickel	**21**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	08/19/11	ns	09/07/11	jd		
Silver	**0.29**	**mg/kg dry**	**0.10**	**10**	**08/19/11**	**ns**	**09/12/11**	**jd**		
Zinc	**110**	**mg/kg dry**	**9.4**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024778										
Mercury	**0.14**	**mg/kg dry**	**0.050**	**1**	**08/19/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**38**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.7**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**52**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-29 | Date Collected: 08/17/11 16:45 | Matrix: Sediment
Sample ID: DS-11-47 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**1100**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	**0.24**	**mg/kg dry**	**0.20**	**1**	**08/22/11**	**bd**	**08/23/11**	**bd**	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**77000**	**mg/kg dry**	**750**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**8.5**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.6**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**44000**	**mg/kg dry**	**1800**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<1100	mg/kg dry	1100	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-30 | Date Collected: 08/17/11 17:00 | Matrix: Sediment
Sample ID: DS-11-48 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<410	ug/kg dry	410	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<410	ug/kg dry	410	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<410	ug/kg dry	410	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<410	ug/kg dry	410	1	08/22/11	kb	08/26/11	avl		
Fluorene	<410	ug/kg dry	410	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<410	ug/kg dry	410	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<410	ug/kg dry	410	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	67	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	59	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	66	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<170	ug/kg dry	170	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	* **39**	%	40-113	1	08/23/11	kb	08/25/11	tim	303, N	
Decachlorobiphenyl	47	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-30 | Date Collected: 08/17/11 17:00 | Matrix: Sediment
Sample ID: DS-11-48 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024778										
Iron	**28000**	**mg/kg dry**	**29**	**10**	**08/19/11**	**ns**	**08/22/11**	**jlm**		
Phosphorus	**730**	**mg/kg dry**	**6.1**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024778										
Arsenic	**3.1**	**mg/kg dry**	**0.12**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Barium	**130**	**mg/kg dry**	**2.9**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.35**	**mg/kg dry**	**0.20**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Chromium	**34**	**mg/kg dry**	**2.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Copper	**19**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Lead	**20**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Manganese	**800**	**mg/kg dry**	**3.9**	**200**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Nickel	**21**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	08/19/11	ns	09/07/11	jd		
Silver	**0.27**	**mg/kg dry**	**0.10**	**10**	**08/19/11**	**ns**	**09/12/11**	**jd**		
Zinc	**110**	**mg/kg dry**	**9.7**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024778										
Mercury	**0.14**	**mg/kg dry**	**0.050**	**1**	**08/19/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**40**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024792										
Specific Gravity	**2.2**			**1**	**08/22/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**44**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-30 | Date Collected: 08/17/11 17:00 | Matrix: Sediment
Sample ID: DS-11-48 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**2600**	**mg/kg dry**	**150**	**10**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	**0.22**	**mg/kg dry**	**0.20**	**1**	**08/22/11**	**bd**	**08/23/11**	**bd**	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**78000**	**mg/kg dry**	**710**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**8.6**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.7**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**32000**	**mg/kg dry**	**1700**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<1000	mg/kg dry	1000	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-31 | Date Collected: 08/17/11 14:30 | Matrix: Sediment
Sample ID: DS-11-21 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<370	ug/kg dry	370	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<370	ug/kg dry	370	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<370	ug/kg dry	370	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<370	ug/kg dry	370	1	08/22/11	kb	08/26/11	avl		
Fluorene	<370	ug/kg dry	370	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<370	ug/kg dry	370	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<370	ug/kg dry	370	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	56	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	50	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	59	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<150	ug/kg dry	150	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<150	ug/kg dry	150	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<150	ug/kg dry	150	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<150	ug/kg dry	150	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<150	ug/kg dry	150	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<150	ug/kg dry	150	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<150	ug/kg dry	150	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	45	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	57	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-31 | Date Collected: 08/17/11 14:30 | Matrix: Sediment
Sample ID: DS-11-21 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024778										
Iron	**21000**	**mg/kg dry**	**5.0**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**		
Phosphorus	**510**	**mg/kg dry**	**6.3**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024778										
Arsenic	**2.6**	**mg/kg dry**	**0.12**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Barium	**82**	**mg/kg dry**	**3.0**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.23**	**mg/kg dry**	**0.20**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Chromium	**23**	**mg/kg dry**	**2.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Copper	**14**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Lead	**15**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Manganese	**670**	**mg/kg dry**	**4.0**	**200**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Nickel	**16**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.40	mg/kg dry	0.40	10	08/19/11	ns	09/07/11	jd		
Silver	**0.29**	**mg/kg dry**	**0.10**	**10**	**08/19/11**	**ns**	**09/12/11**	**jd**		
Zinc	**78**	**mg/kg dry**	**9.9**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024778										
Mercury	**0.10**	**mg/kg dry**	**0.050**	**1**	**08/19/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**44**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.4**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**83**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-31 | Date Collected: 08/17/11 14:30 | Matrix: Sediment
Sample ID: DS-11-21 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**1100**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**33000**	**mg/kg dry**	**650**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**5.4**	**% by Wt.**	**0.10**	**1**	**08/23/11**	**bd**	**08/29/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.7**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**20000**	**mg/kg dry**	**1500**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<950	mg/kg dry	950	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-32 | Date Collected: 08/17/11 15:45 | Matrix: Sediment
Sample ID: DS-11-22 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	51	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	47	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	57	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<130	ug/kg dry	130	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<130	ug/kg dry	130	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<130	ug/kg dry	130	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<130	ug/kg dry	130	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<130	ug/kg dry	130	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<130	ug/kg dry	130	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<130	ug/kg dry	130	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	54	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	74	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-32 | Date Collected: 08/17/11 15:45 | Matrix: Sediment
Sample ID: DS-11-22 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T024778										
Iron	**21000**	**mg/kg dry**	**5.0**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**		
Phosphorus	**500**	**mg/kg dry**	**5.9**	**1**	**08/19/11**	**ns**	**08/22/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T024778										
Arsenic	**2.8**	**mg/kg dry**	**0.11**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Barium	**77**	**mg/kg dry**	**2.8**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	08/19/11	ns	09/07/11	jd		
Chromium	**23**	**mg/kg dry**	**2.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Copper	**14**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Lead	**14**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Manganese	**830**	**mg/kg dry**	**3.7**	**200**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Nickel	**16**	**mg/kg dry**	**1.0**	**10**	**08/19/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	08/19/11	ns	09/07/11	jd		
Silver	**0.29**	**mg/kg dry**	**0.10**	**10**	**08/19/11**	**ns**	**09/12/11**	**jd**		
Zinc	**65**	**mg/kg dry**	**9.3**	**100**	**08/19/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T024778										
Mercury	**0.10**	**mg/kg dry**	**0.050**	**1**	**08/19/11**	**ns**	**08/24/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024759										
% Solids	**52**	**% by Wt.**	**0.10**	**1**	**08/18/11**	**as**	**08/19/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.6**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**170**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-32 | Date Collected: 08/17/11 15:45 | Matrix: Sediment
Sample ID: DS-11-22 | Date Received: 08/18/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**1100**	**mg/kg dry**	**30**	**2**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**61000**	**mg/kg dry**	**550**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**4.3**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**08/27/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024746										
In-Place Density	**1.7**	**g/mL**		**1**	**08/18/11**	**as**	**08/18/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**23000**	**mg/kg dry**	**1300**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<800	mg/kg dry	800	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-33 | Date Collected: 08/18/11 08:00 | Matrix: Sediment
Sample ID: DS-11-36 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	61	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	54	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	59	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	52	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	74	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-33 | Date Collected: 08/18/11 08:00 | Matrix: Sediment
Sample ID: DS-11-36 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**17000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**480**	**mg/kg dry**	**5.8**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**2.6**	**mg/kg dry**	**0.11**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**54**	**mg/kg dry**	**2.8**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.29**	**mg/kg dry**	**0.20**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Chromium	**18**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**17**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**9.3**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**300**	**mg/kg dry**	**1.8**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**13**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	09/02/11	ns	09/07/11	jd		
Silver	**0.12**	**mg/kg dry**	**0.10**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Zinc	**39**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**66**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.5**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**8.3**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-33 | Date Collected: 08/18/11 08:00 | Matrix: Sediment
Sample ID: DS-11-36 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**720**	**mg/kg dry**	**130**	**10**	**08/29/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**22000**	**mg/kg dry**	**430**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**2.2**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**08/27/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.1**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**19000**	**mg/kg dry**	**1000**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024804										
Grain Size without Hydrometer, see attached report	0.0			1	08/22/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<630	mg/kg dry	630	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-34 | Date Collected: 08/18/11 08:30 | Matrix: Sediment
Sample ID: DS-11-37 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	57	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	49	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	49	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<99	ug/kg dry	99	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<99	ug/kg dry	99	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<99	ug/kg dry	99	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<99	ug/kg dry	99	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<99	ug/kg dry	99	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<99	ug/kg dry	99	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<99	ug/kg dry	99	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	64	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	78	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-34 | Date Collected: 08/18/11 08:30 | Matrix: Sediment
Sample ID: DS-11-37 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**14000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**430**	**mg/kg dry**	**5.8**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**2.0**	**mg/kg dry**	**0.11**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**34**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/02/11	ns	09/07/11	jd		
Chromium	**15**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**11**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**7.1**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**240**	**mg/kg dry**	**1.8**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**10**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	09/02/11	ns	09/07/11	jd		
Silver	**0.14**	**mg/kg dry**	**0.10**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Zinc	**29**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**68**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.4**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**1.9**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-34 | Date Collected: 08/18/11 08:30 | Matrix: Sediment
Sample ID: DS-11-37 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**170**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**10000**	**mg/kg dry**	**420**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**1.5**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**08/27/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.2**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**9100**	**mg/kg dry**	**1000**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<620	mg/kg dry	620	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-35 | Date Collected: 08/18/11 08:50 | Matrix: Sediment
Sample ID: DS-11-38 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	65	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	58	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	64	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	54	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	67	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-35 | Date Collected: 08/18/11 08:50 | Matrix: Sediment
Sample ID: DS-11-38 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**14000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**400**	**mg/kg dry**	**5.7**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**2.1**	**mg/kg dry**	**0.11**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**38**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	**0.27**	**mg/kg dry**	**0.20**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Chromium	**15**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**14**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**9.4**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**250**	**mg/kg dry**	**1.8**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**11**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.36	mg/kg dry	0.36	10	09/02/11	ns	09/07/11	jd		
Silver	**0.10**	**mg/kg dry**	**0.10**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Zinc	**33**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**66**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.2**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**6.4**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-35 | Date Collected: 08/18/11 08:50 | Matrix: Sediment
Sample ID: DS-11-38 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**340**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**27000**	**mg/kg dry**	**430**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**2.8**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**08/27/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.4**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**15000**	**mg/kg dry**	**1000**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<630	mg/kg dry	630	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-36 | Date Collected: 08/18/11 09:00 | Matrix: Sediment
Sample ID: DS-11-39 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<340	ug/kg dry	340	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<340	ug/kg dry	340	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<340	ug/kg dry	340	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<340	ug/kg dry	340	1	08/22/11	kb	08/26/11	avl		
Fluorene	<340	ug/kg dry	340	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<340	ug/kg dry	340	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<340	ug/kg dry	340	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	64	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	55	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	61	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<140	ug/kg dry	140	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	40	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	51	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-36 | Date Collected: 08/18/11 09:00 | Matrix: Sediment
Sample ID: DS-11-39 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**14000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**420**	**mg/kg dry**	**5.9**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**2.1**	**mg/kg dry**	**0.11**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**30**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/02/11	ns	09/07/11	jd		
Chromium	**14**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**9.0**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**5.7**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**330**	**mg/kg dry**	**1.9**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**9.4**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	09/02/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	09/02/11	ns	09/07/11	jd		
Zinc	**25**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**49**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.0**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	<1.0	mg/kg dry	1.0	1	08/29/11	sm	08/30/11	sm	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-36 | Date Collected: 08/18/11 09:00 | Matrix: Sediment
Sample ID: DS-11-39 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**300**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**13000**	**mg/kg dry**	**580**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**1.6**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**08/27/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.4**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**4500**	**mg/kg dry**	**1400**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<850	mg/kg dry	850	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-37 | Date Collected: 08/18/11 09:20 | Matrix: Sediment
Sample ID: DS-11-40 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	64	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	57	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	56	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<120	ug/kg dry	120	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<120	ug/kg dry	120	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<120	ug/kg dry	120	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<120	ug/kg dry	120	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<120	ug/kg dry	120	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<120	ug/kg dry	120	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<120	ug/kg dry	120	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	47	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	63	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-37 | Date Collected: 08/18/11 09:20 | Matrix: Sediment
Sample ID: DS-11-40 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**16000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**450**	**mg/kg dry**	**5.8**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**2.0**	**mg/kg dry**	**0.11**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**40**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	**0.23**	**mg/kg dry**	**0.20**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Chromium	**16**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**13**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**9.2**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**240**	**mg/kg dry**	**1.8**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**12**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	09/02/11	ns	09/07/11	jd		
Silver	**0.11**	**mg/kg dry**	**0.10**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Zinc	**32**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**58**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.1**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	<1.0	mg/kg dry	1.0	1	08/29/11	sm	08/30/11	sm	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-37 | Date Collected: 08/18/11 09:20 | Matrix: Sediment
Sample ID: DS-11-40 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**460**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**34000**	**mg/kg dry**	**490**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**3.4**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**08/27/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.5**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**17000**	**mg/kg dry**	**1200**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<720	mg/kg dry	720	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-38 | Date Collected: 08/18/11 09:20 | Matrix: Sediment
Sample ID: DS-11-MO PU | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Phosphorus	**480**	**mg/kg dry**	**6.1**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
WET CHEMISTRY										
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**3.7**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										
Total Kjeldahl Nitrogen	**170**	**mg/kg dry**	**15**	**1**	**08/29/11**	**da**	**09/01/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-39 | Date Collected: 08/18/11 10:45 | Matrix: Sediment
Sample ID: DS-11-31 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	55	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	50	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	57	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	53	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	68	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-39 | Date Collected: 08/18/11 10:45 | Matrix: Sediment
Sample ID: DS-11-31 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**15000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**340**	**mg/kg dry**	**6.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**1.8**	**mg/kg dry**	**0.11**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**43**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/02/11	ns	09/07/11	jd		
Chromium	**16**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**11**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**6.1**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**230**	**mg/kg dry**	**1.9**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**10**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	09/02/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	09/02/11	ns	09/07/11	jd		
Zinc	**27**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**67**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.2**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**3.9**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-39 | Date Collected: 08/18/11 10:45 | Matrix: Sediment
Sample ID: DS-11-31 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**200**	**mg/kg dry**	**15**	**1**	**08/29/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	<430	mg/kg dry	430	1	08/22/11	da	08/25/11	da	N	
Volatile Solids	**2.2**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.4**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**5600**	**mg/kg dry**	**1000**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<630	mg/kg dry	630	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-40 | Date Collected: 08/18/11 11:20 | Matrix: Sediment
Sample ID: DS-11-32 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/26/11	avl		
Surrogates:										
Nitrobenzene-d5	59	%	36-98	1	08/22/11	kb	08/26/11	avl		
2-Fluorobiphenyl	53	%	44-105	1	08/22/11	kb	08/26/11	avl		
Terphenyl-d14	57	%	46-109	1	08/22/11	kb	08/26/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024845										
Aroclor-1016	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1221	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1232	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1242	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1248	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1254	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Aroclor-1260	<100	ug/kg dry	100	1	08/23/11	kb	08/25/11	tim		
Surrogates:										
Tetrachloro-m-xylene	47	%	40-113	1	08/23/11	kb	08/25/11	tim	N	
Decachlorobiphenyl	57	%	32-111	1	08/23/11	kb	08/25/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-40 | Date Collected: 08/18/11 11:20 | Matrix: Sediment
Sample ID: DS-11-32 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**20000**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**420**	**mg/kg dry**	**6.2**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**2.5**	**mg/kg dry**	**0.12**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**65**	**mg/kg dry**	**3.0**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.23**	**mg/kg dry**	**0.20**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Chromium	**20**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**15**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**9.1**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**290**	**mg/kg dry**	**2.0**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**13**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	09/02/11	ns	09/07/11	jd		
Silver	**0.13**	**mg/kg dry**	**0.10**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Zinc	**37**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**64**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.0**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**23**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-40 | Date Collected: 08/18/11 11:20 | Matrix: Sediment
Sample ID: DS-11-32 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**610**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	**0.24**	**mg/kg dry**	**0.20**	**1**	**08/22/11**	**bd**	**08/23/11**	**bd**	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**7800**	**mg/kg dry**	**300**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**4.5**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.4**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**6800**	**mg/kg dry**	**1000**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<650	mg/kg dry	650	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-41 | Date Collected: 08/18/11 11:40 | Matrix: Sediment
Sample ID: DS-11-33 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024913										
Naphthalene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/26/11	kb	08/29/11	avl		
Surrogates:										
Nitrobenzene-d5	54	%	36-98	1	08/26/11	kb	08/29/11	avl		
2-Fluorobiphenyl	51	%	44-105	1	08/26/11	kb	08/29/11	avl		
Terphenyl-d14	54	%	46-109	1	08/26/11	kb	08/29/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024971										
Aroclor-1016	<83	ug/kg dry	83	1	08/29/11	kb	08/31/11	tim		
Aroclor-1221	<83	ug/kg dry	83	1	08/29/11	kb	08/31/11	tim		
Aroclor-1232	<83	ug/kg dry	83	1	08/29/11	kb	08/31/11	tim		
Aroclor-1242	<83	ug/kg dry	83	1	08/29/11	kb	08/31/11	tim		
Aroclor-1248	<83	ug/kg dry	83	1	08/29/11	kb	08/31/11	tim		
Aroclor-1254	<83	ug/kg dry	83	1	08/29/11	kb	08/31/11	tim		
Aroclor-1260	<83	ug/kg dry	83	1	08/29/11	kb	08/31/11	tim		
Surrogates:										
Tetrachloro-m-xylene	53	%	40-113	1	08/29/11	kb	08/31/11	tim	N	
Decachlorobiphenyl	59	%	32-111	1	08/29/11	kb	08/31/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-41 | Date Collected: 08/18/11 11:40 | Matrix: Sediment
Sample ID: DS-11-33 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**5500**	**mg/kg dry**	**5.0**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**140**	**mg/kg dry**	**6.1**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**0.87**	**mg/kg dry**	**0.12**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Barium	**8.7**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/06/11	ns	09/07/11	jd		
Chromium	**4.2**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Copper	**2.4**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Lead	**1.5**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Manganese	**72**	**mg/kg dry**	**1.9**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**3.1**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	09/06/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	09/06/11	ns	09/07/11	jd		
Zinc	**7.1**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	<0.050	mg/kg dry	0.050	1	09/06/11	ns	09/07/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**81**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.2**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	<1.0	mg/kg dry	1.0	1	08/29/11	sm	08/31/11	bd	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-41 | Date Collected: 08/18/11 11:40 | Matrix: Sediment
Sample ID: DS-11-33 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**33**	**mg/kg dry**	**27**	**1**	**08/29/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/24/11	da	08/25/11	da	N	
Analysis Method: PLUMB										
Batch: T024824										
Chemical Oxygen Demand	**2600**	**mg/kg dry**	**350**	**1**	**08/22/11**	**da**	**08/24/11**	**da**	N	
Volatile Solids	**0.31**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**08/27/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.9**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	<1000	mg/kg dry	1000	1	08/24/11	sm	08/25/11	sm	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025066										
Oil & Grease (HEM)	<520	mg/kg dry	520	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-42 | Date Collected: 08/18/11 12:00 | Matrix: Sediment
Sample ID: DS-11-34 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Surrogates:										
Nitrobenzene-d5	60	%	36-98	1	08/22/11	kb	08/30/11	avl		
2-Fluorobiphenyl	54	%	44-105	1	08/22/11	kb	08/30/11	avl		
Terphenyl-d14	50	%	46-109	1	08/22/11	kb	08/30/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024971										
Aroclor-1016	<90	ug/kg dry	90	1	08/29/11	kb	08/31/11	tim		
Aroclor-1221	<90	ug/kg dry	90	1	08/29/11	kb	08/31/11	tim		
Aroclor-1232	<90	ug/kg dry	90	1	08/29/11	kb	08/31/11	tim		
Aroclor-1242	<90	ug/kg dry	90	1	08/29/11	kb	08/31/11	tim		
Aroclor-1248	<90	ug/kg dry	90	1	08/29/11	kb	08/31/11	tim		
Aroclor-1254	<90	ug/kg dry	90	1	08/29/11	kb	08/31/11	tim		
Aroclor-1260	<90	ug/kg dry	90	1	08/29/11	kb	08/31/11	tim		
Surrogates:										
Tetrachloro-m-xylene	62	%	40-113	1	08/29/11	kb	08/31/11	tim	N	
Decachlorobiphenyl	77	%	32-111	1	08/29/11	kb	08/31/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-42 | Date Collected: 08/18/11 12:00 | Matrix: Sediment
Sample ID: DS-11-34 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**5100**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**130**	**mg/kg dry**	**6.2**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**0.89**	**mg/kg dry**	**0.12**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**9.2**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/02/11	ns	09/07/11	jd		
Chromium	**4.4**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**2.4**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**1.7**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**81**	**mg/kg dry**	**2.0**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**3.2**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	09/02/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	09/02/11	ns	09/07/11	jd		
Zinc	**7.5**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**74**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.5**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	<1.0	mg/kg dry	1.0	1	08/29/11	sm	08/30/11	sm	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-42 | Date Collected: 08/18/11 12:00 | Matrix: Sediment
Sample ID: DS-11-34 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**40**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	<380	mg/kg dry	380	1	08/22/11	da	08/25/11	da	N	
Volatile Solids	**0.34**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.9**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**11000**	**mg/kg dry**	**1000**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<560	mg/kg dry	560	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-43 | Date Collected: 08/18/11 12:55 | Matrix: Sediment
Sample ID: DS-11-35 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Surrogates:										
Nitrobenzene-d5	61	%	36-98	1	08/22/11	kb	08/30/11	avl		
2-Fluorobiphenyl	57	%	44-105	1	08/22/11	kb	08/30/11	avl		
Terphenyl-d14	62	%	46-109	1	08/22/11	kb	08/30/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024971										
Aroclor-1016	<100	ug/kg dry	100	1	08/29/11	kb	08/31/11	tim		
Aroclor-1221	<100	ug/kg dry	100	1	08/29/11	kb	08/31/11	tim		
Aroclor-1232	<100	ug/kg dry	100	1	08/29/11	kb	08/31/11	tim		
Aroclor-1242	<100	ug/kg dry	100	1	08/29/11	kb	08/31/11	tim		
Aroclor-1248	<100	ug/kg dry	100	1	08/29/11	kb	08/31/11	tim		
Aroclor-1254	<100	ug/kg dry	100	1	08/29/11	kb	08/31/11	tim		
Aroclor-1260	<100	ug/kg dry	100	1	08/29/11	kb	08/31/11	tim		
Surrogates:										
Tetrachloro-m-xylene	58	%	40-113	1	08/29/11	kb	08/31/11	tim	N	
Decachlorobiphenyl	68	%	32-111	1	08/29/11	kb	08/31/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-43 | Date Collected: 08/18/11 12:55 | Matrix: Sediment
Sample ID: DS-11-35 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025033										
Iron	**6700**	**mg/kg dry**	**5.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**		
Phosphorus	**130**	**mg/kg dry**	**6.0**	**1**	**09/02/11**	**ns**	**09/06/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025033										
Arsenic	**1.0**	**mg/kg dry**	**0.11**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Barium	**12**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/02/11	ns	09/07/11	jd		
Chromium	**6.8**	**mg/kg dry**	**2.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Copper	**3.0**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Lead	**2.0**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Manganese	**91**	**mg/kg dry**	**1.9**	**100**	**09/02/11**	**ns**	**09/08/11**	**jd**		
Nickel	**3.8**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	09/02/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	09/02/11	ns	09/07/11	jd		
Zinc	**8.4**	**mg/kg dry**	**1.0**	**10**	**09/02/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025033										
Mercury	<0.050	mg/kg dry	0.050	1	09/02/11	ns	09/06/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**65**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.5**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024946										
Ammonia as N	**1.6**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-43 | Date Collected: 08/18/11 12:55 | Matrix: Sediment
Sample ID: DS-11-35 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**210**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**2900**	**mg/kg dry**	**440**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**1.3**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.9**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024822										
Total Organic Carbon	**9600**	**mg/kg dry**	**1000**	**1**	**08/22/11**	**sm**	**08/23/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<640	mg/kg dry	640	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-44 | Date Collected: 08/18/11 12:45 | Matrix: Sediment
Sample ID: DS-11-WO PU | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Phosphorus	**160**	**mg/kg dry**	**6.0**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
WET CHEMISTRY										
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	<1.0	mg/kg dry	1.0	1	08/29/11	sm	08/31/11	bd	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										
Total Kjeldahl Nitrogen	**18**	**mg/kg dry**	**15**	**1**	**08/29/11**	**da**	**09/01/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-45 | Date Collected: 08/18/11 14:30 | Matrix: Sediment
Sample ID: DS-11-30 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Surrogates:										
Nitrobenzene-d5	56	%	36-98	1	08/22/11	kb	08/30/11	avl		
2-Fluorobiphenyl	54	%	44-105	1	08/22/11	kb	08/30/11	avl		
Terphenyl-d14	60	%	46-109	1	08/22/11	kb	08/30/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024971										
Aroclor-1016	<97	ug/kg dry	97	1	08/29/11	kb	08/31/11	tim		
Aroclor-1221	<97	ug/kg dry	97	1	08/29/11	kb	08/31/11	tim		
Aroclor-1232	<97	ug/kg dry	97	1	08/29/11	kb	08/31/11	tim		
Aroclor-1242	<97	ug/kg dry	97	1	08/29/11	kb	08/31/11	tim		
Aroclor-1248	<97	ug/kg dry	97	1	08/29/11	kb	08/31/11	tim		
Aroclor-1254	<97	ug/kg dry	97	1	08/29/11	kb	08/31/11	tim		
Aroclor-1260	<97	ug/kg dry	97	1	08/29/11	kb	08/31/11	tim		
Surrogates:										
Tetrachloro-m-xylene	* **32**	%	40-113	1	08/29/11	kb	08/31/11	tim	303, N	
Decachlorobiphenyl	32	%	32-111	1	08/29/11	kb	08/31/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-45 | Date Collected: 08/18/11 14:30 | Matrix: Sediment
Sample ID: DS-11-30 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**17000**	**mg/kg dry**	**5.0**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**330**	**mg/kg dry**	**6.3**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**2.0**	**mg/kg dry**	**0.12**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Barium	**62**	**mg/kg dry**	**3.0**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/06/11	ns	09/07/11	jd		
Chromium	**17**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Copper	**12**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Lead	**5.1**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Manganese	**370**	**mg/kg dry**	**2.0**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**12**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.40	mg/kg dry	0.40	10	09/06/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	09/06/11	ns	09/07/11	jd		
Zinc	**29**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	<0.050	mg/kg dry	0.050	1	09/06/11	ns	09/07/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**69**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.6**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**20**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024917										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-45 | Date Collected: 08/18/11 14:30 | Matrix: Sediment
Sample ID: DS-11-30 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**450**	**mg/kg dry**	**15**	**1**	**08/26/11**	**da**	**08/29/11**	**sm**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**9500**	**mg/kg dry**	**420**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**4.0**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.8**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**9700**	**mg/kg dry**	**1000**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<610	mg/kg dry	610	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-46 | Date Collected: 08/18/11 16:45 | Matrix: Sediment
Sample ID: DS-11-29 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024818										
Naphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/22/11	kb	08/30/11	avl		
Surrogates:										
Nitrobenzene-d5	52	%	36-98	1	08/22/11	kb	08/30/11	avl		
2-Fluorobiphenyl	44	%	44-105	1	08/22/11	kb	08/30/11	avl		
Terphenyl-d14 *	**42**	%	46-109	1	08/22/11	kb	08/30/11	avl	802	
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024971										
Aroclor-1016	<89	ug/kg dry	89	1	08/29/11	kb	08/31/11	tim		
Aroclor-1221	<89	ug/kg dry	89	1	08/29/11	kb	08/31/11	tim		
Aroclor-1232	<89	ug/kg dry	89	1	08/29/11	kb	08/31/11	tim		
Aroclor-1242	<89	ug/kg dry	89	1	08/29/11	kb	08/31/11	tim		
Aroclor-1248	<89	ug/kg dry	89	1	08/29/11	kb	08/31/11	tim		
Aroclor-1254	<89	ug/kg dry	89	1	08/29/11	kb	08/31/11	tim		
Aroclor-1260	<89	ug/kg dry	89	1	08/29/11	kb	08/31/11	tim		
Surrogates:										
Tetrachloro-m-xylene	48	%	40-113	1	08/29/11	kb	08/31/11	tim	N	
Decachlorobiphenyl	61	%	32-111	1	08/29/11	kb	08/31/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-46 | Date Collected: 08/18/11 16:45 | Matrix: Sediment
Sample ID: DS-11-29 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**11000**	**mg/kg dry**	**5.0**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**220**	**mg/kg dry**	**5.9**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**1.9**	**mg/kg dry**	**0.11**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Barium	**26**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/06/11	ns	09/07/11	jd		
Chromium	**9.2**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Copper	**5.7**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Lead	**3.0**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Manganese	**130**	**mg/kg dry**	**1.9**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**6.5**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	09/06/11	ns	09/07/11	jd		
Silver	<0.10	mg/kg dry	0.10	10	09/06/11	ns	09/07/11	jd		
Zinc	**15**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	<0.050	mg/kg dry	0.050	1	09/06/11	ns	09/07/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**75**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.7**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**2.4**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-46 | Date Collected: 08/18/11 16:45 | Matrix: Sediment
Sample ID: DS-11-29 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**120**	**mg/kg dry**	**15**	**1**	**08/29/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/22/11	bd	08/23/11	bd	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**6100**	**mg/kg dry**	**380**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**1.0**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.6**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**6200**	**mg/kg dry**	**1600**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<560	mg/kg dry	560	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-47 | Date Collected: 08/18/11 17:30 | Matrix: Sediment
Sample ID: DS-11-28 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T025009										
Naphthalene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/31/11	kb	08/31/11	avl		
Surrogates:										
Nitrobenzene-d5	47	%	36-98	1	08/31/11	kb	08/31/11	avl		
2-Fluorobiphenyl	48	%	44-105	1	08/31/11	kb	08/31/11	avl		
Terphenyl-d14	47	%	46-109	1	08/31/11	kb	08/31/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T024971										
Aroclor-1016	<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim		
Aroclor-1221	<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim		
Aroclor-1232	<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim		
Aroclor-1242	**1100**	**ug/kg dry**	**440**	**4**	**08/29/11**	**kb**	**09/01/11**	**tim**		
Aroclor-1248	<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim		
Aroclor-1254	<110	ug/kg dry	110	1	08/29/11	kb	08/31/11	tim	900	
Aroclor-1260	**610**	**ug/kg dry**	**110**	**1**	**08/29/11**	**kb**	**08/31/11**	**tim**		
Surrogates:										
Tetrachloro-m-xylene	66	%	40-113	1	08/29/11	kb	08/31/11	tim	N	
Decachlorobiphenyl *	**157**	%	32-111	1	08/29/11	kb	08/31/11	tim	304, N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-47 | Date Collected: 08/18/11 17:30 | Matrix: Sediment
Sample ID: DS-11-28 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**27000**	**mg/kg dry**	**28**	**10**	**09/06/11**	**ns**	**09/08/11**	**jlm**		
Phosphorus	**570**	**mg/kg dry**	**5.9**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**3.8**	**mg/kg dry**	**0.11**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Barium	**120**	**mg/kg dry**	**2.8**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.23**	**mg/kg dry**	**0.20**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Chromium	**25**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Copper	**21**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Lead	**13**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Manganese	**740**	**mg/kg dry**	**3.7**	**200**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**20**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	09/06/11	ns	09/07/11	jd		
Silver	**0.23**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**70**	**mg/kg dry**	**9.3**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	**0.067**	**mg/kg dry**	**0.050**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**60**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**3.0**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**87**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-47 | Date Collected: 08/18/11 17:30 | Matrix: Sediment
Sample ID: DS-11-28 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**1000**	**mg/kg dry**	**140**	**10**	**08/29/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024815										
Cyanide (total)	**0.20**	**mg/kg dry**	**0.20**	**1**	**08/22/11**	**bd**	**08/23/11**	**bd**	N	
Analysis Method: PLUMB										
Batch: T024823										
Chemical Oxygen Demand	**32000**	**mg/kg dry**	**470**	**1**	**08/22/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**6.2**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.5**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**32000**	**mg/kg dry**	**1100**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<690	mg/kg dry	690	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-48 | Date Collected: 08/18/11 18:45 | Matrix: Sediment
Sample ID: DS-11-49 | Date Received: 08/20/11 10:30

PARAMETERS		RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS											
Analysis Method: EPA 8270C											
Batch: T024913											
Naphthalene		<380	ug/kg dry	380	1	08/26/11	kb	08/30/11	avl		
2-Methylnaphthalene		<380	ug/kg dry	380	1	08/26/11	kb	08/30/11	avl		
Acenaphthylene		<380	ug/kg dry	380	1	08/26/11	kb	08/30/11	avl		
Acenaphthene		<380	ug/kg dry	380	1	08/26/11	kb	08/30/11	avl		
Fluorene		<380	ug/kg dry	380	1	08/26/11	kb	08/30/11	avl		
Phenanthrene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Anthracene		<380	ug/kg dry	380	1	08/26/11	kb	08/30/11	avl		
Fluoranthene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Pyrene		<380	ug/kg dry	380	1	08/26/11	kb	08/30/11	avl		
Benzo (a) anthracene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Chrysene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (b) fluoranthene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (k) fluoranthene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (a) pyrene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Indeno (1,2,3-cd) pyrene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Dibenz (a,h) anthracene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (g,h,i) perylene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Surrogates:											
Nitrobenzene-d5		51	%	36-98	1	08/26/11	kb	08/30/11	avl		
2-Fluorobiphenyl	*	**38**	%	44-105	1	08/26/11	kb	08/30/11	avl	802	
Terphenyl-d14		55	%	46-109	1	08/26/11	kb	08/30/11	avl		
PESTICIDES/PCBS											
Analysis Method: EPA 8082											
Batch: T024971											
Aroclor-1016		<160	ug/kg dry	160	1	08/29/11	kb	09/01/11	tim		
Aroclor-1221		<160	ug/kg dry	160	1	08/29/11	kb	09/01/11	tim		
Aroclor-1232		<160	ug/kg dry	160	1	08/29/11	kb	09/01/11	tim		
Aroclor-1242		<160	ug/kg dry	160	1	08/29/11	kb	09/01/11	tim		
Aroclor-1248		<160	ug/kg dry	160	1	08/29/11	kb	09/01/11	tim		
Aroclor-1254		<160	ug/kg dry	160	1	08/29/11	kb	09/01/11	tim		
Aroclor-1260		<160	ug/kg dry	160	1	08/29/11	kb	09/01/11	tim		
Surrogates:											
Tetrachloro-m-xylene	*	**16**	%	40-113	1	08/29/11	kb	09/01/11	tim	303, N	
Decachlorobiphenyl		46	%	32-111	1	08/29/11	kb	09/01/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-48 | Date Collected: 08/18/11 18:45 | Matrix: Sediment
Sample ID: DS-11-49 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**34000**	**mg/kg dry**	**28**	**10**	**09/06/11**	**ns**	**09/08/11**	**jlm**		
Phosphorus	**780**	**mg/kg dry**	**5.9**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**3.3**	**mg/kg dry**	**0.11**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Barium	**130**	**mg/kg dry**	**2.8**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.32**	**mg/kg dry**	**0.20**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Chromium	**33**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Copper	**18**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Lead	**18**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Manganese	**880**	**mg/kg dry**	**3.7**	**200**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**21**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	09/06/11	ns	09/07/11	jd		
Silver	**0.25**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**110**	**mg/kg dry**	**9.4**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	**0.15**	**mg/kg dry**	**0.050**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**43**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**1.9**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**53**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-48 | Date Collected: 08/18/11 18:45 | Matrix: Sediment
Sample ID: DS-11-49 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**1900**	**mg/kg dry**	**150**	**10**	**08/29/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/24/11	da	08/25/11	da	N	
Analysis Method: PLUMB										
Batch: T024824										
Chemical Oxygen Demand	**70000**	**mg/kg dry**	**670**	**1**	**08/22/11**	**da**	**08/24/11**	**da**	N	
Volatile Solids	**6.7**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.4**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**28000**	**mg/kg dry**	**1600**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025012										
Oil & Grease (HEM)	<980	mg/kg dry	980	1	08/31/11	kb	09/01/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-49 | Date Collected: 08/18/11 19:00 | Matrix: Sediment
Sample ID: DS-11-50 | Date Received: 08/20/11 10:30

PARAMETERS		RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS											
Analysis Method: EPA 8270C											
Batch: T024913											
Naphthalene		<420	ug/kg dry	420	1	08/26/11	kb	08/31/11	avl		
2-Methylnaphthalene		<420	ug/kg dry	420	1	08/26/11	kb	08/31/11	avl		
Acenaphthylene		<420	ug/kg dry	420	1	08/26/11	kb	08/31/11	avl		
Acenaphthene		<420	ug/kg dry	420	1	08/26/11	kb	08/31/11	avl		
Fluorene		<420	ug/kg dry	420	1	08/26/11	kb	08/31/11	avl		
Phenanthrene		<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Anthracene		<420	ug/kg dry	420	1	08/26/11	kb	08/31/11	avl		
Fluoranthene		<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Pyrene		<420	ug/kg dry	420	1	08/26/11	kb	08/31/11	avl		
Benzo (a) anthracene		<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Chrysene		<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (b) fluoranthene		<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (k) fluoranthene		<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (a) pyrene		<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Indeno (1,2,3-cd) pyrene		<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Dibenz (a,h) anthracene		<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (g,h,i) perylene		<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Surrogates:											
Nitrobenzene-d5		52	%	36-98	1	08/26/11	kb	08/31/11	avl		
2-Fluorobiphenyl	*	**34**	%	44-105	1	08/26/11	kb	08/31/11	avl	802	
Terphenyl-d14		56	%	46-109	1	08/26/11	kb	08/31/11	avl		
PESTICIDES/PCBS											
Analysis Method: EPA 8082											
Batch: T025068											
Aroclor-1016		<170	ug/kg dry	170	1	09/06/11	kb	09/08/11	tim		
Aroclor-1221		<170	ug/kg dry	170	1	09/06/11	kb	09/08/11	tim		
Aroclor-1232		<170	ug/kg dry	170	1	09/06/11	kb	09/08/11	tim		
Aroclor-1242		<170	ug/kg dry	170	1	09/06/11	kb	09/08/11	tim		
Aroclor-1248		<170	ug/kg dry	170	1	09/06/11	kb	09/08/11	tim		
Aroclor-1254		<170	ug/kg dry	170	1	09/06/11	kb	09/08/11	tim		
Aroclor-1260		<170	ug/kg dry	170	1	09/06/11	kb	09/08/11	tim		
Surrogates:											
Tetrachloro-m-xylene		55	%	40-113	1	09/06/11	kb	09/08/11	tim	N	
Decachlorobiphenyl		56	%	32-111	1	09/06/11	kb	09/08/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-49 | Date Collected: 08/18/11 19:00 | Matrix: Sediment
Sample ID: DS-11-50 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**27000**	**mg/kg dry**	**29**	**10**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**740**	**mg/kg dry**	**6.1**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**2.9**	**mg/kg dry**	**0.12**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Barium	**110**	**mg/kg dry**	**2.9**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.30**	**mg/kg dry**	**0.20**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Chromium	**28**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Copper	**17**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Lead	**17**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Manganese	**690**	**mg/kg dry**	**3.9**	**200**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**18**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	09/06/11	ns	09/07/11	jd		
Silver	**0.21**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**96**	**mg/kg dry**	**9.7**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	**0.11**	**mg/kg dry**	**0.050**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024808										
% Solids	**39**	**% by Wt.**	**0.10**	**1**	**08/22/11**	**sm**	**08/23/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024855										
Specific Gravity	**2.8**			**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**90**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										
Total Kjeldahl Nitrogen	**1300**	**mg/kg dry**	**120**	**10**	**08/29/11**	**da**	**09/01/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-49 | Date Collected: 08/18/11 19:00 | Matrix: Sediment
Sample ID: DS-11-50 | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/24/11	da	08/25/11	da	N	
Analysis Method: PLUMB										
Batch: T024824										
Chemical Oxygen Demand	**83000**	**mg/kg dry**	**720**	**1**	**08/22/11**	**da**	**08/24/11**	**da**	N	
Volatile Solids	**7.8**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024803										
In-Place Density	**1.3**	**g/mL**		**1**	**08/22/11**	**sm**	**08/22/11**	**sm**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**29000**	**mg/kg dry**	**1700**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025066										
Oil & Grease (HEM)	<1100	mg/kg dry	1100	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-50 | Date Collected: 08/18/11 19:00 | Matrix: Sediment
Sample ID: DS-11-II PU | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Phosphorus	**750**	**mg/kg dry**	**6.0**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
WET CHEMISTRY										
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**91**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										
Total Kjeldahl Nitrogen	**1900**	**mg/kg dry**	**130**	**10**	**08/29/11**	**da**	**09/01/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-51 | Date Collected: 08/18/11 17:00 | Matrix: Elutriate
Sample ID: DS-11-MU6 Elutriate | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T025050										
Mercury	<0.00020	mg/L	0.00020	1	09/02/11	ns	09/02/11	jlm		
METALS, ELUTRIATE										
Analysis Method: EPA 6010B										
Batch: T025070										
Iron	**5.6**	**mg/L**	**0.20**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Analysis Method: EPA 6020										
Batch: T025070										
Arsenic	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Barium	<0.10	mg/L	0.10	5	09/06/11	ns	09/06/11	jd		
Cadmium	<0.0010	mg/L	0.0010	5	09/06/11	ns	09/06/11	jd		
Chromium	<0.010	mg/L	0.010	5	09/06/11	ns	09/06/11	jd		
Copper	**0.0072**	**mg/L**	**0.0040**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Lead	**0.0042**	**mg/L**	**0.0030**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Manganese	**2.7**	**mg/L**	**0.050**	**50**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Nickel	<0.020	mg/L	0.020	5	09/06/11	ns	09/06/11	jd		
Selenium	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Silver	<0.00020	mg/L	0.00020	5	09/06/11	ns	09/12/11	jd		
Zinc	<0.15	mg/L	0.15	5	09/06/11	ns	09/06/11	jd		
WET CHEMISTRY										
Analysis Method: EPA 350.1										
Batch: T024976										
Ammonia as N	**0.63**	**mg/L**	**0.010**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2										
Batch: T024978										
Total Kjeldahl Nitrogen	**1.5**	**mg/L**	**0.50**	**1**	**08/30/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 365.2										
Batch: T024982										
Phosphorus-Total (as P)	**0.12**	**mg/L**	**0.010**	**1**	**08/30/11**	**bd**	**08/30/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-52 | Date Collected: 08/19/11 08:00 | Matrix: Elutriate
Sample ID: DS-11-MU1 Elutriate | Date Received: 08/20/11 10:30

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T025050										
Mercury	<0.00020	mg/L	0.00020	1	09/02/11	ns	09/02/11	jlm		
METALS, ELUTRIATE										
Analysis Method: EPA 6010B										
Batch: T025070										
Iron	**2.9**	**mg/L**	**0.20**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Analysis Method: EPA 6020										
Batch: T025070										
Arsenic	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Barium	<0.10	mg/L	0.10	5	09/06/11	ns	09/06/11	jd		
Cadmium	<0.0010	mg/L	0.0010	5	09/06/11	ns	09/06/11	jd		
Chromium	<0.010	mg/L	0.010	5	09/06/11	ns	09/06/11	jd		
Copper	**0.0053**	**mg/L**	**0.0040**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Lead	<0.0030	mg/L	0.0030	5	09/06/11	ns	09/06/11	jd		
Manganese	**1.1**	**mg/L**	**0.050**	**50**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Nickel	<0.020	mg/L	0.020	5	09/06/11	ns	09/06/11	jd		
Selenium	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Silver	<0.00020	mg/L	0.00020	5	09/06/11	ns	09/12/11	jd		
Zinc	<0.15	mg/L	0.15	5	09/06/11	ns	09/06/11	jd		
WET CHEMISTRY										
Analysis Method: EPA 350.1										
Batch: T024976										
Ammonia as N	**0.60**	**mg/L**	**0.010**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2										
Batch: T024978										
Total Kjeldahl Nitrogen	**1.9**	**mg/L**	**0.50**	**1**	**08/30/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 365.2										
Batch: T024982										
Phosphorus-Total (as P)	**0.062**	**mg/L**	**0.010**	**1**	**08/30/11**	**bd**	**08/30/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-53 | Date Collected: 08/20/11 07:00 | Matrix: Sediment
Sample ID: DS-11-23 | Date Received: 08/23/11 10:47

PARAMETERS		RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS											
Analysis Method: EPA 8270C											
Batch: T024913											
Naphthalene		<540	ug/kg dry	540	1	08/26/11	kb	08/30/11	avl		
2-Methylnaphthalene		<540	ug/kg dry	540	1	08/26/11	kb	08/30/11	avl		
Acenaphthylene		<540	ug/kg dry	540	1	08/26/11	kb	08/30/11	avl		
Acenaphthene		<540	ug/kg dry	540	1	08/26/11	kb	08/30/11	avl		
Fluorene		<540	ug/kg dry	540	1	08/26/11	kb	08/30/11	avl		
Phenanthrene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Anthracene		<540	ug/kg dry	540	1	08/26/11	kb	08/30/11	avl		
Fluoranthene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Pyrene		<540	ug/kg dry	540	1	08/26/11	kb	08/30/11	avl		
Benzo (a) anthracene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Chrysene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (b) fluoranthene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (k) fluoranthene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (a) pyrene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Indeno (1,2,3-cd) pyrene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Dibenz (a,h) anthracene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (g,h,i) perylene		<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Surrogates:											
Nitrobenzene-d5		41	%	36-98	1	08/26/11	kb	08/30/11	avl		
2-Fluorobiphenyl	*	**34**	%	44-105	1	08/26/11	kb	08/30/11	avl	802	
Terphenyl-d14		47	%	46-109	1	08/26/11	kb	08/30/11	avl		
PESTICIDES/PCBS											
Analysis Method: EPA 8082											
Batch: T024971											
Aroclor-1016		<220	ug/kg dry	220	1	08/29/11	kb	09/01/11	tim		
Aroclor-1221		<220	ug/kg dry	220	1	08/29/11	kb	09/01/11	tim		
Aroclor-1232		<220	ug/kg dry	220	1	08/29/11	kb	09/01/11	tim		
Aroclor-1242		<220	ug/kg dry	220	1	08/29/11	kb	09/01/11	tim		
Aroclor-1248		<220	ug/kg dry	220	1	08/29/11	kb	09/01/11	tim		
Aroclor-1254		<220	ug/kg dry	220	1	08/29/11	kb	09/01/11	tim		
Aroclor-1260		<220	ug/kg dry	220	1	08/29/11	kb	09/01/11	tim		
Surrogates:											
Tetrachloro-m-xylene		41	%	40-113	1	08/29/11	kb	09/01/11	tim	N	
Decachlorobiphenyl		50	%	32-111	1	08/29/11	kb	09/01/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-53 | Date Collected: 08/20/11 07:00 | Matrix: Sediment
Sample ID: DS-11-23 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**31000**	**mg/kg dry**	**28**	**10**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**840**	**mg/kg dry**	**5.9**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**4.1**	**mg/kg dry**	**0.11**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Barium	**140**	**mg/kg dry**	**2.8**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.32**	**mg/kg dry**	**0.20**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Chromium	**29**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Copper	**18**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Lead	**23**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Manganese	**1400**	**mg/kg dry**	**9.3**	**500**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**19**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	09/06/11	ns	09/07/11	jd		
Silver	**0.36**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**110**	**mg/kg dry**	**9.3**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	**0.16**	**mg/kg dry**	**0.050**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024873										
% Solids	**31**	**% by Wt.**	**0.10**	**1**	**08/24/11**	**as**	**08/25/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024926										
Specific Gravity	**2.4**			**1**	**08/26/11**	**as**	**08/31/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**47**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-53 | Date Collected: 08/20/11 07:00 | Matrix: Sediment
Sample ID: DS-11-23 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**2400**	**mg/kg dry**	**120**	**10**	**08/29/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/24/11	da	08/25/11	da	N	
Analysis Method: PLUMB										
Batch: T024877										
Chemical Oxygen Demand	**110000**	**mg/kg dry**	**930**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**7.2**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024853										
In-Place Density	**1.5**	**g/mL**		**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**45000**	**mg/kg dry**	**2200**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025066										
Oil & Grease (HEM)	<1400	mg/kg dry	1400	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-54 | Date Collected: 08/20/11 07:25 | Matrix: Sediment
Sample ID: DS-11-24 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024913										
Naphthalene	<440	ug/kg dry	440	1	08/26/11	kb	08/30/11	avl		
2-Methylnaphthalene	<440	ug/kg dry	440	1	08/26/11	kb	08/30/11	avl		
Acenaphthylene	<440	ug/kg dry	440	1	08/26/11	kb	08/30/11	avl		
Acenaphthene	<440	ug/kg dry	440	1	08/26/11	kb	08/30/11	avl		
Fluorene	<440	ug/kg dry	440	1	08/26/11	kb	08/30/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Anthracene	<440	ug/kg dry	440	1	08/26/11	kb	08/30/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Pyrene	<440	ug/kg dry	440	1	08/26/11	kb	08/30/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Surrogates:										
Nitrobenzene-d5	65	%	36-98	1	08/26/11	kb	08/30/11	avl		
2-Fluorobiphenyl	61	%	44-105	1	08/26/11	kb	08/30/11	avl		
Terphenyl-d14	71	%	46-109	1	08/26/11	kb	08/30/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T025011										
Aroclor-1016	<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1221	<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1232	<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1242	<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1248	<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1254	<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Aroclor-1260	<180	ug/kg dry	180	1	08/31/11	kb	09/02/11	tim		
Surrogates:										
Tetrachloro-m-xylene	* **23**	%	40-113	1	08/31/11	kb	09/02/11	tim	303, N	
Decachlorobiphenyl	40	%	32-111	1	08/31/11	kb	09/02/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-54 | Date Collected: 08/20/11 07:25 | Matrix: Sediment
Sample ID: DS-11-24 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**43000**	**mg/kg dry**	**29**	**10**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**1000**	**mg/kg dry**	**6.2**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**4.9**	**mg/kg dry**	**0.12**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Barium	**190**	**mg/kg dry**	**2.9**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.37**	**mg/kg dry**	**0.20**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Chromium	**42**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Copper	**23**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Lead	**27**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Manganese	**1600**	**mg/kg dry**	**9.8**	**500**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**25**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	09/06/11	ns	09/08/11	jd		
Silver	**0.51**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**130**	**mg/kg dry**	**9.8**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	**0.17**	**mg/kg dry**	**0.050**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024873										
% Solids	**38**	**% by Wt.**	**0.10**	**1**	**08/24/11**	**as**	**08/25/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024926										
Specific Gravity	**2.7**			**1**	**08/26/11**	**as**	**08/31/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**72**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-54 | Date Collected: 08/20/11 07:25 | Matrix: Sediment
Sample ID: DS-11-24 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**2000**	**mg/kg dry**	**150**	**10**	**08/29/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/24/11	da	08/25/11	da	N	
Analysis Method: PLUMB										
Batch: T024877										
Chemical Oxygen Demand	**81000**	**mg/kg dry**	**750**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**9.6**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024853										
In-Place Density	**1.6**	**g/mL**		**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**28000**	**mg/kg dry**	**1800**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025066										
Oil & Grease (HEM)	<1100	mg/kg dry	1100	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-55 | Date Collected: 08/20/11 08:00 | Matrix: Sediment
Sample ID: DS-11-25 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024913										
Naphthalene	<590	ug/kg dry	590	1	08/26/11	kb	08/30/11	avl		
2-Methylnaphthalene	<590	ug/kg dry	590	1	08/26/11	kb	08/30/11	avl		
Acenaphthylene	<590	ug/kg dry	590	1	08/26/11	kb	08/30/11	avl		
Acenaphthene	<590	ug/kg dry	590	1	08/26/11	kb	08/30/11	avl		
Fluorene	<590	ug/kg dry	590	1	08/26/11	kb	08/30/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Anthracene	<590	ug/kg dry	590	1	08/26/11	kb	08/30/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Pyrene	<590	ug/kg dry	590	1	08/26/11	kb	08/30/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/26/11	kb	08/30/11	avl		
Surrogates:										
Nitrobenzene-d5	62	%	36-98	1	08/26/11	kb	08/30/11	avl		
2-Fluorobiphenyl	52	%	44-105	1	08/26/11	kb	08/30/11	avl		
Terphenyl-d14	69	%	46-109	1	08/26/11	kb	08/30/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T025011										
Aroclor-1016	<240	ug/kg dry	240	1	08/31/11	kb	09/02/11	tim		
Aroclor-1221	<240	ug/kg dry	240	1	08/31/11	kb	09/02/11	tim		
Aroclor-1232	<240	ug/kg dry	240	1	08/31/11	kb	09/02/11	tim		
Aroclor-1242	<240	ug/kg dry	240	1	08/31/11	kb	09/02/11	tim		
Aroclor-1248	<240	ug/kg dry	240	1	08/31/11	kb	09/02/11	tim		
Aroclor-1254	<240	ug/kg dry	240	1	08/31/11	kb	09/02/11	tim		
Aroclor-1260	<240	ug/kg dry	240	1	08/31/11	kb	09/02/11	tim		
Surrogates:										
Tetrachloro-m-xylene	46	%	40-113	1	08/31/11	kb	09/02/11	tim	N	
Decachlorobiphenyl	50	%	32-111	1	08/31/11	kb	09/02/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-55 | Date Collected: 08/20/11 08:00 | Matrix: Sediment
Sample ID: DS-11-25 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**35000**	**mg/kg dry**	**28**	**10**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**810**	**mg/kg dry**	**5.8**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**4.1**	**mg/kg dry**	**0.11**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Barium	**140**	**mg/kg dry**	**2.8**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.26**	**mg/kg dry**	**0.20**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Chromium	**35**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Copper	**18**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Lead	**20**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Manganese	**1500**	**mg/kg dry**	**9.3**	**500**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**20**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	09/06/11	ns	09/08/11	jd		
Silver	**0.34**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**89**	**mg/kg dry**	**9.3**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	**0.13**	**mg/kg dry**	**0.050**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024873										
% Solids	**28**	**% by Wt.**	**0.10**	**1**	**08/24/11**	**as**	**08/25/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024926										
Specific Gravity	**2.7**			**1**	**08/26/11**	**as**	**08/31/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**40**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-55 | Date Collected: 08/20/11 08:00 | Matrix: Sediment
Sample ID: DS-11-25 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**2300**	**mg/kg dry**	**120**	**10**	**08/29/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/24/11	da	08/25/11	da	N	
Analysis Method: PLUMB										
Batch: T024877										
Chemical Oxygen Demand	**89000**	**mg/kg dry**	**1000**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**9.7**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024853										
In-Place Density	**1.5**	**g/mL**		**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**59000**	**mg/kg dry**	**2400**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025066										
Oil & Grease (HEM)	<1500	mg/kg dry	1500	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-56 | Date Collected: 08/20/11 08:45 | Matrix: Sediment
Sample ID: DS-11-26 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024913										
Naphthalene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Surrogates:										
Nitrobenzene-d5	58	%	36-98	1	08/26/11	kb	08/31/11	avl		
2-Fluorobiphenyl	49	%	44-105	1	08/26/11	kb	08/31/11	avl		
Terphenyl-d14	69	%	46-109	1	08/26/11	kb	08/31/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T025068										
Aroclor-1016	<130	ug/kg dry	130	1	09/06/11	kb	09/08/11	tim		
Aroclor-1221	<130	ug/kg dry	130	1	09/06/11	kb	09/08/11	tim		
Aroclor-1232	<130	ug/kg dry	130	1	09/06/11	kb	09/08/11	tim		
Aroclor-1242	<130	ug/kg dry	130	1	09/06/11	kb	09/08/11	tim		
Aroclor-1248	<130	ug/kg dry	130	1	09/06/11	kb	09/08/11	tim		
Aroclor-1254	<130	ug/kg dry	130	1	09/06/11	kb	09/08/11	tim		
Aroclor-1260	<130	ug/kg dry	130	1	09/06/11	kb	09/08/11	tim		
Surrogates:										
Tetrachloro-m-xylene	54	%	40-113	1	09/06/11	kb	09/08/11	tim	N	
Decachlorobiphenyl	59	%	32-111	1	09/06/11	kb	09/08/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-56 | Date Collected: 08/20/11 08:45 | Matrix: Sediment
Sample ID: DS-11-26 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**28000**	**mg/kg dry**	**29**	**10**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**570**	**mg/kg dry**	**6.1**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**4.1**	**mg/kg dry**	**0.12**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Barium	**150**	**mg/kg dry**	**2.9**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/06/11	ns	09/08/11	jd		
Chromium	**28**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Copper	**20**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Lead	**9.5**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Manganese	**770**	**mg/kg dry**	**3.9**	**200**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**20**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	09/06/11	ns	09/08/11	jd		
Silver	**0.18**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**65**	**mg/kg dry**	**9.7**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	<0.050	mg/kg dry	0.050	1	09/06/11	ns	09/07/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024873										
% Solids	**52**	**% by Wt.**	**0.10**	**1**	**08/24/11**	**as**	**08/25/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024926										
Specific Gravity	**2.5**			**1**	**08/26/11**	**as**	**08/31/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**50**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024921										
Total Kjeldahl Nitrogen	**490**	**mg/kg dry**	**15**	**1**	**08/29/11**	**da**	**09/01/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-56 | Date Collected: 08/20/11 08:45 | Matrix: Sediment
Sample ID: DS-11-26 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	**1.3**	**mg/kg dry**	**0.20**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024877										
Chemical Oxygen Demand	**43000**	**mg/kg dry**	**550**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**5.8**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024853										
In-Place Density	**1.5**	**g/mL**		**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**2100**	**mg/kg dry**	**1300**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024870										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025066										
Oil & Grease (HEM)	<810	mg/kg dry	810	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-57 | Date Collected: 08/20/11 09:00 | Matrix: Sediment
Sample ID: DS-11-27 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024913										
Naphthalene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Surrogates:										
Nitrobenzene-d5	76	%	36-98	1	08/26/11	kb	08/31/11	avl		
2-Fluorobiphenyl	65	%	44-105	1	08/26/11	kb	08/31/11	avl		
Terphenyl-d14	76	%	46-109	1	08/26/11	kb	08/31/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T025011										
Aroclor-1016	<110	ug/kg dry	110	1	08/31/11	kb	09/02/11	tim		
Aroclor-1221	<110	ug/kg dry	110	1	08/31/11	kb	09/02/11	tim		
Aroclor-1232	<110	ug/kg dry	110	1	08/31/11	kb	09/02/11	tim		
Aroclor-1242	<110	ug/kg dry	110	1	08/31/11	kb	09/02/11	tim		
Aroclor-1248	<110	ug/kg dry	110	1	08/31/11	kb	09/02/11	tim		
Aroclor-1254	<110	ug/kg dry	110	1	08/31/11	kb	09/02/11	tim		
Aroclor-1260	<110	ug/kg dry	110	1	08/31/11	kb	09/02/11	tim		
Surrogates:										
Tetrachloro-m-xylene	42	%	40-113	1	08/31/11	kb	09/02/11	tim	N	
Decachlorobiphenyl	43	%	32-111	1	08/31/11	kb	09/02/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-57 | Date Collected: 08/20/11 09:00 | Matrix: Sediment
Sample ID: DS-11-27 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025076										
Iron	**18000**	**mg/kg dry**	**5.0**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**400**	**mg/kg dry**	**6.1**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025076										
Arsenic	**2.9**	**mg/kg dry**	**0.12**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Barium	**91**	**mg/kg dry**	**2.9**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	<0.20	mg/kg dry	0.20	10	09/06/11	ns	09/08/11	jd		
Chromium	**20**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Copper	**16**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**	205	
Lead	**6.9**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Manganese	**400**	**mg/kg dry**	**1.9**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**	227	
Nickel	**15**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**	205	
Selenium	<0.39	mg/kg dry	0.39	10	09/06/11	ns	09/08/11	jd		
Silver	**0.12**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**36**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025076										
Mercury	<0.050	mg/kg dry	0.050	1	09/06/11	ns	09/07/11	jlm		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024873										
% Solids	**61**	**% by Wt.**	**0.10**	**1**	**08/24/11**	**as**	**08/25/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024926										
Specific Gravity	**2.4**			**1**	**08/26/11**	**as**	**08/31/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T025020										
Ammonia as N	**13**	**mg/kg dry**	**1.0**	**1**	**08/31/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024977										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-57 | Date Collected: 08/20/11 09:00 | Matrix: Sediment
Sample ID: DS-11-27 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**800**	**mg/kg dry**	**120**	**10**	**08/30/11**	**da**	**09/01/11**	**bd**	203, N	
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/24/11	da	08/25/11	da	N	
Analysis Method: PLUMB										
Batch: T024877										
Chemical Oxygen Demand	**63000**	**mg/kg dry**	**470**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	205, N	
Volatile Solids	**3.4**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024853										
In-Place Density	**1.7**	**g/mL**		**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**16000**	**mg/kg dry**	**1100**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024871										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025066										
Oil & Grease (HEM)	<690	mg/kg dry	690	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-58 | Date Collected: 08/20/11 08:00 | Matrix: Sediment
Sample ID: DS-11-MU5 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Phosphorus	**760**	**mg/kg dry**	**6.2**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
WET CHEMISTRY										
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**120**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024977										
Total Kjeldahl Nitrogen	**2300**	**mg/kg dry**	**130**	**10**	**08/30/11**	**da**	**09/01/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-59 | Date Collected: 08/20/11 08:00 | Matrix: Elutriate
Sample ID: DS-11-MU5 Elutriate | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 7470A										
Batch: T025050										
Mercury	<0.00020	mg/L	0.00020	1	09/02/11	ns	09/02/11	jlm		
METALS, ELUTRIATE										
Analysis Method: EPA 6010B										
Batch: T025070										
Iron	**3.6**	**mg/L**	**0.20**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Analysis Method: EPA 6020										
Batch: T025070										
Arsenic	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Barium	<0.10	mg/L	0.10	5	09/06/11	ns	09/06/11	jd		
Cadmium	<0.0010	mg/L	0.0010	5	09/06/11	ns	09/06/11	jd		
Chromium	<0.010	mg/L	0.010	5	09/06/11	ns	09/06/11	jd		
Copper	**0.0044**	**mg/L**	**0.0040**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Lead	**0.0034**	**mg/L**	**0.0030**	**5**	**09/06/11**	**ns**	**09/06/11**	**jd**		
Manganese	**2.5**	**mg/L**	**0.050**	**50**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Nickel	<0.020	mg/L	0.020	5	09/06/11	ns	09/06/11	jd		
Selenium	<0.0050	mg/L	0.0050	5	09/06/11	ns	09/06/11	jd		
Silver	<0.00020	mg/L	0.00020	5	09/06/11	ns	09/12/11	jd		
Zinc	<0.15	mg/L	0.15	5	09/06/11	ns	09/06/11	jd		
WET CHEMISTRY										
Analysis Method: EPA 350.1										
Batch: T024976										
Ammonia as N	**0.71**	**mg/L**	**0.010**	**1**	**08/29/11**	**sm**	**08/30/11**	**sm**	N	
Analysis Method: EPA 351.2										
Batch: T024978										
Total Kjeldahl Nitrogen	**2.0**	**mg/L**	**0.50**	**1**	**08/30/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 365.2										
Batch: T024982										
Phosphorus-Total (as P)	**0.11**	**mg/L**	**0.010**	**1**	**08/30/11**	**bd**	**08/30/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-60 | Date Collected: 08/20/11 09:00 | Matrix: Sediment
Sample ID: DS-11-MU6 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Phosphorus	**430**	**mg/kg dry**	**6.0**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
WET CHEMISTRY										
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**67**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024977										
Total Kjeldahl Nitrogen	**1100**	**mg/kg dry**	**140**	**10**	**08/30/11**	**da**	**09/01/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-61 | Date Collected: 08/20/11 10:40 | Matrix: Sediment
Sample ID: DS-11-01 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024913										
Naphthalene	<510	ug/kg dry	510	1	08/26/11	kb	08/31/11	avl		
2-Methylnaphthalene	<510	ug/kg dry	510	1	08/26/11	kb	08/31/11	avl		
Acenaphthylene	<510	ug/kg dry	510	1	08/26/11	kb	08/31/11	avl		
Acenaphthene	<510	ug/kg dry	510	1	08/26/11	kb	08/31/11	avl		
Fluorene	<510	ug/kg dry	510	1	08/26/11	kb	08/31/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Anthracene	<510	ug/kg dry	510	1	08/26/11	kb	08/31/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Pyrene	<510	ug/kg dry	510	1	08/26/11	kb	08/31/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Surrogates:										
Nitrobenzene-d5	61	%	36-98	1	08/26/11	kb	08/31/11	avl		
2-Fluorobiphenyl	47	%	44-105	1	08/26/11	kb	08/31/11	avl		
Terphenyl-d14	65	%	46-109	1	08/26/11	kb	08/31/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T025011										
Aroclor-1016	<210	ug/kg dry	210	1	08/31/11	kb	09/02/11	tim		
Aroclor-1221	<210	ug/kg dry	210	1	08/31/11	kb	09/02/11	tim		
Aroclor-1232	<210	ug/kg dry	210	1	08/31/11	kb	09/02/11	tim		
Aroclor-1242	<210	ug/kg dry	210	1	08/31/11	kb	09/02/11	tim		
Aroclor-1248	<210	ug/kg dry	210	1	08/31/11	kb	09/02/11	tim		
Aroclor-1254	<210	ug/kg dry	210	1	08/31/11	kb	09/02/11	tim		
Aroclor-1260	<210	ug/kg dry	210	1	08/31/11	kb	09/02/11	tim		
Surrogates:										
Tetrachloro-m-xylene	54	%	40-113	1	08/31/11	kb	09/02/11	tim	N	
Decachlorobiphenyl	68	%	32-111	1	08/31/11	kb	09/02/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-61 | Date Collected: 08/20/11 10:40 | Matrix: Sediment
Sample ID: DS-11-01 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**35000**	**mg/kg dry**	**28**	**10**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**870**	**mg/kg dry**	**5.9**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**4.4**	**mg/kg dry**	**0.11**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Barium	**200**	**mg/kg dry**	**2.8**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.37**	**mg/kg dry**	**0.20**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Chromium	**39**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Copper	**18**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Lead	**19**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Manganese	**2400**	**mg/kg dry**	**9.4**	**500**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**21**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	09/06/11	ns	09/08/11	jd		
Silver	**0.22**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**120**	**mg/kg dry**	**9.4**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	**0.12**	**mg/kg dry**	**0.050**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024873										
% Solids	**32**	**% by Wt.**	**0.10**	**1**	**08/24/11**	**as**	**08/25/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024926										
Specific Gravity	**2.3**			**1**	**08/26/11**	**as**	**08/31/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**33**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024977										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-61 | Date Collected: 08/20/11 10:40 | Matrix: Sediment
Sample ID: DS-11-01 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**3100**	**mg/kg dry**	**140**	**10**	**08/30/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	**0.24**	**mg/kg dry**	**0.20**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	N	
Analysis Method: PLUMB										
Batch: T024877										
Chemical Oxygen Demand	**120000**	**mg/kg dry**	**880**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**10**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024853										
In-Place Density	**1.8**	**g/mL**		**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**63000**	**mg/kg dry**	**2100**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024871										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025066										
Oil & Grease (HEM)	<1300	mg/kg dry	1300	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-62 | Date Collected: 08/20/11 11:00 | Matrix: Sediment
Sample ID: DS-11-02 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024913										
Naphthalene	<410	ug/kg dry	410	1	08/26/11	kb	08/31/11	avl		
2-Methylnaphthalene	<410	ug/kg dry	410	1	08/26/11	kb	08/31/11	avl		
Acenaphthylene	<410	ug/kg dry	410	1	08/26/11	kb	08/31/11	avl		
Acenaphthene	<410	ug/kg dry	410	1	08/26/11	kb	08/31/11	avl		
Fluorene	<410	ug/kg dry	410	1	08/26/11	kb	08/31/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Anthracene	<410	ug/kg dry	410	1	08/26/11	kb	08/31/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Pyrene	<410	ug/kg dry	410	1	08/26/11	kb	08/31/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Surrogates:										
Nitrobenzene-d5	61	%	36-98	1	08/26/11	kb	08/31/11	avl		
2-Fluorobiphenyl	59	%	44-105	1	08/26/11	kb	08/31/11	avl		
Terphenyl-d14	61	%	46-109	1	08/26/11	kb	08/31/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T025011										
Aroclor-1016	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1221	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1232	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1242	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1248	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1254	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1260	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Surrogates:										
Tetrachloro-m-xylene	* **35**	%	40-113	1	08/31/11	kb	09/02/11	tim	303, N	
Decachlorobiphenyl	34	%	32-111	1	08/31/11	kb	09/02/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-62 | Date Collected: 08/20/11 11:00 | Matrix: Sediment
Sample ID: DS-11-02 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**35000**	**mg/kg dry**	**29**	**10**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**800**	**mg/kg dry**	**6.0**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**4.3**	**mg/kg dry**	**0.11**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Barium	**170**	**mg/kg dry**	**2.9**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.39**	**mg/kg dry**	**0.20**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Chromium	**39**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Copper	**18**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Lead	**20**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Manganese	**1900**	**mg/kg dry**	**9.5**	**500**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**21**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.38	mg/kg dry	0.38	10	09/06/11	ns	09/08/11	jd		
Silver	**0.21**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**120**	**mg/kg dry**	**9.5**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	**0.13**	**mg/kg dry**	**0.050**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024873										
% Solids	**40**	**% by Wt.**	**0.10**	**1**	**08/24/11**	**as**	**08/25/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024926										
Specific Gravity	**2.7**			**1**	**08/26/11**	**as**	**08/31/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**46**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024977										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-62 | Date Collected: 08/20/11 11:00 | Matrix: Sediment
Sample ID: DS-11-02 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**1800**	**mg/kg dry**	**120**	**10**	**08/30/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/24/11	da	08/25/11	da	N	
Analysis Method: PLUMB										
Batch: T024877										
Chemical Oxygen Demand	**86000**	**mg/kg dry**	**710**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**10**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024853										
In-Place Density	**1.6**	**g/mL**		**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**46000**	**mg/kg dry**	**1700**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024871										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025066										
Oil & Grease (HEM)	<1000	mg/kg dry	1000	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-63 | Date Collected: 08/20/11 11:25 | Matrix: Sediment
Sample ID: DS-11-03 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024913										
Naphthalene	<430	ug/kg dry	430	1	08/26/11	kb	08/31/11	avl		
2-Methylnaphthalene	<430	ug/kg dry	430	1	08/26/11	kb	08/31/11	avl		
Acenaphthylene	<430	ug/kg dry	430	1	08/26/11	kb	08/31/11	avl		
Acenaphthene	<430	ug/kg dry	430	1	08/26/11	kb	08/31/11	avl		
Fluorene	<430	ug/kg dry	430	1	08/26/11	kb	08/31/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Anthracene	<430	ug/kg dry	430	1	08/26/11	kb	08/31/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Pyrene	<430	ug/kg dry	430	1	08/26/11	kb	08/31/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Surrogates:										
Nitrobenzene-d5	61	%	36-98	1	08/26/11	kb	08/31/11	avl		
2-Fluorobiphenyl	54	%	44-105	1	08/26/11	kb	08/31/11	avl		
Terphenyl-d14	66	%	46-109	1	08/26/11	kb	08/31/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T025011										
Aroclor-1016	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1221	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1232	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1242	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1248	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1254	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Aroclor-1260	<170	ug/kg dry	170	1	08/31/11	kb	09/02/11	tim		
Surrogates:										
Tetrachloro-m-xylene	52	%	40-113	1	08/31/11	kb	09/02/11	tim	N	
Decachlorobiphenyl	56	%	32-111	1	08/31/11	kb	09/02/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-63 | Date Collected: 08/20/11 11:25 | Matrix: Sediment
Sample ID: DS-11-03 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**34000**	**mg/kg dry**	**29**	**10**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**760**	**mg/kg dry**	**6.1**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**3.9**	**mg/kg dry**	**0.12**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Barium	**160**	**mg/kg dry**	**2.9**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.41**	**mg/kg dry**	**0.20**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Chromium	**34**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Copper	**17**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Lead	**22**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Manganese	**1800**	**mg/kg dry**	**9.7**	**500**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**20**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	09/06/11	ns	09/08/11	jd		
Silver	**0.25**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**120**	**mg/kg dry**	**9.7**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	**0.15**	**mg/kg dry**	**0.050**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024873										
% Solids	**38**	**% by Wt.**	**0.10**	**1**	**08/24/11**	**as**	**08/25/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024926										
Specific Gravity	**2.3**			**1**	**08/26/11**	**as**	**08/31/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**26**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024977										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-63 | Date Collected: 08/20/11 11:25 | Matrix: Sediment
Sample ID: DS-11-03 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**2800**	**mg/kg dry**	**120**	**10**	**08/30/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/24/11	da	08/25/11	da	N	
Analysis Method: PLUMB										
Batch: T024877										
Chemical Oxygen Demand	**130000**	**mg/kg dry**	**750**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**12**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024853										
In-Place Density	**1.7**	**g/mL**		**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**16000**	**mg/kg dry**	**1800**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024871										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025066										
Oil & Grease (HEM)	<1100	mg/kg dry	1100	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-64 | Date Collected: 08/20/11 11:40 | Matrix: Sediment
Sample ID: DS-11-04 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024913										
Naphthalene	<380	ug/kg dry	380	1	08/26/11	kb	08/31/11	avl		
2-Methylnaphthalene	<380	ug/kg dry	380	1	08/26/11	kb	08/31/11	avl		
Acenaphthylene	<380	ug/kg dry	380	1	08/26/11	kb	08/31/11	avl		
Acenaphthene	<380	ug/kg dry	380	1	08/26/11	kb	08/31/11	avl		
Fluorene	<380	ug/kg dry	380	1	08/26/11	kb	08/31/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Anthracene	<380	ug/kg dry	380	1	08/26/11	kb	08/31/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Pyrene	<380	ug/kg dry	380	1	08/26/11	kb	08/31/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Surrogates:										
Nitrobenzene-d5	71	%	36-98	1	08/26/11	kb	08/31/11	avl		
2-Fluorobiphenyl	66	%	44-105	1	08/26/11	kb	08/31/11	avl		
Terphenyl-d14	75	%	46-109	1	08/26/11	kb	08/31/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T025068										
Aroclor-1016	<160	ug/kg dry	160	1	09/06/11	kb	09/08/11	tim		
Aroclor-1221	<160	ug/kg dry	160	1	09/06/11	kb	09/08/11	tim		
Aroclor-1232	<160	ug/kg dry	160	1	09/06/11	kb	09/08/11	tim		
Aroclor-1242	<160	ug/kg dry	160	1	09/06/11	kb	09/08/11	tim		
Aroclor-1248	<160	ug/kg dry	160	1	09/06/11	kb	09/08/11	tim		
Aroclor-1254	<160	ug/kg dry	160	1	09/06/11	kb	09/08/11	tim		
Aroclor-1260	<160	ug/kg dry	160	1	09/06/11	kb	09/08/11	tim		
Surrogates:										
Tetrachloro-m-xylene	47	%	40-113	1	09/06/11	kb	09/08/11	tim	N	
Decachlorobiphenyl	53	%	32-111	1	09/06/11	kb	09/08/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-64 | Date Collected: 08/20/11 11:40 | Matrix: Sediment
Sample ID: DS-11-04 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**26000**	**mg/kg dry**	**29**	**10**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**650**	**mg/kg dry**	**6.1**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**3.1**	**mg/kg dry**	**0.12**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Barium	**120**	**mg/kg dry**	**2.9**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.29**	**mg/kg dry**	**0.20**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Chromium	**29**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Copper	**14**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Lead	**16**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Manganese	**1100**	**mg/kg dry**	**3.9**	**200**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**17**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.39	mg/kg dry	0.39	10	09/06/11	ns	09/08/11	jd		
Silver	**0.17**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**89**	**mg/kg dry**	**9.6**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	**0.11**	**mg/kg dry**	**0.050**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024873										
% Solids	**43**	**% by Wt.**	**0.10**	**1**	**08/24/11**	**as**	**08/25/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024926										
Specific Gravity	**2.2**			**1**	**08/26/11**	**as**	**08/31/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**31**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024977										
Total Kjeldahl Nitrogen	**1900**	**mg/kg dry**	**130**	**10**	**08/30/11**	**da**	**09/01/11**	**bd**	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-64 | Date Collected: 08/20/11 11:40 | Matrix: Sediment
Sample ID: DS-11-04 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY									
Analysis Method: EPA 9012B									
Batch: T024857									
Cyanide (total)	<0.20 mg/kg dry	0.20	1	08/24/11	da	08/25/11	da	N	
Analysis Method: PLUMB									
Batch: T024877									
Chemical Oxygen Demand	**78000 mg/kg dry**	**670**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**8.4 % by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density									
Batch: T024853									
In-Place Density	**1.7 g/mL**		**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: WALKLEY BLACK									
Batch: T024858									
Total Organic Carbon	**120000 mg/kg dry**	**1600**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY									
Analysis Method: ASTM D422									
Batch: T024871									
Grain Size without Hydrometer, see attached report	0.0		1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B									
Batch: T025066									
Oil & Grease (HEM)	<980 mg/kg dry	980	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-65 | Date Collected: 08/20/11 12:00 | Matrix: Sediment
Sample ID: DS-11-05 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
SEMI-VOLATILE ORGANIC COMPOUNDS BY GC-MS										
Analysis Method: EPA 8270C										
Batch: T024913										
Naphthalene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
2-Methylnaphthalene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Acenaphthylene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Acenaphthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Fluorene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Phenanthrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (a) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Chrysene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (b) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (k) fluoranthene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (a) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Indeno (1,2,3-cd) pyrene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Dibenz (a,h) anthracene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Benzo (g,h,i) perylene	<330	ug/kg dry	330	1	08/26/11	kb	08/31/11	avl		
Surrogates:										
Nitrobenzene-d5	60	%	36-98	1	08/26/11	kb	08/31/11	avl		
2-Fluorobiphenyl	59	%	44-105	1	08/26/11	kb	08/31/11	avl		
Terphenyl-d14	65	%	46-109	1	08/26/11	kb	08/31/11	avl		
PESTICIDES/PCBS										
Analysis Method: EPA 8082										
Batch: T025011										
Aroclor-1016	<130	ug/kg dry	130	1	08/31/11	kb	09/02/11	tim		
Aroclor-1221	<130	ug/kg dry	130	1	08/31/11	kb	09/02/11	tim		
Aroclor-1232	<130	ug/kg dry	130	1	08/31/11	kb	09/02/11	tim		
Aroclor-1242	<130	ug/kg dry	130	1	08/31/11	kb	09/02/11	tim		
Aroclor-1248	<130	ug/kg dry	130	1	08/31/11	kb	09/02/11	tim		
Aroclor-1254	<130	ug/kg dry	130	1	08/31/11	kb	09/02/11	tim		
Aroclor-1260	<130	ug/kg dry	130	1	08/31/11	kb	09/02/11	tim		
Surrogates:										
Tetrachloro-m-xylene	45	%	40-113	1	08/31/11	kb	09/02/11	tim	N	
Decachlorobiphenyl	53	%	32-111	1	08/31/11	kb	09/02/11	tim	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-65 | Date Collected: 08/20/11 12:00 | Matrix: Sediment
Sample ID: DS-11-05 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Iron	**22000**	**mg/kg dry**	**5.0**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
Phosphorus	**580**	**mg/kg dry**	**5.9**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
Analysis Method: EPA 6020										
Batch: T025072										
Arsenic	**2.7**	**mg/kg dry**	**0.11**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Barium	**89**	**mg/kg dry**	**2.8**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Cadmium	**0.22**	**mg/kg dry**	**0.20**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Chromium	**25**	**mg/kg dry**	**2.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Copper	**12**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Lead	**13**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Manganese	**810**	**mg/kg dry**	**3.7**	**200**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Nickel	**14**	**mg/kg dry**	**1.0**	**10**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Selenium	<0.37	mg/kg dry	0.37	10	09/06/11	ns	09/08/11	jd		
Silver	**0.13**	**mg/kg dry**	**0.10**	**10**	**09/06/11**	**ns**	**09/07/11**	**jd**		
Zinc	**68**	**mg/kg dry**	**9.3**	**100**	**09/06/11**	**ns**	**09/08/11**	**jd**		
Analysis Method: EPA 7471A										
Batch: T025072										
Mercury	**0.084**	**mg/kg dry**	**0.050**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**		
WET CHEMISTRY										
Analysis Method: ASTM D2974-87										
Batch: T024873										
% Solids	**51**	**% by Wt.**	**0.10**	**1**	**08/24/11**	**as**	**08/25/11**	**as**	N	
Analysis Method: ASTM D854-91										
Batch: T024926										
Specific Gravity	**2.4**			**1**	**08/26/11**	**as**	**08/31/11**	**as**	N	
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**25**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024977										

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-65 | Date Collected: 08/20/11 12:00 | Matrix: Sediment
Sample ID: DS-11-05 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
WET CHEMISTRY										
Total Kjeldahl Nitrogen	**1500**	**mg/kg dry**	**110**	**10**	**08/30/11**	**da**	**09/01/11**	**bd**	N	
Analysis Method: EPA 9012B										
Batch: T024857										
Cyanide (total)	<0.20	mg/kg dry	0.20	1	08/24/11	da	08/25/11	da	N	
Analysis Method: PLUMB										
Batch: T024877										
Chemical Oxygen Demand	**100000**	**mg/kg dry**	**560**	**1**	**08/24/11**	**da**	**08/25/11**	**da**	N	
Volatile Solids	**7.0**	**% by Wt.**	**0.10**	**1**	**08/26/11**	**bd**	**09/01/11**	**bd**	N	
Analysis Method: USACE, In-Place Density										
Batch: T024853										
In-Place Density	**1.6**	**g/mL**		**1**	**08/24/11**	**as**	**08/24/11**	**as**	N	
Analysis Method: WALKLEY BLACK										
Batch: T024858										
Total Organic Carbon	**30000**	**mg/kg dry**	**1300**	**1**	**08/24/11**	**sm**	**08/25/11**	**sm**	N	
WET CHEMISTRY										
Analysis Method: ASTM D422										
Batch: T024871										
Grain Size without Hydrometer, see attached report	0.0			1	08/24/11	as	09/07/11	as	N	
Analysis Method: EPA 9071B										
Batch: T025066										
Oil & Grease (HEM)	<820	mg/kg dry	820	1	09/06/11	kb	09/06/11	kb	N	

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ANALYTICAL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

Trace ID: T11H197-66 | Date Collected: 08/20/11 12:00 | Matrix: Sediment
Sample ID: DS-11-MU1 | Date Received: 08/23/11 10:47

PARAMETERS	RESULTS	UNITS	RDL	DILUTION	PREPARED	BY	ANALYZED	BY	NOTES	MCL
METALS, TOTAL										
Analysis Method: EPA 6010B										
Batch: T025072										
Phosphorus	**730**	**mg/kg dry**	**6.1**	**1**	**09/06/11**	**ns**	**09/07/11**	**jlm**	N	
WET CHEMISTRY										
Analysis Method: EPA 350.1 Rev. 2.0										
Batch: T024973										
Ammonia as N	**24**	**mg/kg dry**	**1.0**	**1**	**08/29/11**	**sm**	**08/31/11**	**bd**	N	
Analysis Method: EPA 351.2 Rev. 2.0										
Batch: T024977										
Total Kjeldahl Nitrogen	**1700**	**mg/kg dry**	**130**	**10**	**08/30/11**	**da**	**09/01/11**	**bd**	N	

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QUALITY CONTROL RESULTS

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024960
QC Batch Method: Leaching proceedures
Analysis Description: Elutriation per USACE
Analysis Method: USACE Elutriate

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024778
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids
Analysis Description: Iron, Total
Analysis Method: EPA 6010B

METHOD BLANK: T024778-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Iron	mg/kg dry	<5.0	5.0	
Phosphorus	mg/kg dry	<6.3	6.3	

LABORATORY CONTROL SAMPLE: T024778-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Iron	mg/kg dry	400	398	99	80-120	
Phosphorus	mg/kg dry	400	378	95	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024778-MSD1

Original: **T11H197-26**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Iron	**mg/kg dry**	**41100**	**366**	**43400**	**38900**	**584**	**-612**	**75-125**	**-8400**	**20**	**223**
Phosphorus	mg/kg dry	1100	366	1450	1380	87	76	75-125	14	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024794
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids
Analysis Description: Phosphorus, Total
Analysis Method: EPA 6010B

METHOD BLANK: T024794-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Iron	mg/kg dry	<5.0	5.0	
Phosphorus	mg/kg dry	<6.3	6.3	

LABORATORY CONTROL SAMPLE: T024794-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Iron	mg/kg dry	400	385	96	80-120	

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LABORATORY CONTROL SAMPLE: T024794-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Phosphorus	mg/kg dry	400	397	99	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024794-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Iron	**mg/kg dry**	**16600**	**372**	**16000**	**15400**	**-152**	**-325**	**75-125**	**-73**	**20**	**223**
Phosphorus	mg/kg dry	445	372	834	830	103	103	75-125	0.6	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025033
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids
Analysis Description: Phosphorus, Total
Analysis Method: EPA 6010B

METHOD BLANK: T025033-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Iron	mg/kg dry	<5.0	5.0	
Phosphorus	mg/kg dry	<6.3	6.3	

LABORATORY CONTROL SAMPLE: T025033-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Iron	mg/kg dry	400	363	91	80-120	
Phosphorus	mg/kg dry	400	376	94	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025033-MSD1 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Iron	**mg/kg dry**	**20100**	**397**	**20700**	**18400**	**140**	**-431**	**75-125**	**-394**	**20**	**223**
Phosphorus	**mg/kg dry**	**579**	**397**	**921**	**865**	**87**	**72**	**75-125**	**19**	**20**	**209**

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025070
QC Batch Method: EPA 3015 Microwave Assisted Digestions for Liquids
Analysis Description: Iron, Elutriate
Analysis Method: EPA 6010B

METHOD BLANK: T025070-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Iron	mg/L	<0.20	0.20	

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LABORATORY CONTROL SAMPLE: T025070-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Iron	mg/L	8.89	9.19	103	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025070-MSD1 Original: **T11H197-15**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Iron	mg/L	4.84	8.89	14.8	14.0	112	103	75-125	8	20	

Trace Project ID: T11H197

Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025072

QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids

Analysis Description: Phosphorus, Total

Analysis Method: EPA 6010B

METHOD BLANK: T025072-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Iron	mg/kg dry	<5.0	5.0	
Phosphorus	mg/kg dry	<6.3	6.3	

LABORATORY CONTROL SAMPLE: T025072-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Iron	mg/kg dry	400	403	101	80-120	
Phosphorus	mg/kg dry	400	393	98	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025072-MSD1 Original: **T11H197-41**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Iron	**mg/kg dry**	**5480**	**386**	**5830**	**6370**	**89**	**231**	**75-125**	**89**	**20**	**227**
Phosphorus	mg/kg dry	137	386	511	471	96	86	75-125	11	20	

Trace Project ID: T11H197

Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025076

QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids

Analysis Description: Iron, Total

Analysis Method: EPA 6010B

METHOD BLANK: T025076-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Iron	mg/kg dry	<5.0	5.0	
Phosphorus	mg/kg dry	<6.3	6.3	

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LABORATORY CONTROL SAMPLE: T025076-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Iron	mg/kg dry	400	389	97	80-120	
Phosphorus	mg/kg dry	400	382	96	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025076-MSD1 Original: **T11H197-57**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Iron	**mg/kg dry**	**17900**	**367**	**18900**	**17200**	**256**	**-194**	**75-125**	**1440**	**20**	**223**
Phosphorus	mg/kg dry	404	367	771	718	97	86	75-125	13	20	

Trace Project ID: T11H197

Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024778

QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids

Analysis Description: Copper, Total

Analysis Method: EPA 6020

METHOD BLANK: T024778-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/kg dry	<0.10	0.10	
Arsenic	mg/kg dry	<0.12	0.12	
Barium	mg/kg dry	<1.0	1.0	
Cadmium	mg/kg dry	<0.20	0.20	
Chromium	mg/kg dry	<2.0	2.0	
Copper	mg/kg dry	<1.0	1.0	
Manganese	mg/kg dry	<1.0	1.0	
Nickel	mg/kg dry	<1.0	1.0	
Lead	mg/kg dry	<1.0	1.0	
Selenium	mg/kg dry	<0.40	0.40	
Zinc	mg/kg dry	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T024778-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/kg dry	5.00	4.81	96	80-120	
Arsenic	mg/kg dry	5.00	4.75	95	80-120	
Barium	mg/kg dry	40.0	36.8	92	80-120	
Cadmium	mg/kg dry	40.0	36.5	91	80-120	
Chromium	mg/kg dry	40.0	38.4	96	80-120	
Copper	mg/kg dry	40.0	38.6	97	80-120	
Manganese	mg/kg dry	40.0	39.9	100	80-120	
Nickel	mg/kg dry	40.0	39.3	98	80-120	
Lead	mg/kg dry	40.0	41.7	104	80-120	

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LABORATORY CONTROL SAMPLE: T024778-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Selenium	mg/kg dry	5.00	4.42	88	80-120	
Zinc	mg/kg dry	40.0	35.3	88	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024778-MSD1 Original: **T11H197-26**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Silver	mg/kg dry	0.317	4.58	4.91	4.48	92	91	75-125	2	20	
Arsenic	mg/kg dry	5.96	4.58	10.6	9.77	92	83	75-125	10	20	
Barium	**mg/kg dry**	**179**	**36.6**	**224**	**227**	**113**	**129**	**75-125**	**13**	**20**	**209**
Cadmium	mg/kg dry	0.436	36.6	35.7	32.7	88	88	75-125	0.4	20	
Chromium	**mg/kg dry**	**38.3**	**36.6**	**69.2**	**64.9**	**78**	**73**	**75-125**	**6**	**20**	**209**
Copper	**mg/kg dry**	**23.1**	**36.6**	**50.8**	**46.3**	**70**	**63**	**75-125**	**9**	**20**	**205**
Manganese	**mg/kg dry**	**2300**	**36.6**	**2610**	**2360**	**792**	**171**	**75-125**	**129**	**20**	**223**
Nickel	**mg/kg dry**	**24.1**	**36.6**	**53.0**	**48.9**	**73**	**68**	**75-125**	**7**	**20**	**205**
Lead	mg/kg dry	29.0	36.6	70.1	65.7	103	100	75-125	3	20	
Selenium	mg/kg dry	0.417	4.58	4.38	3.95	80	77	75-125	3	20	
Zinc	mg/kg dry	141	36.6	184	180	108	107	75-125	0.5	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024794
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids

Analysis Description: Silver, Total
Analysis Method: EPA 6020

METHOD BLANK: T024794-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/kg dry	<0.10	0.10	
Arsenic	mg/kg dry	<0.12	0.12	
Barium	mg/kg dry	<1.0	1.0	
Cadmium	mg/kg dry	<0.20	0.20	
Chromium	mg/kg dry	<2.0	2.0	
Copper	mg/kg dry	<1.0	1.0	
Manganese	mg/kg dry	<1.0	1.0	
Nickel	mg/kg dry	<1.0	1.0	
Lead	mg/kg dry	<1.0	1.0	
Selenium	mg/kg dry	<0.40	0.40	
Zinc	mg/kg dry	<1.0	1.0	

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LABORATORY CONTROL SAMPLE: T024794-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/kg dry	5.00	5.34	107	80-120	
Arsenic	mg/kg dry	5.00	4.47	89	80-120	
Barium	mg/kg dry	40.0	38.2	95	80-120	
Cadmium	mg/kg dry	40.0	36.8	92	80-120	
Chromium	mg/kg dry	40.0	39.3	98	80-120	
Copper	mg/kg dry	40.0	39.6	99	80-120	
Manganese	mg/kg dry	40.0	40.5	101	80-120	
Nickel	mg/kg dry	40.0	39.9	100	80-120	
Lead	mg/kg dry	40.0	42.3	106	80-120	
Selenium	mg/kg dry	5.00	4.19	84	80-120	
Zinc	mg/kg dry	40.0	35.4	88	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024794-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Silver	mg/kg dry	0.110	4.66	5.06	4.82	104	101	75-125	3	20	
Arsenic	mg/kg dry	1.93	4.66	5.94	5.65	85	80	75-125	6	20	
Barium	mg/kg dry	33.9	37.2	73.0	67.9	103	91	75-125	12	20	
Cadmium	mg/kg dry	0.0924	37.2	35.4	33.9	93	91	75-125	2	20	
Chromium	mg/kg dry	15.6	37.2	48.9	46.0	88	82	75-125	7	20	
Copper	mg/kg dry	7.77	37.2	41.1	40.2	88	87	75-125	0.9	20	
Manganese	**mg/kg dry**	**449**	**37.2**	**509**	**479**	**159**	**80**	**75-125**	**66**	**20**	**226**
Nickel	mg/kg dry	9.45	37.2	43.1	41.6	89	86	75-125	3	20	
Lead	mg/kg dry	6.46	37.2	46.3	45.0	105	103	75-125	1	20	
Selenium	mg/kg dry	0	4.66	3.66	3.60	77	77	75-125	0.5	20	
Zinc	mg/kg dry	30.3	37.2	63.3	60.3	87	81	75-125	8	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025033
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids

Analysis Description: Nickel, Total
Analysis Method: EPA 6020

METHOD BLANK: T025033-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/kg dry	<0.10	0.10	
Arsenic	mg/kg dry	<0.12	0.12	
Barium	mg/kg dry	<1.0	1.0	
Cadmium	mg/kg dry	<0.20	0.20	

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METHOD BLANK: T025033-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Chromium	mg/kg dry	<2.0	2.0	
Copper	mg/kg dry	<1.0	1.0	
Manganese	mg/kg dry	<1.0	1.0	
Nickel	mg/kg dry	<1.0	1.0	
Lead	mg/kg dry	<1.0	1.0	
Selenium	mg/kg dry	<0.40	0.40	
Zinc	mg/kg dry	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T025033-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/kg dry	5.00	4.71	94	80-120	
Arsenic	mg/kg dry	5.00	4.29	86	80-120	
Barium	mg/kg dry	40.0	36.8	92	80-120	
Cadmium	mg/kg dry	40.0	35.6	89	80-120	
Chromium	mg/kg dry	40.0	37.9	95	80-120	
Copper	mg/kg dry	40.0	39.2	98	80-120	
Manganese	mg/kg dry	40.0	38.9	97	80-120	
Nickel	mg/kg dry	40.0	39.0	98	80-120	
Lead	mg/kg dry	40.0	40.3	101	80-120	
Selenium	mg/kg dry	5.00	4.05	81	80-120	
Zinc	mg/kg dry	40.0	33.7	84	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025033-MSD1 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Silver	mg/kg dry	0.357	4.97	4.73	4.71	89	88	75-125	2	20	
Arsenic	**mg/kg dry**	**2.89**	**4.97**	**6.87**	**6.47**	**81**	**72**	**75-125**	**12**	**20**	**209**
Barium	**mg/kg dry**	**101**	**39.7**	**141**	**131**	**102**	**76**	**75-125**	**29**	**20**	**207**
Cadmium	mg/kg dry	0.424	39.7	33.6	32.7	84	81	75-125	4	20	
Chromium	**mg/kg dry**	**26.1**	**39.7**	**53.8**	**50.6**	**71**	**62**	**75-125**	**14**	**20**	**205**
Copper	**mg/kg dry**	**18.4**	**39.7**	**45.7**	**45.3**	**69**	**68**	**75-125**	**2**	**20**	**205**
Manganese	**mg/kg dry**	**504**	**39.7**	**516**	**503**	**31**	**-3**	**75-125**	**247**	**20**	**223**
Nickel	**mg/kg dry**	**17.1**	**39.7**	**44.0**	**43.8**	**68**	**67**	**75-125**	**2**	**20**	**205**
Lead	mg/kg dry	27.8	39.7	63.0	62.8	90	88	75-125	2	20	
Selenium	**mg/kg dry**	**0.230**	**4.97**	**3.88**	**3.81**	**74**	**72**	**75-125**	**3**	**20**	**205**
Zinc	**mg/kg dry**	**104**	**39.7**	**142**	**135**	**96**	**77**	**75-125**	**22**	**20**	**207**

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

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QC Batch: T025070
QC Batch Method: EPA 3015 Microwave Assisted Digestions for Liquids

Analysis Description: Chromium, Elutriate
Analysis Method: EPA 6020

METHOD BLANK: T025070-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/L	<0.00020	0.00020	
Arsenic	mg/L	<0.0050	0.0050	
Barium	mg/L	<0.10	0.10	
Cadmium	mg/L	<0.0010	0.0010	
Chromium	mg/L	<0.010	0.010	
Copper	mg/L	<0.0040	0.0040	
Manganese	mg/L	<0.050	0.050	
Nickel	mg/L	<0.020	0.020	
Lead	mg/L	<0.0030	0.0030	
Selenium	mg/L	<0.0050	0.0050	
Zinc	mg/L	<0.15	0.15	

LABORATORY CONTROL SAMPLE: T025070-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/L	0.0278	0.0296	107	80-120	
Arsenic	mg/L	0.0556	0.0514	92	80-120	
Barium	mg/L	0.889	0.836	94	80-120	
Cadmium	mg/L	0.0278	0.0269	97	80-120	
Chromium	mg/L	0.0278	0.0289	104	80-120	
Copper	mg/L	0.889	0.920	103	80-120	
Manganese	mg/L	0.889	0.906	102	80-120	
Nickel	mg/L	0.889	0.923	104	80-120	
Lead	mg/L	0.0556	0.0582	105	80-120	
Selenium	mg/L	0.0556	0.0452	81	80-120	
Zinc	mg/L	0.889	0.779	88	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025070-MSD1 Original: **T11H197-15**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Silver	mg/L	0.000201	0.0278	0.0313	0.0303	112	108	75-125	3	20	
Arsenic	mg/L	0.00312	0.0556	0.0560	0.0554	95	94	75-125	1	20	
Barium	mg/L	0.0658	0.889	0.959	0.929	101	97	75-125	3	20	
Cadmium	mg/L	0	0.0278	0.0283	0.0275	102	99	75-125	3	20	
Chromium	mg/L	0.00665	0.0278	0.0353	0.0349	103	102	75-125	1	20	
Copper	mg/L	0.0102	0.889	0.955	0.922	106	103	75-125	4	20	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025070-MSD1 Original: **T11H197-15**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Manganese	mg/L	2.40	0.889	3.45	3.38	118	110	75-125	8	20	
Nickel	mg/L	0.0105	0.889	0.942	0.902	105	100	75-125	4	20	
Lead	mg/L	0.00584	0.0556	0.0683	0.0664	112	109	75-125	3	20	
Selenium	mg/L	0	0.0556	0.0472	0.0465	85	84	75-125	2	20	
Zinc	mg/L	0	0.889	0.825	0.808	93	91	75-125	2	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025072
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids
Analysis Description: Zinc, Total
Analysis Method: EPA 6020

METHOD BLANK: T025072-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/kg dry	<0.10	0.10	
Arsenic	mg/kg dry	<0.12	0.12	
Barium	mg/kg dry	<1.0	1.0	
Cadmium	mg/kg dry	<0.20	0.20	
Chromium	mg/kg dry	<2.0	2.0	
Copper	mg/kg dry	<1.0	1.0	
Manganese	mg/kg dry	<1.0	1.0	
Nickel	mg/kg dry	<1.0	1.0	
Lead	mg/kg dry	<1.0	1.0	
Selenium	mg/kg dry	<0.40	0.40	
Zinc	mg/kg dry	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T025072-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/kg dry	5.00	4.83	97	80-120	
Arsenic	mg/kg dry	5.00	4.29	86	80-120	
Barium	mg/kg dry	40.0	38.5	96	80-120	
Cadmium	mg/kg dry	40.0	36.2	90	80-120	
Chromium	mg/kg dry	40.0	39.5	99	80-120	
Copper	mg/kg dry	40.0	40.5	101	80-120	
Manganese	mg/kg dry	40.0	40.6	102	80-120	
Nickel	mg/kg dry	40.0	39.5	99	80-120	
Lead	mg/kg dry	40.0	42.4	106	80-120	
Selenium	mg/kg dry	5.00	4.09	82	80-120	
Zinc	mg/kg dry	40.0	35.3	88	80-120	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025072-MSD1 Original: **T11H197-41**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Silver	mg/kg dry	0.0140	4.83	4.59	4.03	94	83	75-125	12	20	
Arsenic	mg/kg dry	0.867	4.83	5.28	4.75	91	80	75-125	12	20	
Barium	mg/kg dry	8.72	38.6	46.2	40.7	96	83	75-125	15	20	
Cadmium	mg/kg dry	0	38.6	35.4	30.9	91	80	75-125	13	20	
Chromium	mg/kg dry	4.19	38.6	40.9	36.3	94	83	75-125	13	20	
Copper	mg/kg dry	2.35	38.6	38.2	34.3	92	83	75-125	11	20	
Manganese	mg/kg dry	71.5	38.6	116	112	114	105	75-125	8	20	
Nickel	mg/kg dry	3.10	38.6	39.4	34.7	93	82	75-125	13	20	
Lead	mg/kg dry	1.45	38.6	41.5	36.3	103	90	75-125	13	20	
Selenium	mg/kg dry	0	4.83	4.03	3.64	83	75	75-125	9	20	
Zinc	mg/kg dry	7.10	38.6	40.2	36.3	85	76	75-125	12	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025076
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids
Analysis Description: Zinc, Total
Analysis Method: EPA 6020

METHOD BLANK: T025076-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Silver	mg/kg dry	<0.10	0.10	
Arsenic	mg/kg dry	<0.12	0.12	
Barium	mg/kg dry	<1.0	1.0	
Cadmium	mg/kg dry	<0.20	0.20	
Chromium	mg/kg dry	<2.0	2.0	
Copper	mg/kg dry	<1.0	1.0	
Manganese	mg/kg dry	<1.0	1.0	
Nickel	mg/kg dry	<1.0	1.0	
Lead	mg/kg dry	<1.0	1.0	
Selenium	mg/kg dry	<0.40	0.40	
Zinc	mg/kg dry	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T025076-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Silver	mg/kg dry	5.00	4.76	95	80-120	
Arsenic	mg/kg dry	5.00	4.45	89	80-120	
Barium	mg/kg dry	40.0	38.0	95	80-120	
Cadmium	mg/kg dry	40.0	36.5	91	80-120	
Chromium	mg/kg dry	40.0	38.9	97	80-120	

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LABORATORY CONTROL SAMPLE: T025076-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Copper	mg/kg dry	40.0	37.9	95	80-120	
Manganese	mg/kg dry	40.0	39.8	100	80-120	
Nickel	mg/kg dry	40.0	38.4	96	80-120	
Lead	mg/kg dry	40.0	43.1	108	80-120	
Selenium	mg/kg dry	5.00	4.12	82	80-120	
Zinc	mg/kg dry	40.0	34.6	86	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025076-MSD1 Original: **T11H197-57**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Silver	mg/kg dry	0.115	4.59	4.36	4.06	90	86	75-125	4	20	
Arsenic	mg/kg dry	2.94	4.59	7.12	6.71	89	82	75-125	8	20	
Barium	**mg/kg dry**	**90.7**	**36.7**	**133**	**124**	**113**	**90**	**75-125**	**22**	**20**	**207**
Cadmium	mg/kg dry	0.146	36.7	33.8	31.8	89	86	75-125	4	20	
Chromium	**mg/kg dry**	**19.8**	**36.7**	**49.1**	**46.5**	**77**	**73**	**75-125**	**7**	**20**	**209**
Copper	**mg/kg dry**	**15.6**	**36.7**	**43.2**	**41.0**	**73**	**69**	**75-125**	**6**	**20**	**205**
Manganese	**mg/kg dry**	**403**	**36.7**	**438**	**406**	**92**	**8**	**75-125**	**168**	**20**	**227**
Nickel	**mg/kg dry**	**14.8**	**36.7**	**42.6**	**40.8**	**74**	**71**	**75-125**	**4**	**20**	**205**
Lead	mg/kg dry	6.90	36.7	45.7	42.4	103	97	75-125	6	20	
Selenium	mg/kg dry	0.197	4.59	3.83	3.66	77	75	75-125	2	20	
Zinc	**mg/kg dry**	**36.1**	**36.7**	**67.4**	**63.3**	**83**	**74**	**75-125**	**11**	**20**	**209**

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025050
QC Batch Method: EPA 7470A Prep
Analysis Description: Mercury, Total
Analysis Method: EPA 7470A

METHOD BLANK: T025050-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/L	<0.00020	0.00020	

LABORATORY CONTROL SAMPLE: T025050-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/L	0.00200	0.00206	103	77-122	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025050-MSD1 Original: **T11H197-15**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/L	0.00000740	0.00200	0.00210	0.00186	105	92	76-123	12	20	

Trace Project ID: T11H197

Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024778
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids
Analysis Description: Mercury, Total, EPA 7470/7471
Analysis Method: EPA 7471A

METHOD BLANK: T024778-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/kg dry	<0.050	0.050	

LABORATORY CONTROL SAMPLE: T024778-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/kg dry	0.200	0.229	114	77-122	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024778-MSD1 Original: **T11H197-26**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/kg dry	0.194	0.183	0.382	0.371	94	96	76-123	2	20	

Trace Project ID: T11H197

Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024794
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids
Analysis Description: Mercury, Total, EPA 7470/7471
Analysis Method: EPA 7471A

METHOD BLANK: T024794-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/kg dry	<0.050	0.050	

LABORATORY CONTROL SAMPLE: T024794-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/kg dry	0.200	0.210	105	77-122	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024794-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/kg dry	0.0376	0.186	0.234	0.230	104	103	76-123	0.4	20	

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Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025033
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids
Analysis Description: Mercury, Total, EPA 7470/7471
Analysis Method: EPA 7471A

METHOD BLANK: T025033-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/kg dry	<0.050	0.050	

LABORATORY CONTROL SAMPLE: T025033-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/kg dry	0.200	0.184	92	77-122	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025033-MSD1 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	**mg/kg dry**	**0.166**	**0.199**	**0.314**	**0.305**	**75**	**70**	**76-123**	**7**	**20**	**205**

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025072
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids
Analysis Description: Mercury, Total, EPA 7470/7471
Analysis Method: EPA 7471A

METHOD BLANK: T025072-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/kg dry	<0.050	0.050	

LABORATORY CONTROL SAMPLE: T025072-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/kg dry	0.200	0.196	98	77-122	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025072-MSD1 Original: **T11H197-41**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/kg dry	0	0.193	0.199	0.170	102	88	76-123	15	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

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QC Batch: T025076
QC Batch Method: EPA 3051 Microwave Assisted Digestions for Solids

Analysis Description: Mercury, Total, EPA 7470/7471
Analysis Method: EPA 7471A

METHOD BLANK: T025076-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Mercury	mg/kg dry	<0.050	0.050	

LABORATORY CONTROL SAMPLE: T025076-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Mercury	mg/kg dry	0.200	0.206	103	77-122	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025076-MSD1 Original: **T11H197-57**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Mercury	mg/kg dry	0.0242	0.184	0.183	0.169	84	79	76-123	7	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024703
QC Batch Method: ASTM D422

Analysis Description: Grain Size (without Hydrometer)
Analysis Method: ASTM D422

SAMPLE DUPLICATE: T024703-DUP1 Original: **T11H197-03**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Grain Size without Hydrometer, see attached report	[blank] dry	0.00	0.00		200	

SAMPLE DUPLICATE: T024703-DUP2 Original: **T11H197-10**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Grain Size without Hydrometer, see attached report	[blank] dry	0.00	0.00		200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024804
QC Batch Method: ASTM D422

Analysis Description: Grain Size (without Hydrometer)
Analysis Method: ASTM D422

SAMPLE DUPLICATE: T024804-DUP1 Original: **T11H197-26**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Grain Size without Hydrometer, see attached report	[blank] dry	0.00	0.00		200	

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Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024870
QC Batch Method: ASTM D422
Analysis Description: Grain Size (without Hydrometer)
Analysis Method: ASTM D422

SAMPLE DUPLICATE: T024870-DUP2 Original: **T11H197-41**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Grain Size without Hydrometer, see attached report	[blank] dry	0.00	0.00		200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024871
QC Batch Method: ASTM D422
Analysis Description: Grain Size (without Hydrometer)
Analysis Method: ASTM D422

SAMPLE DUPLICATE: T024871-DUP1 Original: **T11H197-57**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Grain Size without Hydrometer, see attached report	[blank] dry	0.00	0.00		200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024906
QC Batch Method: EPA 9071B
Analysis Description: Oil and Grease, Gravimetric
Analysis Method: EPA 9071B

METHOD BLANK: T024906-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Oil & Grease (HEM)	mg/kg wet	<420	420	

LABORATORY CONTROL SAMPLE: T024906-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Oil & Grease (HEM)	mg/kg wet	8820	8620	98	78-121	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024906-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Oil & Grease (HEM)	mg/kg dry	0	15200	16300	14800	96	97	68-127	0.9	21	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024906-MSD2 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Oil & Grease (HEM)	mg/kg dry	0	17500	14600	18700	95	107	68-127	12	21	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025012
QC Batch Method: EPA 9071B
Analysis Description: Oil and Grease, Gravimetric
Analysis Method: EPA 9071B

METHOD BLANK: T025012-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Oil & Grease (HEM)	mg/kg wet	<420	420	

LABORATORY CONTROL SAMPLE: T025012-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Oil & Grease (HEM)	mg/kg wet	9230	9290	101	78-121	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025012-MSD1 Original: **T11H197-26**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Oil & Grease (HEM)	mg/kg dry	0	34200	34900	34100	115	100	68-127	14	21	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025066
QC Batch Method: EPA 9071B
Analysis Description: Oil and Grease, Gravimetric
Analysis Method: EPA 9071B

METHOD BLANK: T025066-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Oil & Grease (HEM)	mg/kg wet	<420	420	

LABORATORY CONTROL SAMPLE: T025066-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Oil & Grease (HEM)	mg/kg wet	5900	5840	99	78-121	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025066-MSD1 Original: **T11H197-41**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Oil & Grease (HEM)	mg/kg dry	0	10100	8590	10200	100	101	68-127	1	21	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025066-MSD2 Original: **T11H197-57**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Oil & Grease (HEM)	mg/kg dry	0	14000	11100	14100	99	101	68-127	1	21	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024727
QC Batch Method: EPA 3540C Soxhlet Extraction
Analysis Description: PCBs
Analysis Method: EPA 8082

METHOD BLANK: T024727-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Aroclor-1016	ug/kg wet	<70	70	
Aroclor-1221	ug/kg wet	<70	70	
Aroclor-1232	ug/kg wet	<70	70	
Aroclor-1242	ug/kg wet	<70	70	
Aroclor-1248	ug/kg wet	<70	70	
Aroclor-1254	ug/kg wet	<70	70	
Aroclor-1260	ug/kg wet	<70	70	
Tetrachloro-m-xylene (S)	%	83	40-113	
Decachlorobiphenyl (S)	%	92	32-111	

LABORATORY CONTROL SAMPLE: T024727-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Aroclor-1016	ug/kg wet	665	362	54	51-110	
Aroclor-1260	ug/kg wet	665	390	59	49-110	
Tetrachloro-m-xylene (S)	%	33.3	19.8	59	40-113	
Decachlorobiphenyl (S)	%	33.3	22.3	67	32-111	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024727-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Aroclor-1016	ug/kg dry	0	1080	762	645	71	60	41-118	17	39	
Aroclor-1260	ug/kg dry	0	1080	776	728	72	67	41-113	7	40	
Tetrachloro-m-xylene (S)	%		54.2	39.8	29.3	74	54	40-113			
Decachlorobiphenyl (S)	%		54.2	41.9	38.9	78	72	32-111			

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024727-MSD2 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Aroclor-1016	ug/kg dry	0	1090	644	612	59	56	41-118	5	39	
Aroclor-1260	ug/kg dry	0	1090	716	653	66	60	41-113	9	40	
Tetrachloro-m-xylene (S)	%		54.4	26.9	26.5	49	49	40-113			
Decachlorobiphenyl (S)	%		54.4	36.8	31.1	68	57	32-111			

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024845
QC Batch Method: EPA 3540C Soxhlet Extraction
Analysis Description: PCBs
Analysis Method: EPA 8082

METHOD BLANK: T024845-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Aroclor-1016	ug/kg wet	<70	70	
Aroclor-1221	ug/kg wet	<70	70	
Aroclor-1232	ug/kg wet	<70	70	
Aroclor-1242	ug/kg wet	<70	70	
Aroclor-1248	ug/kg wet	<70	70	
Aroclor-1254	ug/kg wet	<70	70	
Aroclor-1260	ug/kg wet	<70	70	
Tetrachloro-m-xylene (S)	%	72	40-113	
Decachlorobiphenyl (S)	%	85	32-111	

LABORATORY CONTROL SAMPLE: T024845-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Aroclor-1016	ug/kg wet	662	428	65	51-110	
Aroclor-1260	ug/kg wet	662	466	70	49-110	
Tetrachloro-m-xylene (S)	%	33.1	24.3	73	40-113	
Decachlorobiphenyl (S)	%	33.1	27.5	83	32-111	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024971
QC Batch Method: EPA 3540C Soxhlet Extraction
Analysis Description: PCBs
Analysis Method: EPA 8082

METHOD BLANK: T024971-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Aroclor-1016	ug/kg wet	<70	70	
Aroclor-1221	ug/kg wet	<70	70	
Aroclor-1232	ug/kg wet	<70	70	
Aroclor-1242	ug/kg wet	<70	70	
Aroclor-1248	ug/kg wet	<70	70	

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METHOD BLANK: T024971-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Aroclor-1254	ug/kg wet	<70	70	
Aroclor-1260	ug/kg wet	<70	70	
Tetrachloro-m-xylene (S)	%	79	40-113	
Decachlorobiphenyl (S)	%	89	32-111	

LABORATORY CONTROL SAMPLE: T024971-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Aroclor-1016	ug/kg wet	662	478	72	51-110	
Aroclor-1260	ug/kg wet	662	512	77	49-110	
Tetrachloro-m-xylene (S)	%	33.1	27.0	81	40-113	
Decachlorobiphenyl (S)	%	33.1	29.9	90	32-111	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024971-MSD1 Original: **T11H197-41**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Aroclor-1016	ug/kg dry	0	820	595	544	72	66	41-118	8	39	
Aroclor-1260	ug/kg dry	0	820	643	598	78	73	41-113	7	40	
Tetrachloro-m-xylene (S)	%		41.0	32.0	28.0	78	68	40-113			
Decachlorobiphenyl (S)	%		41.0	35.9	33.7	87	82	32-111			

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025011
QC Batch Method: EPA 3540C Soxhlet Extraction
Analysis Description: PCBs
Analysis Method: EPA 8082

METHOD BLANK: T025011-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Aroclor-1016	ug/kg wet	<70	70	
Aroclor-1221	ug/kg wet	<70	70	
Aroclor-1232	ug/kg wet	<70	70	
Aroclor-1242	ug/kg wet	<70	70	
Aroclor-1248	ug/kg wet	<70	70	
Aroclor-1254	ug/kg wet	<70	70	
Aroclor-1260	ug/kg wet	<70	70	
Tetrachloro-m-xylene (S)	%	48	40-113	
Decachlorobiphenyl (S)	%	55	32-111	

LABORATORY CONTROL SAMPLE: T025011-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Aroclor-1016	ug/kg wet	662	387	58	51-110	

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LABORATORY CONTROL SAMPLE: T025011-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Aroclor-1260	ug/kg wet	662	420	63	49-110	
Tetrachloro-m-xylene (S)	%	33.1	20.1	61	40-113	
Decachlorobiphenyl (S)	%	33.1	23.6	71	32-111	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025011-MSD1 Original: **T11H197-57**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Aroclor-1016	ug/kg dry	0	1090	788	683	72	63	41-118	14	39	
Aroclor-1260	ug/kg dry	0	1090	862	742	79	68	41-113	14	40	
Tetrachloro-m-xylene (S)	%		54.6	40.5	34.0	74	62	40-113			
Decachlorobiphenyl (S)	%		54.6	47.8	39.5	87	72	32-111			

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025011-MSD2 Original: **T11H197-26RE1**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Aroclor-1016	ug/kg dry	0	1830	1250	1020	68	56	41-118	20	39	
Aroclor-1260	ug/kg dry	0	1830	1330	1070	72	58	41-113	21	40	
Tetrachloro-m-xylene (S)	%		91.7	64.2	51.9	70	57	40-113			
Decachlorobiphenyl (S)	%		91.7	68.3	56.5	74	62	32-111			

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025068
QC Batch Method: EPA 3540C Soxhlet Extraction
Analysis Description: PCBs
Analysis Method: EPA 8082

METHOD BLANK: T025068-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Aroclor-1016	ug/kg wet	<70	70	
Aroclor-1221	ug/kg wet	<70	70	
Aroclor-1232	ug/kg wet	<70	70	
Aroclor-1242	ug/kg wet	<70	70	
Aroclor-1248	ug/kg wet	<70	70	
Aroclor-1254	ug/kg wet	<70	70	
Aroclor-1260	ug/kg wet	<70	70	
Tetrachloro-m-xylene (S)	%	66	40-113	
Decachlorobiphenyl (S)	%	74	32-111	

LABORATORY CONTROL SAMPLE: T025068-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Aroclor-1016	ug/kg wet	662	436	66	51-110	

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LABORATORY CONTROL SAMPLE: T025068-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Aroclor-1260	ug/kg wet	662	466	70	49-110	
Tetrachloro-m-xylene (S)	%	33.1	24.8	75	40-113	
Decachlorobiphenyl (S)	%	33.1	26.4	80	32-111	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024765
QC Batch Method: EPA 3550B Ultrasonic Extraction
Analysis Description: PNAs
Analysis Method: EPA 8270C

METHOD BLANK: T024765-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Naphthalene	ug/kg wet	<330	330	
2-Methylnaphthalene	ug/kg wet	<330	330	
Acenaphthylene	ug/kg wet	<330	330	
Acenaphthene	ug/kg wet	<330	330	
Fluorene	ug/kg wet	<330	330	
Phenanthrene	ug/kg wet	<330	330	
Anthracene	ug/kg wet	<330	330	
Fluoranthene	ug/kg wet	<330	330	
Pyrene	ug/kg wet	<330	330	
Benzo (a) anthracene	ug/kg wet	<330	330	
Chrysene	ug/kg wet	<330	330	
Benzo (b) fluoranthene	ug/kg wet	<330	330	
Benzo (k) fluoranthene	ug/kg wet	<330	330	
Benzo (a) pyrene	ug/kg wet	<330	330	
Indeno (1,2,3-cd) pyrene	ug/kg wet	<330	330	
Dibenz (a,h) anthracene	ug/kg wet	<330	330	
Benzo (g,h,i) perylene	ug/kg wet	<330	330	
Nitrobenzene-d5 (S)	%	67	36-98	
2-Fluorobiphenyl (S)	%	68	44-105	
Terphenyl-d14 (S)	%	72	46-109	

LABORATORY CONTROL SAMPLE: T024765-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Naphthalene	ug/kg wet	3330	2240	67	59-91	
2-Methylnaphthalene	ug/kg wet	3330	1910	57	45-105	
Acenaphthylene	ug/kg wet	3330	2130	64	49-94	
Acenaphthene	ug/kg wet	3330	2100	63	52-105	
Fluorene	ug/kg wet	3330	2270	68	58-106	
Phenanthrene	ug/kg wet	3330	2230	67	61-108	
Anthracene	ug/kg wet	3330	2180	66	57-106	
Fluoranthene	ug/kg wet	3330	2200	66	54-129	

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LABORATORY CONTROL SAMPLE: T024765-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Pyrene	ug/kg wet	3330	2090	63	47-114	
Benzo (a) anthracene	ug/kg wet	3330	2390	72	58-114	
Chrysene	ug/kg wet	3330	2050	61	52-123	
Benzo (b) fluoranthene	ug/kg wet	3330	2400	72	47-142	
Benzo (k) fluoranthene	ug/kg wet	3330	2240	67	53-126	
Benzo (a) pyrene	ug/kg wet	3330	2370	71	56-121	
Indeno (1,2,3-cd) pyrene	ug/kg wet	3330	2300	69	51-123	
Dibenz (a,h) anthracene	ug/kg wet	3330	1850	56	52-131	
Benzo (g,h,i) perylene	ug/kg wet	3330	2470	74	45-116	
Nitrobenzene-d5 (S)	%	3330	2130	64	36-98	
2-Fluorobiphenyl (S)	%	3370	2140	64	44-105	
Terphenyl-d14 (S)	%	3500	2230	64	46-109	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024765-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Naphthalene	ug/kg dry	0	5400	3820	3440	70	64	45-92	10	32	
2-Methylnaphthalene	ug/kg dry	0	5400	3260	3160	60	58	45-105	3	30	
Acenaphthylene	ug/kg dry	0	5400	3600	3590	66	66	47-92	0.00002	20	
Acenaphthene	ug/kg dry	0	5400	3780	3430	70	63	46-111	9	31	
Fluorene	ug/kg dry	0	5400	3900	3730	72	69	50-106	4	23	
Phenanthrene	ug/kg dry	29.2	5400	3790	3740	69	69	57-107	1	21	
Anthracene	ug/kg dry	0	5400	3850	3800	71	70	55-104	1	33	
Fluoranthene	ug/kg dry	50.3	5400	3910	3640	71	67	47-122	7	28	
Pyrene	ug/kg dry	42.2	5400	3850	3640	70	67	40-124	5	33	
Benzo (a) anthracene	ug/kg dry	31.4	5400	4260	4190	78	77	54-107	1	35	
Chrysene	ug/kg dry	0	5400	3900	3600	72	67	55-104	8	25	
Benzo (b) fluoranthene	ug/kg dry	33.0	5400	4250	4730	78	87	47-103	11	39	
Benzo (k) fluoranthene	ug/kg dry	0	5400	3860	3300	71	61	54-108	15	33	
Benzo (a) pyrene	ug/kg dry	0	5400	4040	4010	75	74	57-118	0.5	24	
Indeno (1,2,3-cd) pyrene	ug/kg dry	0	5400	3990	3830	74	71	47-123	4	25	
Dibenz (a,h) anthracene	ug/kg dry	0	5400	3280	3090	61	57	42-143	6	27	
Benzo (g,h,i) perylene	ug/kg dry	0	5400	4210	3930	78	73	50-105	7	20	
Nitrobenzene-d5 (S)	%		5400	3450	3120	64	58	36-98			
2-Fluorobiphenyl (S)	%		5450	3310	3040	60	56	44-105			
Terphenyl-d14 (S)	%		5670	3870	3520	68	62	46-109			

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024765-MSD2 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Naphthalene	ug/kg dry	0	5480	2950	3280	54	60	45-92	11	32	
2-Methylnaphthalene	ug/kg dry	0	5480	2590	2820	47	52	45-105	9	30	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024765-MSD2 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Acenaphthylene	ug/kg dry	0	5480	2850	3050	52	56	47-92	7	20	
Acenaphthene	ug/kg dry	0	5480	2850	2950	52	54	46-111	4	31	
Fluorene	ug/kg dry	0	5480	2960	3070	54	56	50-106	4	23	
Phenanthrene	**ug/kg dry**	**40.4**	**5480**	**2930**	**3040**	**53**	**55**	**57-107**	**4**	**21**	**205**
Anthracene	ug/kg dry	0	5480	3180	3140	58	57	55-104	1	33	
Fluoranthene	ug/kg dry	71.0	5480	3020	3090	54	55	47-122	2	28	
Pyrene	ug/kg dry	59.0	5480	3120	3090	56	55	40-124	1	33	
Benzo (a) anthracene	ug/kg dry	40.4	5480	3380	3430	61	62	54-107	1	35	
Chrysene	ug/kg dry	39.3	5480	3210	3030	58	55	55-104	6	25	
Benzo (b) fluoranthene	ug/kg dry	48.1	5480	3280	3510	59	63	47-103	7	39	
Benzo (k) fluoranthene	ug/kg dry	0	5480	2960	3260	54	59	54-108	10	33	
Benzo (a) pyrene	**ug/kg dry**	**35.5**	**5480**	**2990**	**3370**	**54**	**61**	**57-118**	**12**	**24**	**208**
Indeno (1,2,3-cd) pyrene	ug/kg dry	0	5480	2870	2980	52	54	47-123	4	25	
Dibenz (a,h) anthracene	ug/kg dry	0	5480	2470	2500	45	46	42-143	1	27	
Benzo (g,h,i) perylene	ug/kg dry	0	5480	3010	3110	55	57	50-105	3	20	
Nitrobenzene-d5 (S)	%		5480	2820	2910	51	53	36-98			
2-Fluorobiphenyl (S)	**%**		**5530**	**2250**	**2470**	**41**	**45**	**44-105**			**802**
Terphenyl-d14 (S)	%		5750	2980	3010	52	52	46-109			

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024818
QC Batch Method: EPA 3540C Soxhlet Extraction
Analysis Description: PNAs
Analysis Method: EPA 8270C

METHOD BLANK: T024818-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Naphthalene	ug/kg wet	<330	330	
2-Methylnaphthalene	ug/kg wet	<330	330	
Acenaphthylene	ug/kg wet	<330	330	
Acenaphthene	ug/kg wet	<330	330	
Fluorene	ug/kg wet	<330	330	
Phenanthrene	ug/kg wet	<330	330	
Anthracene	ug/kg wet	<330	330	
Fluoranthene	ug/kg wet	<330	330	
Pyrene	ug/kg wet	<330	330	
Benzo (a) anthracene	ug/kg wet	<330	330	
Chrysene	ug/kg wet	<330	330	
Benzo (b) fluoranthene	ug/kg wet	<330	330	
Benzo (k) fluoranthene	ug/kg wet	<330	330	
Benzo (a) pyrene	ug/kg wet	<330	330	
Indeno (1,2,3-cd) pyrene	ug/kg wet	<330	330	
Dibenz (a,h) anthracene	ug/kg wet	<330	330	
Benzo (g,h,i) perylene	ug/kg wet	<330	330	

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METHOD BLANK: T024818-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Nitrobenzene-d5 (S)	%	60	36-98	
2-Fluorobiphenyl (S)	%	59	44-105	
Terphenyl-d14 (S)	%	58	46-109	

LABORATORY CONTROL SAMPLE: T024818-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Naphthalene	ug/kg wet	3330	2490	75	59-91	
2-Methylnaphthalene	ug/kg wet	3330	2120	64	45-105	
Acenaphthylene	ug/kg wet	3330	2320	70	49-94	
Acenaphthene	ug/kg wet	3330	2350	70	52-105	
Fluorene	ug/kg wet	3330	2500	75	58-106	
Phenanthrene	ug/kg wet	3330	2410	72	61-108	
Anthracene	ug/kg wet	3330	2470	74	57-106	
Fluoranthene	ug/kg wet	3330	2530	76	54-129	
Pyrene	ug/kg wet	3330	2450	73	47-114	
Benzo (a) anthracene	ug/kg wet	3330	2760	83	58-114	
Chrysene	ug/kg wet	3330	2490	75	52-123	
Benzo (b) fluoranthene	ug/kg wet	3330	2930	88	47-142	
Benzo (k) fluoranthene	ug/kg wet	3330	2550	76	53-126	
Benzo (a) pyrene	ug/kg wet	3330	2830	85	56-121	
Indeno (1,2,3-cd) pyrene	ug/kg wet	3330	2760	83	51-123	
Dibenz (a,h) anthracene	ug/kg wet	3330	3880	116	52-131	
Benzo (g,h,i) perylene	ug/kg wet	3330	2790	84	45-116	
Nitrobenzene-d5 (S)	%	3330	2300	69	36-98	
2-Fluorobiphenyl (S)	%	3370	2280	68	44-105	
Terphenyl-d14 (S)	%	3500	2360	67	46-109	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024818-MSD1 Original: **T11H197-26**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Naphthalene	ug/kg dry	0	9190	6010	6330	65	69	45-92	5	32	
2-Methylnaphthalene	ug/kg dry	0	9190	5150	5490	56	60	45-105	6	30	
Acenaphthylene	ug/kg dry	0	9190	5660	5790	62	63	47-92	2	20	
Acenaphthene	ug/kg dry	0	9190	5790	5990	63	65	46-111	3	31	
Fluorene	ug/kg dry	0	9190	5790	5970	63	65	50-106	3	23	
Phenanthrene	ug/kg dry	0	9190	5410	5640	59	61	57-107	4	21	
Anthracene	ug/kg dry	0	9190	5870	6030	64	66	55-104	3	33	
Fluoranthene	ug/kg dry	0	9190	5810	6030	63	66	47-122	4	28	
Pyrene	ug/kg dry	0	9190	5850	6130	64	67	40-124	5	33	
Benzo (a) anthracene	ug/kg dry	0	9190	6480	6810	70	74	54-107	5	35	
Chrysene	ug/kg dry	0	9190	6000	5860	65	64	55-104	2	25	
Benzo (b) fluoranthene	ug/kg dry	0	9190	6500	6770	71	74	47-103	4	39	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024818-MSD1 Original: **T11H197-26**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Benzo (k) fluoranthene	ug/kg dry	0	9190	5850	5880	64	64	54-108	0.5	33	
Benzo (a) pyrene	ug/kg dry	0	9190	6230	6520	68	71	57-118	5	24	
Indeno (1,2,3-cd) pyrene	ug/kg dry	0	9190	6150	6250	67	68	47-123	2	25	
Dibenz (a,h) anthracene	ug/kg dry	0	9190	5400	5370	59	58	42-143	0.5	27	
Benzo (g,h,i) perylene	ug/kg dry	0	9190	6490	6680	71	73	50-105	3	20	
Nitrobenzene-d5 (S)	%		9190	6100	6260	66	68	36-98			
2-Fluorobiphenyl (S)	%		9280	5120	5380	55	58	44-105			
Terphenyl-d14 (S)	%		9650	5950	6230	62	65	46-109			

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024913
QC Batch Method: EPA 3550B Ultrasonic Extraction
Analysis Description: PNAs
Analysis Method: EPA 8270C

METHOD BLANK: T024913-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Naphthalene	ug/kg wet	<330	330	
2-Methylnaphthalene	ug/kg wet	<330	330	
Acenaphthylene	ug/kg wet	<330	330	
Acenaphthene	ug/kg wet	<330	330	
Fluorene	ug/kg wet	<330	330	
Phenanthrene	ug/kg wet	<330	330	
Anthracene	ug/kg wet	<330	330	
Fluoranthene	ug/kg wet	<330	330	
Pyrene	ug/kg wet	<330	330	
Benzo (a) anthracene	ug/kg wet	<330	330	
Chrysene	ug/kg wet	<330	330	
Benzo (b) fluoranthene	ug/kg wet	<330	330	
Benzo (k) fluoranthene	ug/kg wet	<330	330	
Benzo (a) pyrene	ug/kg wet	<330	330	
Indeno (1,2,3-cd) pyrene	ug/kg wet	<330	330	
Dibenz (a,h) anthracene	ug/kg wet	<330	330	
Benzo (g,h,i) perylene	ug/kg wet	<330	330	
Nitrobenzene-d5 (S)	%	57	36-98	
2-Fluorobiphenyl (S)	%	58	44-105	
Terphenyl-d14 (S)	%	62	46-109	

LABORATORY CONTROL SAMPLE: T024913-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Naphthalene	ug/kg wet	3320	2340	70	59-91	
2-Methylnaphthalene	ug/kg wet	3320	2030	61	45-105	
Acenaphthylene	ug/kg wet	3320	2150	65	49-94	
Acenaphthene	ug/kg wet	3320	2230	67	52-105	

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LABORATORY CONTROL SAMPLE: T024913-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Fluorene	ug/kg wet	3320	2260	68	58-106	
Phenanthrene	ug/kg wet	3320	2150	65	61-108	
Anthracene	ug/kg wet	3320	2310	70	57-106	
Fluoranthene	ug/kg wet	3320	2320	70	54-129	
Pyrene	ug/kg wet	3320	2400	72	47-114	
Benzo (a) anthracene	ug/kg wet	3320	2600	78	58-114	
Chrysene	ug/kg wet	3320	2310	69	52-123	
Benzo (b) fluoranthene	ug/kg wet	3320	2680	81	47-142	
Benzo (k) fluoranthene	ug/kg wet	3320	2380	72	53-126	
Benzo (a) pyrene	ug/kg wet	3320	2570	77	56-121	
Indeno (1,2,3-cd) pyrene	ug/kg wet	3320	2530	76	51-123	
Dibenz (a,h) anthracene	ug/kg wet	3320	2860	86	52-131	
Benzo (g,h,i) perylene	ug/kg wet	3320	2670	80	45-116	
Nitrobenzene-d5 (S)	%	3320	2400	72	36-98	
2-Fluorobiphenyl (S)	%	3360	2220	66	44-105	
Terphenyl-d14 (S)	%	3490	2340	67	46-109	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024913-MSD1 Original: **T11H197-41**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Naphthalene	ug/kg dry	0	4130	2760	2510	67	61	45-92	10	32	
2-Methylnaphthalene	ug/kg dry	0	4130	2510	2240	61	54	45-105	12	30	
Acenaphthylene	ug/kg dry	0	4130	2730	2410	66	58	47-92	13	20	
Acenaphthene	ug/kg dry	0	4130	2690	2460	65	60	46-111	9	31	
Fluorene	ug/kg dry	0	4130	2780	2420	67	59	50-106	14	23	
Phenanthrene	ug/kg dry	0	4130	2700	2340	66	57	57-107	15	21	
Anthracene	ug/kg dry	0	4130	2800	2620	68	63	55-104	7	33	
Fluoranthene	ug/kg dry	0	4130	2810	2450	68	59	47-122	14	28	
Pyrene	ug/kg dry	0	4130	2960	2540	72	61	40-124	16	33	
Benzo (a) anthracene	ug/kg dry	0	4130	3200	2810	78	68	54-107	13	35	
Chrysene	ug/kg dry	0	4130	2860	2590	70	63	55-104	10	25	
Benzo (b) fluoranthene	ug/kg dry	0	4130	3200	2820	78	68	47-103	13	39	
Benzo (k) fluoranthene	ug/kg dry	0	4130	2880	2610	70	63	54-108	10	33	
Benzo (a) pyrene	ug/kg dry	0	4130	3150	2680	77	65	57-118	16	24	
Indeno (1,2,3-cd) pyrene	ug/kg dry	0	4130	3110	2680	76	65	47-123	15	25	
Dibenz (a,h) anthracene	ug/kg dry	0	4130	3390	2800	83	68	42-143	19	27	
Benzo (g,h,i) perylene	ug/kg dry	0	4130	3330	2930	81	71	50-105	13	20	
Nitrobenzene-d5 (S)	%		4130	2460	2250	60	55	36-98			
2-Fluorobiphenyl (S)	%		4170	2190	2100	53	50	44-105			
Terphenyl-d14 (S)	%		4330	2590	2310	60	53	46-109			

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024913-MSD2 Original: **T11H197-57**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Naphthalene	ug/kg dry	0	5490	3710	4430	68	81	45-92	18	32	
2-Methylnaphthalene	ug/kg dry	0	5490	3180	3840	58	70	45-105	19	30	
Acenaphthylene	ug/kg dry	0	5490	3490	4240	64	77	47-92	19	20	
Acenaphthene	ug/kg dry	0	5490	3480	4390	63	80	46-111	23	31	
Fluorene	ug/kg dry	0	5490	3680	4570	67	83	50-106	22	23	
Phenanthrene	**ug/kg dry**	**0**	**5490**	**3490**	**4340**	**64**	**79**	**57-107**	**22**	**21**	**207**
Anthracene	ug/kg dry	0	5490	3470	4750	63	87	55-104	31	33	
Fluoranthene	ug/kg dry	0	5490	3610	4750	66	86	47-122	27	28	
Pyrene	**ug/kg dry**	**0**	**5490**	**3510**	**4920**	**64**	**90**	**40-124**	**34**	**33**	**207**
Benzo (a) anthracene	ug/kg dry	0	5490	3960	5370	72	98	54-107	30	35	
Chrysene	ug/kg dry	0	5490	3690	4610	67	84	55-104	22	25	
Benzo (b) fluoranthene	ug/kg dry	0	5490	4140	5400	75	98	47-103	26	39	
Benzo (k) fluoranthene	ug/kg dry	0	5490	3780	4900	69	89	54-108	26	33	
Benzo (a) pyrene	**ug/kg dry**	**0**	**5490**	**3870**	**5150**	**71**	**94**	**57-118**	**28**	**24**	**207**
Indeno (1,2,3-cd) pyrene	**ug/kg dry**	**0**	**5490**	**3880**	**5080**	**71**	**93**	**47-123**	**27**	**25**	**207**
Dibenz (a,h) anthracene	ug/kg dry	0	5490	4070	5120	74	93	42-143	23	27	
Benzo (g,h,i) perylene	**ug/kg dry**	**0**	**5490**	**4120**	**5280**	**75**	**96**	**50-105**	**25**	**20**	**207**
Nitrobenzene-d5 (S)	%		5490	3180	4080	58	74	36-98			
2-Fluorobiphenyl (S)	%		5540	2580	3830	47	69	44-105			
Terphenyl-d14 (S)	%		5760	3160	4620	55	80	46-109			

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T025009
QC Batch Method: EPA 3550B Ultrasonic Extraction
Analysis Description: PNAs
Analysis Method: EPA 8270C

METHOD BLANK: T025009-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Naphthalene	ug/kg wet	<330	330	
2-Methylnaphthalene	ug/kg wet	<330	330	
Acenaphthylene	ug/kg wet	<330	330	
Acenaphthene	ug/kg wet	<330	330	
Fluorene	ug/kg wet	<330	330	
Phenanthrene	ug/kg wet	<330	330	
Anthracene	ug/kg wet	<330	330	
Fluoranthene	ug/kg wet	<330	330	
Pyrene	ug/kg wet	<330	330	
Benzo (a) anthracene	ug/kg wet	<330	330	
Chrysene	ug/kg wet	<330	330	
Benzo (b) fluoranthene	ug/kg wet	<330	330	
Benzo (k) fluoranthene	ug/kg wet	<330	330	
Benzo (a) pyrene	ug/kg wet	<330	330	
Indeno (1,2,3-cd) pyrene	ug/kg wet	<330	330	

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METHOD BLANK: T025009-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Dibenz (a,h) anthracene	ug/kg wet	<330	330	
Benzo (g,h,i) perylene	ug/kg wet	<330	330	
Nitrobenzene-d5 (S)	%	66	36-98	
2-Fluorobiphenyl (S)	%	64	44-105	
Terphenyl-d14 (S)	%	68	46-109	

LABORATORY CONTROL SAMPLE: T025009-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Acenaphthene	ug/kg wet	1680	1240	74	52-105	
Pyrene	ug/kg wet	1740	1300	75	47-114	
Nitrobenzene-d5 (S)	%	3320	2270	68	36-98	
2-Fluorobiphenyl (S)	%	3360	2260	67	44-105	
Terphenyl-d14 (S)	%	3490	2380	68	46-109	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024705
QC Batch Method: % Solids
Analysis Description: Solids, Dry Weight
Analysis Method: % Calculation

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024758
QC Batch Method: % Solids
Analysis Description: Solids, Dry Weight
Analysis Method: % Calculation

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024806
QC Batch Method: % Solids
Analysis Description: Solids, Dry Weight
Analysis Method: % Calculation

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024807
QC Batch Method: % Solids
Analysis Description: Solids, Dry Weight
Analysis Method: % Calculation

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024872
QC Batch Method: % Solids
Analysis Description: Solids, Dry Weight
Analysis Method: % Calculation

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

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QC Batch: T024706
QC Batch Method: % Solids
Analysis Description: Percent Solids
Analysis Method: ASTM D2974-87

SAMPLE DUPLICATE: T024706-DUP1 Original: **T11H197-03**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
% Solids	% by Wt.	62.0	61.3	1	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024759
QC Batch Method: % Solids
Analysis Description: Percent Solids
Analysis Method: ASTM D2974-87

SAMPLE DUPLICATE: T024759-DUP1 Original: **T11H197-10**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
% Solids	% by Wt.	61.0	50.8	18	20	

SAMPLE DUPLICATE: T024759-DUP2 Original: **T11H197-26**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
% Solids	% by Wt.	36.0	37.3	4	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024808
QC Batch Method: % Solids
Analysis Description: Percent Solids
Analysis Method: ASTM D2974-87

SAMPLE DUPLICATE: T024808-DUP1 Original: **T11H197-41**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
% Solids	% by Wt.	81.0	81.5	0.6	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024873
QC Batch Method: % Solids
Analysis Description: Percent Solids
Analysis Method: ASTM D2974-87

SAMPLE DUPLICATE: T024873-DUP1 Original: **T11H197-57**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
% Solids	% by Wt.	61.0	59.7	2	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

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QC Batch: T024732
QC Batch Method: ASTM D854-91
Analysis Description: Specific Gravity
Analysis Method: ASTM D854-91

SAMPLE DUPLICATE: T024732-DUP1 Original: **T11H197-03**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Specific Gravity	[blank]	2.63	2.59	2	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024792
QC Batch Method: ASTM D854-91
Analysis Description: Specific Gravity
Analysis Method: ASTM D854-91

SAMPLE DUPLICATE: T024792-DUP1 Original: **T11H197-10**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Specific Gravity	[blank]	2.47	2.55	3	200	

SAMPLE DUPLICATE: T024792-DUP2 Original: **T11H197-26**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Specific Gravity	[blank]	2.46	2.41	2	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024855
QC Batch Method: ASTM D854-91
Analysis Description: Specific Gravity
Analysis Method: ASTM D854-91

SAMPLE DUPLICATE: T024855-DUP1 Original: **T11H197-41**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Specific Gravity	[blank]	2.25	2.11	6	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024926
QC Batch Method: ASTM D854-91
Analysis Description: Specific Gravity
Analysis Method: ASTM D854-91

SAMPLE DUPLICATE: T024926-DUP1 Original: **T11H197-57**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Specific Gravity	[blank]	2.37	2.41	2	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

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QC Batch: T024976
QC Batch Method: EPA 350.1

Analysis Description: Elutriate Ammonia by EPA 350.1
Analysis Method: EPA 350.1

METHOD BLANK: T024976-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Ammonia as N	mg/L	<0.010	0.010	

LABORATORY CONTROL SAMPLE: T024976-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Ammonia as N	mg/L	1.00	0.952	95	90-110	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024976-MSD1 Original: **T11H197-15**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Ammonia as N	**mg/L**	**1.61**	**1.00**	**2.16**	**2.15**	**55**	**54**	**90-110**	**2**	**7.2**	**205**

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024894
QC Batch Method: EPA 350.1 Rev. 2.0

Analysis Description: Nitrogen, Ammonia
Analysis Method: EPA 350.1 Rev. 2.0

METHOD BLANK: T024894-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Ammonia as N	mg/kg wet	<0.96	0.96	

LABORATORY CONTROL SAMPLE: T024894-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Ammonia as N	mg/kg wet	25.0	26.0	104	60-124	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024894-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Ammonia as N	mg/kg dry	40.3	30.6	86.2	66.9	93	87	45-144	6	36	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024894-MSD2 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Ammonia as N	**mg/kg dry**	**74.8**	**30.2**	**87.8**	**86.7**	**44**	**40**	**45-144**	**11**	**36**	**205**

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Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024946
QC Batch Method: EPA 350.1 Rev. 2.0
Analysis Description: Nitrogen, Ammonia
Analysis Method: EPA 350.1 Rev. 2.0

METHOD BLANK: T024946-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Ammonia as N	mg/kg wet	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T024946-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Ammonia as N	mg/kg wet	25.0	21.9	88	60-124	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024946-MSD1 Original: **T11H197-26**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Ammonia as N	mg/kg dry	57.1	57.5	105	105	84	84	45-144	0	36	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024973
QC Batch Method: EPA 350.1 Rev. 2.0
Analysis Description: Nitrogen, Ammonia
Analysis Method: EPA 350.1 Rev. 2.0

METHOD BLANK: T024973-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Ammonia as N	mg/kg wet	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T024973-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Ammonia as N	mg/kg wet	25.0	27.5	110	60-124	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024973-MSD1 Original: **T11H197-41**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Ammonia as N	mg/kg dry	0	19.1	20.4	20.1	102	105	45-144	3	36	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

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QC Batch: T025020
QC Batch Method: EPA 350.1 Rev. 2.0

Analysis Description: Nitrogen, Ammonia
Analysis Method: EPA 350.1 Rev. 2.0

METHOD BLANK: T025020-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Ammonia as N	mg/kg wet	<1.0	1.0	

LABORATORY CONTROL SAMPLE: T025020-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Ammonia as N	mg/kg wet	25.0	28.0	112	60-124	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T025020-MSD1 Original: **T11H197-57**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Ammonia as N	mg/kg dry	13.4	22.3	39.0	35.2	116	98	45-144	17	36	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024978
QC Batch Method: EPA 351.2

Analysis Description: Elutriate TKN by EPA 351.2
Analysis Method: EPA 351.2

METHOD BLANK: T024978-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Kjeldahl Nitrogen	mg/L	<0.50	0.50	

LABORATORY CONTROL SAMPLE: T024978-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Kjeldahl Nitrogen	mg/L	10.0	9.12	91	90-110	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024978-MSD1 Original: **T11H197-15**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Total Kjeldahl Nitrogen	mg/L	2.19	10.0	12.0	11.7	98	95	90-110	3	20	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024800
QC Batch Method: EPA 351.2 Rev. 2.0

Analysis Description: Total Kjeldahl Nitrogen
Analysis Method: EPA 351.2 Rev. 2.0

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METHOD BLANK: T024800-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Kjeldahl Nitrogen	mg/kg wet	<15	15	

LABORATORY CONTROL SAMPLE: T024800-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Kjeldahl Nitrogen	mg/kg wet	250	234	94	80-125	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024800-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Total Kjeldahl Nitrogen	mg/kg dry	471	535	880	941	79	88	34-153	11	31	

Trace Project ID: T11H197

Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024917
QC Batch Method: EPA 351.2 Rev. 2.0

Analysis Description: Total Kjeldahl Nitrogen
Analysis Method: EPA 351.2 Rev. 2.0

METHOD BLANK: T024917-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Kjeldahl Nitrogen	mg/kg wet	<15	15	

LABORATORY CONTROL SAMPLE: T024917-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Kjeldahl Nitrogen	mg/kg wet	250	265	106	80-125	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024917-MSD1 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Total Kjeldahl Nitrogen	mg/kg dry	489	334	1030	877	149	116	34-153	25	31	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024917-MSD2 Original: **T11H197-26**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Total Kjeldahl Nitrogen	**mg/kg dry**	**2630**	**633**	**3270**	**3090**	**100**	**72**	**34-153**	**32**	**31**	**207**

Trace Project ID: T11H197

Client Project ID: Duluth MN/Superior, WI / 11652-0036

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QC Batch: T024921
QC Batch Method: EPA 351.2 Rev. 2.0

Analysis Description: Total Kjeldahl Nitrogen
Analysis Method: EPA 351.2 Rev. 2.0

METHOD BLANK: T024921-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Kjeldahl Nitrogen	mg/kg wet	<15	15	

LABORATORY CONTROL SAMPLE: T024921-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Kjeldahl Nitrogen	mg/kg wet	250	216	86	80-125	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024921-MSD2 Original: **T11H197-41**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Total Kjeldahl Nitrogen	**mg/kg dry**	**32.6**	**584**	**313**	**483**	**48**	**77**	**34-153**	**46**	**31**	**207**

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024977
QC Batch Method: EPA 351.2 Rev. 2.0

Analysis Description: Total Kjeldahl Nitrogen
Analysis Method: EPA 351.2 Rev. 2.0

METHOD BLANK: T024977-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Kjeldahl Nitrogen	mg/kg wet	<15	15	

METHOD BLANK: T024977-BLK2

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Kjeldahl Nitrogen	mg/kg wet	<15	15	

LABORATORY CONTROL SAMPLE: T024977-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Kjeldahl Nitrogen	mg/kg wet	250	234	94	80-125	

LABORATORY CONTROL SAMPLE: T024977-BS2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Kjeldahl Nitrogen	mg/kg wet	250	236	95	80-125	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024977-MSD1 Original: **T11H197-57**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Total Kjeldahl Nitrogen	**mg/kg dry**	**800**	**322**	**1120**	**1380**	**84**	**181**	**34-153**	**73**	**31**	**203**

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024982
QC Batch Method: EPA 365.2
Analysis Description: Elutriate Phosphorus, Total by EPA 365.2
Analysis Method: EPA 365.2

METHOD BLANK: T024982-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Phosphorus-Total (as P)	mg/L	<0.010	0.010	

LABORATORY CONTROL SAMPLE: T024982-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Phosphorus-Total (as P)	mg/L	0.100	0.0980	98	85-116	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024982-MSD1 Original: **T11H197-15**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Phosphorus-Total (as P)	mg/L	0.129	0.100	0.221	0.219	92	90	83-114	3	12.5	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024754
QC Batch Method: EPA 9012B
Analysis Description: Cyanide, Total
Analysis Method: EPA 9012B

METHOD BLANK: T024754-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Cyanide (total)	mg/kg wet	<0.20	0.20	

LABORATORY CONTROL SAMPLE: T024754-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Cyanide (total)	mg/kg wet	2.50	2.13	85	81-111	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024754-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024754-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Cyanide (total)	mg/kg dry	0.278	3.95	3.71	3.63	86	85	61-126	1	22	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024754-MSD2 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Cyanide (total)	mg/kg dry	0.528	5.48	6.89	5.05	77	82	61-126	6	22	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024815
QC Batch Method: EPA 9012B
Analysis Description: Cyanide, Total
Analysis Method: EPA 9012B

METHOD BLANK: T024815-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Cyanide (total)	mg/kg wet	<0.20	0.20	

LABORATORY CONTROL SAMPLE: T024815-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Cyanide (total)	mg/kg wet	2.50	2.43	97	81-111	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024815-MSD1 Original: **T11H197-26**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Cyanide (total)	mg/kg dry	0.283	6.27	5.38	6.01	78	91	61-126	16	22	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024857
QC Batch Method: EPA 9012B
Analysis Description: Cyanide, Total
Analysis Method: EPA 9012B

METHOD BLANK: T024857-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Cyanide (total)	mg/kg wet	<0.20	0.20	

LABORATORY CONTROL SAMPLE: T024857-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Cyanide (total)	mg/kg wet	2.50	2.31	92	81-111	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024857-MSD1 Original: **T11H197-41**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Cyanide (total)	mg/kg dry	0	2.86	2.10	2.72	90	95	61-126	6	22	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024857-MSD2 Original: **T11H197-57**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Cyanide (total)	mg/kg dry	0.161	3.12	3.14	2.57	86	77	61-126	11	22	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024745
QC Batch Method: PLUMB
Analysis Description: Volatile Solids
Analysis Method: PLUMB

SAMPLE DUPLICATE: T024745-DUP1 Original: **T11H197-03**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Volatile Solids	% by Wt.	3.47	3.53	2	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024771
QC Batch Method: PLUMB
Analysis Description: Chemical Oxygen Demand
Analysis Method: PLUMB

METHOD BLANK: T024771-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Chemical Oxygen Demand	mg/kg wet	<300	300	

LABORATORY CONTROL SAMPLE: T024771-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Chemical Oxygen Demand	mg/kg wet	4000	4280	107	53-118	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024771-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Chemical Oxygen Demand	mg/kg dry	27900	27100	43500	50700	67	84	38-145	23	37	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024823
QC Batch Method: PLUMB
Analysis Description: Chemical Oxygen Demand
Analysis Method: PLUMB

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METHOD BLANK: T024823-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Chemical Oxygen Demand	mg/kg wet	<300	300	

LABORATORY CONTROL SAMPLE: T024823-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Chemical Oxygen Demand	mg/kg wet	4000	3430	86	53-118	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024823-MSD1 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Chemical Oxygen Demand	**mg/kg dry**	**62200**	**24400**	**61600**	**88100**	**-3**	**106**	**38-145**	**212**	**37**	**202**

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024823-MSD2 Original: **T11H197-26**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Chemical Oxygen Demand	mg/kg dry	72300	30700	112000	99300	105	88	38-145	18	37	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024824
QC Batch Method: PLUMB
Analysis Description: Chemical Oxygen Demand
Analysis Method: PLUMB

METHOD BLANK: T024824-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Chemical Oxygen Demand	mg/kg wet	<300	300	

LABORATORY CONTROL SAMPLE: T024824-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Chemical Oxygen Demand	mg/kg wet	4000	3600	90	53-118	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024824-MSD1 Original: **T11H197-41**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Chemical Oxygen Demand	**mg/kg dry**	**2610**	**15000**	**14100**	**9000**	**98**	**43**	**38-145**	**79**	**37**	**207**

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

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QC Batch: T024833
QC Batch Method: PLUMB
Analysis Description: Volatile Solids
Analysis Method: PLUMB

SAMPLE DUPLICATE: T024833-DUP1 Original: **T11H197-10**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Volatile Solids	% by Wt.	4.06	2.84	35	200	

SAMPLE DUPLICATE: T024833-DUP2 Original: **T11H197-26**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Volatile Solids	% by Wt.	11.0	10.9	0.9	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024877
QC Batch Method: PLUMB
Analysis Description: Chemical Oxygen Demand
Analysis Method: PLUMB

METHOD BLANK: T024877-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Chemical Oxygen Demand	mg/kg wet	<300	300	

LABORATORY CONTROL SAMPLE: T024877-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Chemical Oxygen Demand	mg/kg wet	4000	4380	109	53-118	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024877-MSD1 Original: **T11H197-57**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Chemical Oxygen Demand	**mg/kg dry**	**62700**	**22700**	**62700**	**58400**	**0**	**-19**	**38-145**		**37**	**205**

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024938
QC Batch Method: PLUMB
Analysis Description: Volatile Solids
Analysis Method: PLUMB

SAMPLE DUPLICATE: T024938-DUP1 Original: **T11H197-41**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Volatile Solids	% by Wt.	0.310	0.330	6	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

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QC Batch: T024944
QC Batch Method: PLUMB
Analysis Description: Volatile Solids
Analysis Method: PLUMB

SAMPLE DUPLICATE: T024944-DUP1 Original: **T11H197-57**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
Volatile Solids	% by Wt.	3.44	3.31	4	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024704
QC Batch Method: USACE, In-Place Density
Analysis Description: In-Place Density - USACE
Analysis Method: USACE, In-Place Density

SAMPLE DUPLICATE: T024704-DUP1 Original: **T11H197-03**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
In-Place Density	g/mL	1.52	1.52	0.04	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024746
QC Batch Method: USACE, In-Place Density
Analysis Description: In-Place Density - USACE
Analysis Method: USACE, In-Place Density

SAMPLE DUPLICATE: T024746-DUP1 Original: **T11H197-10**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
In-Place Density	g/mL	1.68	1.70	1	200	

SAMPLE DUPLICATE: T024746-DUP2 Original: **T11H197-26**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
In-Place Density	g/mL	1.66	1.67	0.5	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024803
QC Batch Method: USACE, In-Place Density
Analysis Description: In-Place Density - USACE
Analysis Method: USACE, In-Place Density

SAMPLE DUPLICATE: T024803-DUP1 Original: **T11H197-41**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
In-Place Density	g/mL	1.89	1.90	0.5	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

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QC Batch: T024853
QC Batch Method: USACE, In-Place Density

Analysis Description: In-Place Density - USACE
Analysis Method: USACE, In-Place Density

SAMPLE DUPLICATE: T024853-DUP1 Original: **T11H197-57**

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Notes
In-Place Density	g/mL	1.70	1.71	0.5	200	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024736
QC Batch Method: WALKLEY BLACK

Analysis Description: Total Organic Carbon
Analysis Method: WALKLEY BLACK

METHOD BLANK: T024736-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Organic Carbon	mg/kg wet	<1000	1000	

LABORATORY CONTROL SAMPLE: T024736-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Organic Carbon	mg/kg wet	10000	11600	116	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024736-MSD1 Original: **T11H197-03**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Total Organic Carbon	mg/kg dry	15100	60700	74700	65100	89	82	74-134	8	19	

Trace Project ID: T11H197
Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024822
QC Batch Method: WALKLEY BLACK

Analysis Description: Total Organic Carbon
Analysis Method: WALKLEY BLACK

METHOD BLANK: T024822-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Organic Carbon	mg/kg wet	<1000	1000	

LABORATORY CONTROL SAMPLE: T024822-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Organic Carbon	mg/kg wet	10000	9580	96	80-120	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024822-MSD1 Original: **T11H197-10**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Total Organic Carbon	**mg/kg dry**	**21800**	**28300**	**41000**	**38900**	**67**	**60**	**74-134**	**10**	**19**	**205**

Trace Project ID: T11H197

Client Project ID: Duluth MN/Superior, WI / 11652-0036

QC Batch: T024858
QC Batch Method: WALKLEY BLACK

Analysis Description: Total Organic Carbon
Analysis Method: WALKLEY BLACK

METHOD BLANK: T024858-BLK1

Parameter	Units	Blank Result	Reporting Limit	Notes
Total Organic Carbon	mg/kg wet	<1000	1000	

LABORATORY CONTROL SAMPLE: T024858-BS1

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limit	Notes
Total Organic Carbon	mg/kg wet	10000	9840	98	80-120	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024858-MSD1 Original: **T11H197-26**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Total Organic Carbon	mg/kg dry	36600	74200	102000	99300	91	84	74-134	7	19	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024858-MSD2 Original: **T11H197-41**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Total Organic Carbon	mg/kg dry	478	22700	22500	22200	98	96	74-134	3	19	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE: T024858-MSD3 Original: **T11H197-57**

Parameter	Units	Original Result	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD	Notes
Total Organic Carbon	mg/kg dry	15900	30100	42900	42200	90	88	74-134	2	19	

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-01 **Sample Number:** DS-11-16
Material Description: Sample appears to be mostly clay with some fine sand
Moisture content as received = 40.3%
Sample Date: 8/15/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 8/22/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.57	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	113.97	112.55	97.8
		0.425 mm	114.89	112.55	94.3
		0.180 mm	123.83	112.55	77.1
		0.150 mm	122.15	112.55	62.4
		0.075 mm	141.90	112.55	17.7
		0.053 mm	118.20	112.55	9.0

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	5.7	76.6	82.3			17.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0557	0.0692	0.0795	0.0965	0.1287	0.1457	0.2005	0.2465	0.3173	0.5410

Fineness Modulus	C_u	C_c
0.54	2.61	1.15

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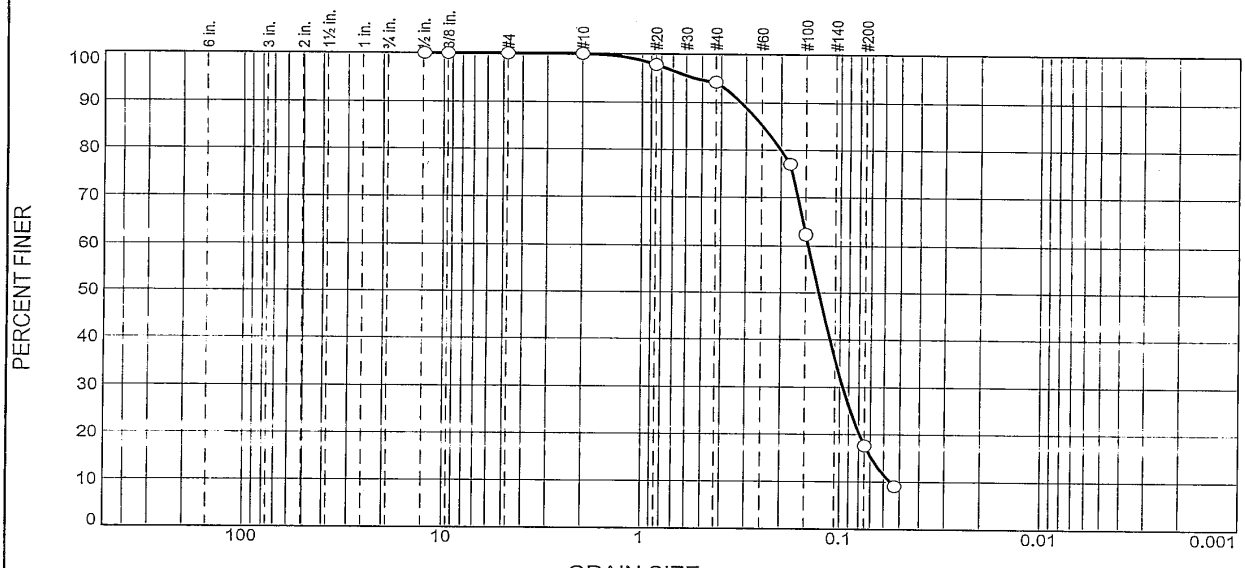
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	5.7	76.6	17.7	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	97.8		
0.425 mm	94.3		
0.180 mm	77.1		
0.150 mm	62.4		
0.075 mm	17.7		
0.053 mm	9.0		

* (no specification provided)

Material Description

Sample appears to be mostly clay with some fine sand
Moisture content as received = 40.3%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.3173 D_{85}= 0.2465 D_{60}= 0.1457
D_{50}= 0.1287 D_{30}= 0.0965 D_{15}= 0.0692
D_{10}= 0.0557 C_u= 2.61 C_c= 1.15

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 8/22/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-01 **Date Sampled:** 8/15/2011
Sample Number: DS-11-16

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-02 **Sample Number:** DS-11-17
Material Description: Sample appears to be medium to fine sand
Moisture content as received = 44.3%
Sample Date: 8/15/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 8/22/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.62	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	113.89	112.55	98.0
		0.425 mm	118.64	112.55	88.7
		0.180 mm	125.65	112.55	68.7
		0.150 mm	120.32	112.55	56.9
		0.075 mm	130.19	112.55	30.0
		0.053 mm	116.18	112.55	24.5

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	11.3	58.7	70.0			30.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0750	0.1334	0.1574	0.2335	0.2967	0.4747	0.6707

Fineness Modulus
0.66

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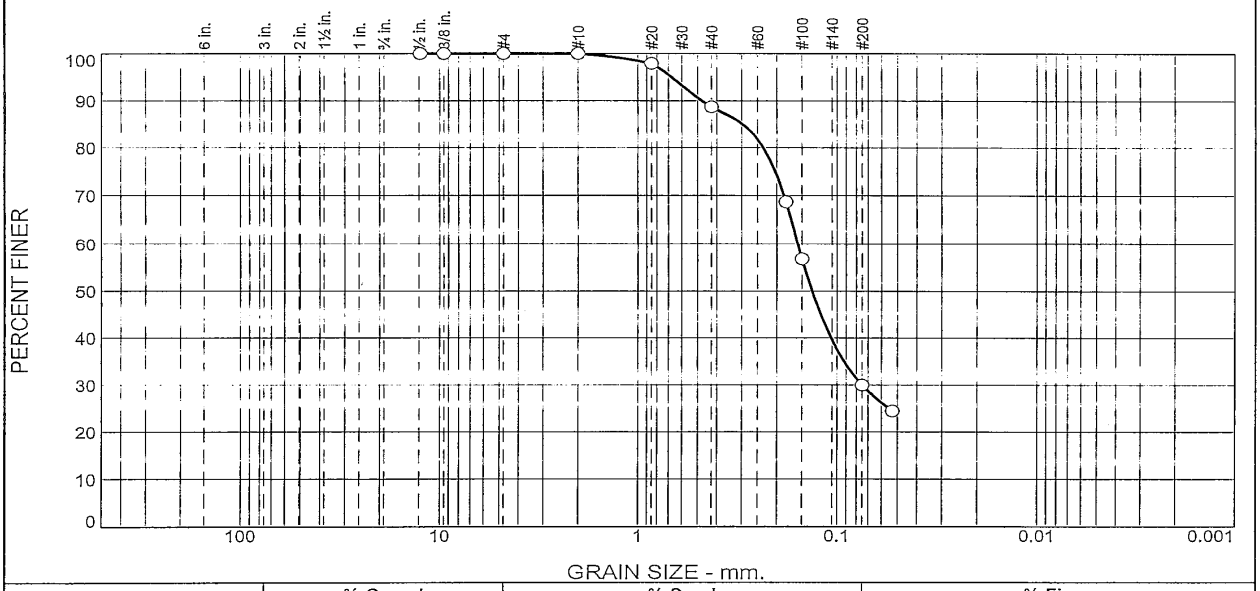
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	11.3	58.7	30.0	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	98.0		
0.425 mm	88.7		
0.180 mm	68.7		
0.150 mm	56.9		
0.075 mm	30.0		
0.053 mm	24.5		

* (no specification provided)

Material Description

Sample appears to be medium to fine sand
Moisture content as received = 44.3%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.4747 D_{85}= 0.2967 D_{60}= 0.1574
D_{50}= 0.1334 D_{30}= 0.0750 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 8/22/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-02 **Date Sampled:** 8/15/2011
Sample Number: DS-11-17

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-03 **Sample Number:** DS-11-18
Material Description: Sample appears to be mostly clay
Moisture content as received = 38.5%
Sample Date: 8/15/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 8/22/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.88	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	112.86	112.55	99.5
		0.425 mm	116.91	112.55	92.9
		0.180 mm	124.56	112.55	74.7
		0.150 mm	119.80	112.55	63.7
		0.075 mm	134.16	112.55	30.9
		0.053 mm	116.94	112.55	24.2

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	7.1	62.0	69.1			30.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0725	0.1186	0.1413	0.2014	0.2332	0.3040	0.5270

Fineness Modulus
0.50

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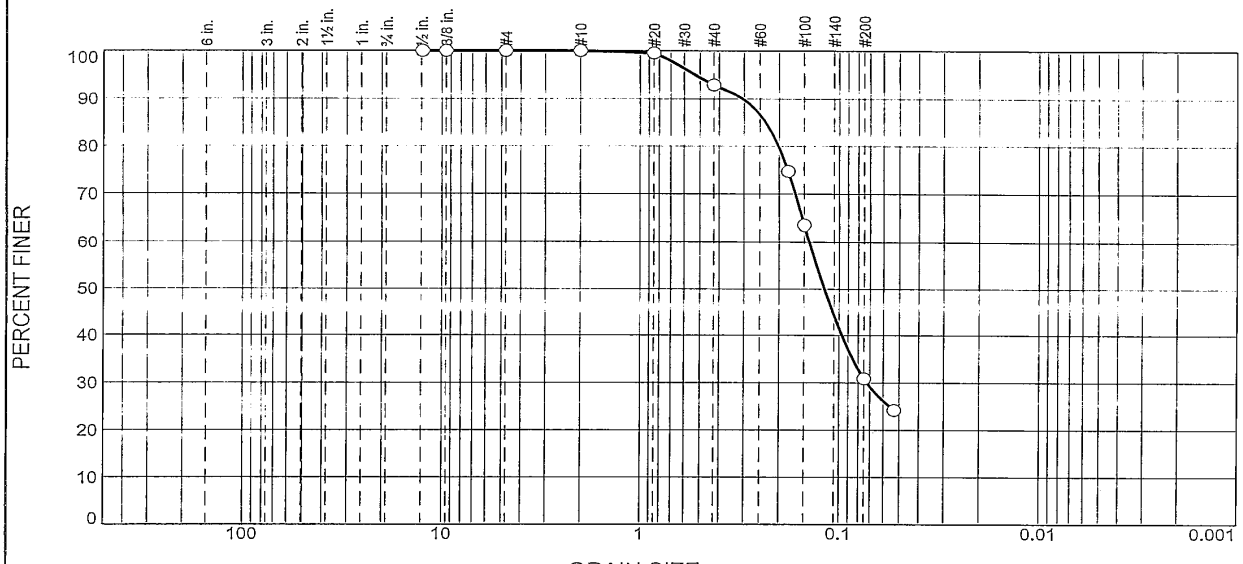
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	7.1	62.0	30.9	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	99.5		
0.425 mm	92.9		
0.180 mm	74.7		
0.150 mm	63.7		
0.075 mm	30.9		
0.053 mm	24.2		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 38.5%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.3040 D_{85}= 0.2332 D_{60}= 0.1413
D_{50}= 0.1186 D_{30}= 0.0725 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 8/22/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-03 **Date Sampled:** 8/15/2011
Sample Number: DS-11-18

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-04 **Sample Number:** DS-11-19
Material Description: Sample appears to be medium to coarse sand
Moisture content as received = 17.7%
Sample Date: 8/15/2011
Date Received: 8/17/2011
USCS Classification: SP
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 8/22/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
115.62	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	114.93	112.55	97.9
		0.425 mm	128.91	112.55	83.8
		0.180 mm	188.54	112.55	18.1
		0.150 mm	125.28	112.55	7.1
		0.075 mm	119.99	112.55	0.6
		0.053 mm	112.75	112.55	0.4

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	16.2	83.2	99.4			0.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1588	0.1722	0.1849	0.2104	0.2668	0.3007	0.3969	0.4355	0.4923	0.6034

Fineness Modulus	C_u	C_c
1.39	1.89	0.93

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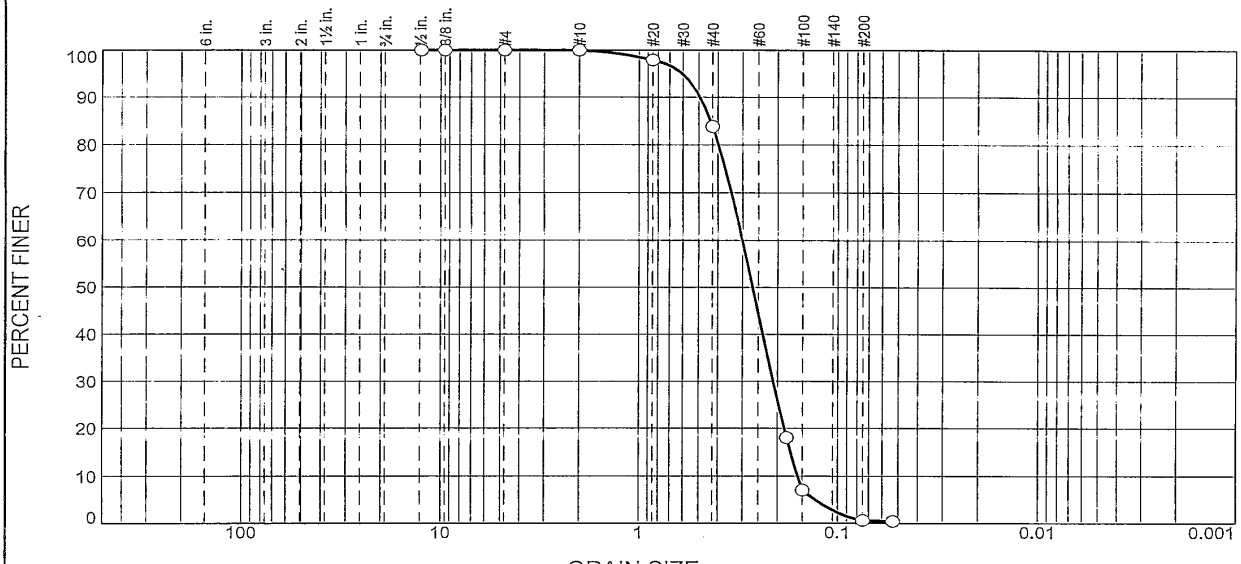
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	16.2	83.2	0.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	97.9		
0.425 mm	83.8		
0.180 mm	18.1		
0.150 mm	7.1		
0.075 mm	0.6		
0.053 mm	0.4		

* (no specification provided)

Material Description

Sample appears to be medium to coarse sand
Moisture content as received = 17.7%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= SP AASHTO (M 145)=

Coefficients

D_{90}= 0.4923 D_{85}= 0.4355 D_{60}= 0.3007
D_{50}= 0.2668 D_{30}= 0.2104 D_{15}= 0.1722
D_{10}= 0.1588 C_u= 1.89 C_c= 0.93

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 8/22/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-04 **Date Sampled:** 8/15/2011
Sample Number: DS-11-19

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/8/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-05 **Sample Number:** DS-11-20
Material Description: Sample appears to be mostly medium to fine sand
Moisture content as received = 21.4%
Sample Date: 8/15/2011
Date Received: 8/17/2011
USCS Classification: SP
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 8/22/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
115.52	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	113.04	112.55	99.6
		0.425 mm	114.90	112.55	97.5
		0.180 mm	169.50	112.55	48.2
		0.150 mm	150.13	112.55	15.7
		0.075 mm	129.00	112.55	1.5
		0.053 mm	113.28	112.55	0.8

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	2.5	96.0	98.5			1.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1236	0.1468	0.1541	0.1630	0.1819	0.1939	0.2310	0.2465	0.2686	0.3102

Fineness Modulus	C_u	C_c
0.92	1.57	1.11

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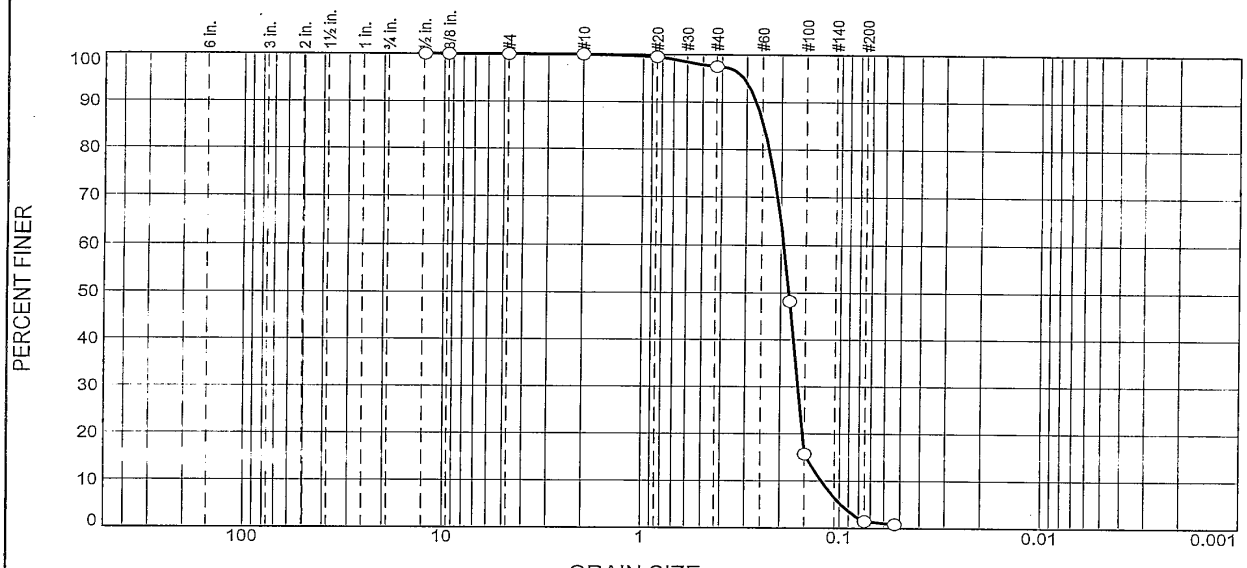
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.5	96.0	1.5	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	99.6		
0.425 mm	97.5		
0.180 mm	48.2		
0.150 mm	15.7		
0.075 mm	1.5		
0.053 mm	0.8		

* (no specification provided)

Material Description

Sample appears to be mostly medium to fine sand
Moisture content as received = 21.4%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= SP AASHTO (M 145)=

Coefficients

D_{90}= 0.2686 D_{85}= 0.2465 D_{60}= 0.1939
D_{50}= 0.1819 D_{30}= 0.1630 D_{15}= 0.1468
D_{10}= 0.1236 C_u= 1.57 C_c= 1.11

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 8/22/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-05 **Date Sampled:** 8/15/2011
Sample Number: DS-11-20

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-07 **Sample Number:** DS-11-10
Material Description: Sample appears to be mostly clay
Moisture content as received = 46.3%
Sample Date: 8/15/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.48	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	125.75	114.32	82.5
		0.425 mm	121.23	114.32	72.0
		0.180 mm	123.17	114.32	58.5
		0.150 mm	117.29	114.32	53.9
		0.075 mm	127.21	114.32	34.3
		0.053 mm	122.39	114.32	21.9

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	28.0	37.7	65.7			34.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0662	0.1289	0.1927	0.7440	0.9526	1.1808	1.4752

Fineness Modulus
1.12

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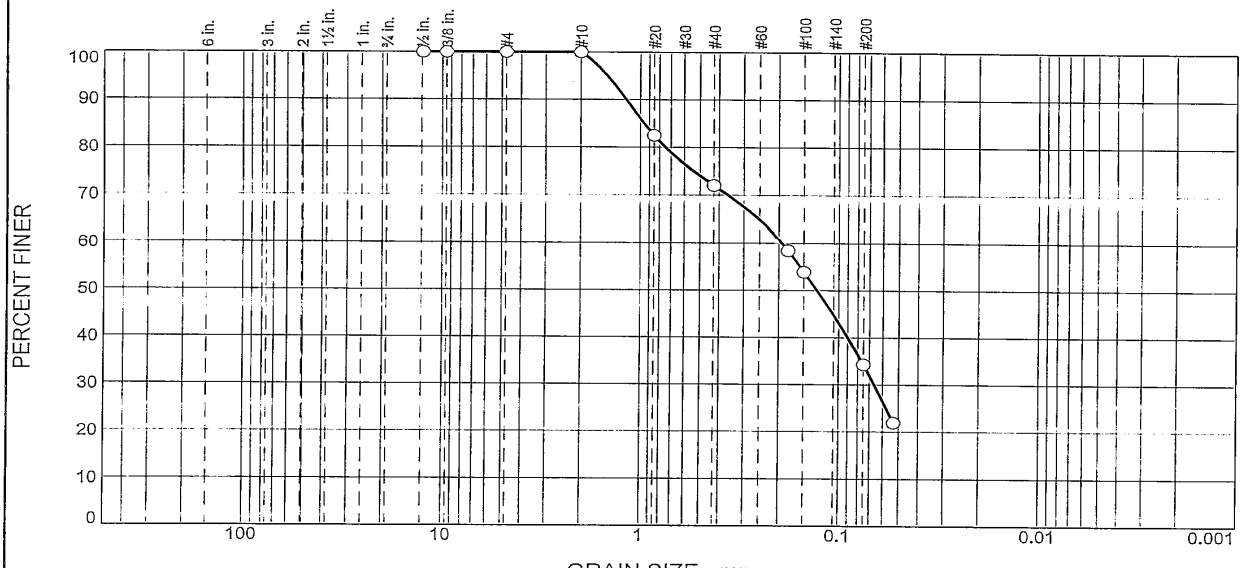
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	28.0	37.7	34.3	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	82.5		
0.425 mm	72.0		
0.180 mm	58.5		
0.150 mm	53.9		
0.075 mm	34.3		
0.053 mm	21.9		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 46.3%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.1808 D_{85}= 0.9526 D_{60}= 0.1927
D_{50}= 0.1289 D_{30}= 0.0662 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-07 **Date Sampled:** 8/15/2011
Sample Number: DS-11-10

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-08 **Sample Number:** DS-11-09
Material Description: Sample appears to be mostly clay
Moisture content as received = 53.1%
Sample Date: 8/15/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.44	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	123.18	114.32	86.5
		0.425 mm	122.91	114.32	73.3
		0.180 mm	124.88	114.32	57.2
		0.150 mm	130.11	114.32	33.1
		0.075 mm	119.06	114.32	25.8
		0.053 mm	120.01	114.32	17.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	26.7	47.5	74.2			25.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0586	0.0964	0.1705	0.2091	0.6047	0.7871	0.9794	1.2620

Fineness Modulus
1.26

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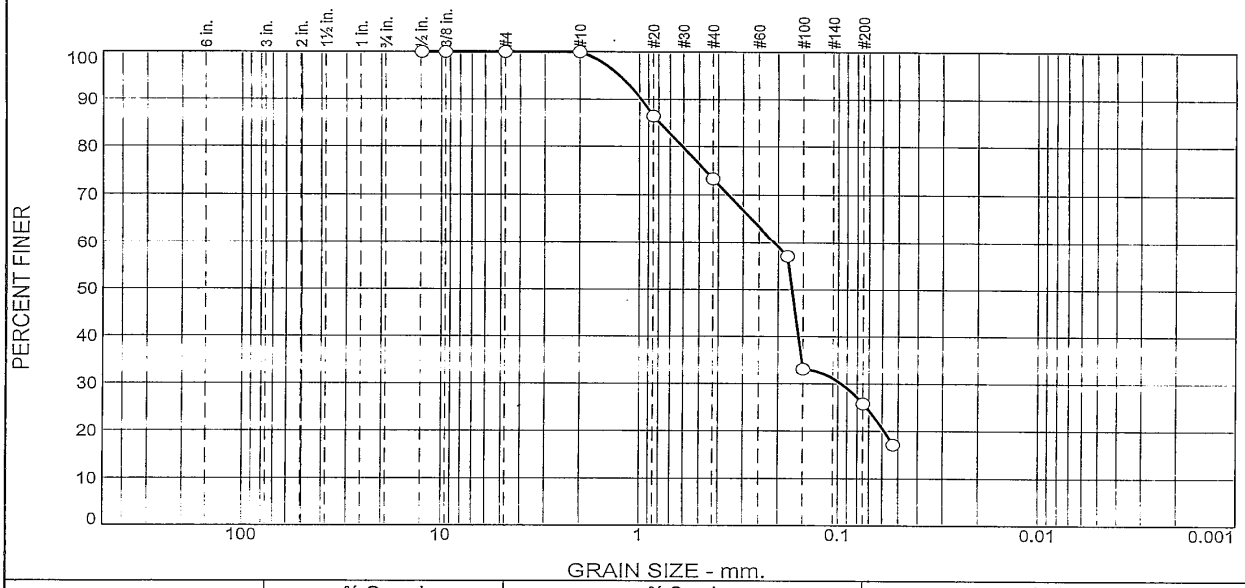
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	26.7	47.5	25.8	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	86.5		
0.425 mm	73.3		
0.180 mm	57.2		
0.150 mm	33.1		
0.075 mm	25.8		
0.053 mm	17.1		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 53.1%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.9794 D_{85}= 0.7871 D_{60}= 0.2091
D_{50}= 0.1705 D_{30}= 0.0964 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-08 **Date Sampled:** 8/15/2011
Sample Number: DS-11-09

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-09 **Sample Number:** DS-11-08
Material Description: Sample appears to be clay
Moisture content as received = 59.4%
Sample Date: 8/15/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.82	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	115.72	114.32	97.9
		0.425 mm	118.02	114.32	92.3
		0.180 mm	134.61	114.32	61.4
		0.150 mm	122.64	114.32	48.8
		0.075 mm	134.43	114.32	18.2
		0.053 mm	120.62	114.32	8.7

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	7.7	74.1	81.8			18.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0557	0.0670	0.0795	0.1053	0.1527	0.1762	0.2587	0.3009	0.3718	0.5344

Fineness Modulus	C_u	C_c
0.71	3.16	1.13

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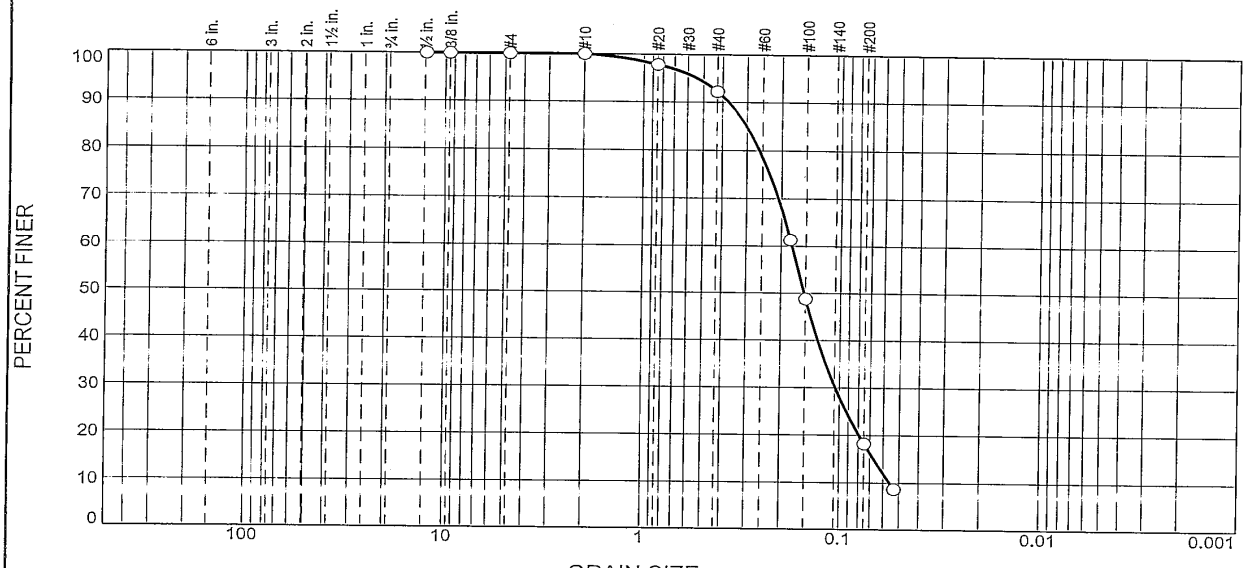
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	7.7	74.1	18.2	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	97.9		
0.425 mm	92.3		
0.180 mm	61.4		
0.150 mm	48.8		
0.075 mm	18.2		
0.053 mm	8.7		

* (no specification provided)

Material Description

Sample appears to be clay
Moisture content as received = 59.4%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.3718 D_{85}= 0.3009 D_{60}= 0.1762
D_{50}= 0.1527 D_{30}= 0.1053 D_{15}= 0.0670
D_{10}= 0.0557 C_u= 3.16 C_c= 1.13

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-09 **Date Sampled:** 8/15/2011
Sample Number: DS-11-08

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-10 **Sample Number:** DS-11-06
Material Description: Sample appears to be mostly clay
Moisture content as received = 39.2%
Sample Date: 8/15/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.83	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	128.94	114.32	77.8
		0.425 mm	123.62	114.32	63.7
		0.180 mm	134.99	114.32	32.3
		0.150 mm	118.28	114.32	26.2
		0.075 mm	127.58	114.32	6.1
		0.053 mm	116.10	114.32	3.4

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	36.3	57.6	93.9			6.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0903	0.1072	0.1247	0.1683	0.2856	0.3760	0.9282	1.1073	1.3098	1.5684

Fineness Modulus	C_u	C_c
1.64	4.17	0.83

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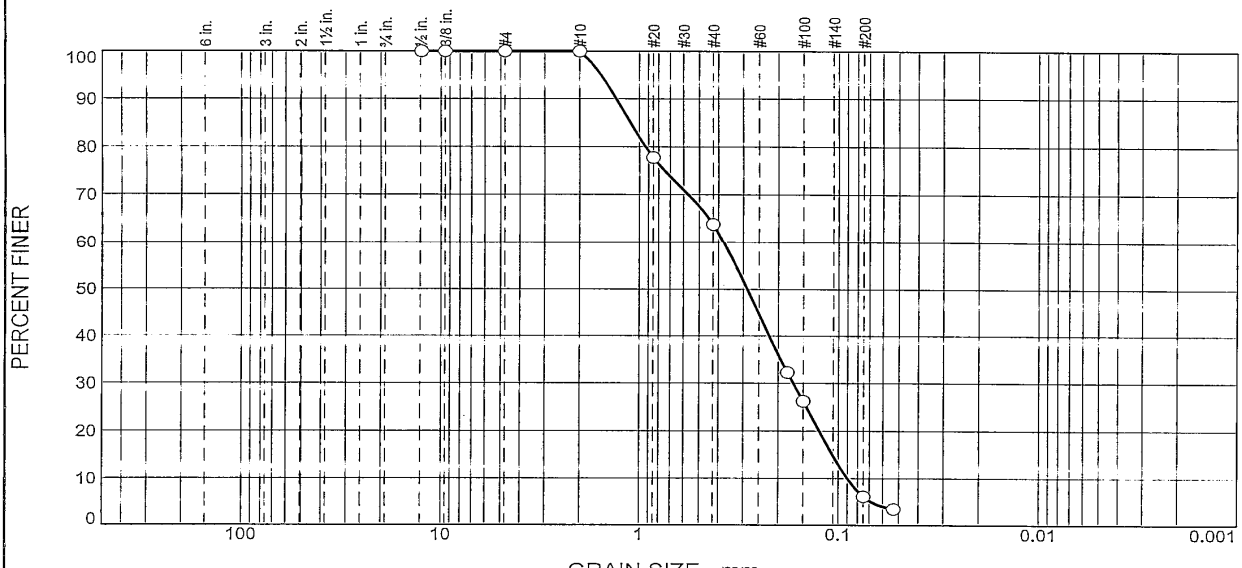
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	36.3	57.6	6.1	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	77.8		
0.425 mm	63.7		
0.180 mm	32.3		
0.150 mm	26.2		
0.075 mm	6.1		
0.053 mm	3.4		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 39.2%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.3098 D_{85}= 1.1073 D_{60}= 0.3760
D_{50}= 0.2856 D_{30}= 0.1683 D_{15}= 0.1072
D_{10}= 0.0903 C_u= 4.17 C_c= 0.83

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-10 **Date Sampled:** 8/15/2011
Sample Number: DS-11-06

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Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-11 **Sample Number:** DS-11-07
Material Description: Sample appears to be clay
Moisture content as received = 37.0%
Sample Date: 8/16/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.63	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	122.96	114.32	86.8
		0.425 mm	127.63	114.32	66.6
		0.180 mm	119.61	114.32	58.5
		0.150 mm	118.33	114.32	52.4
		0.075 mm	124.23	114.32	37.3
		0.053 mm	131.28	114.32	11.4

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	33.4	29.3	62.7			37.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0553	0.0586	0.0667	0.1354	0.1901	0.6872	0.8001	0.9558	1.2182

Fineness Modulus
1.13

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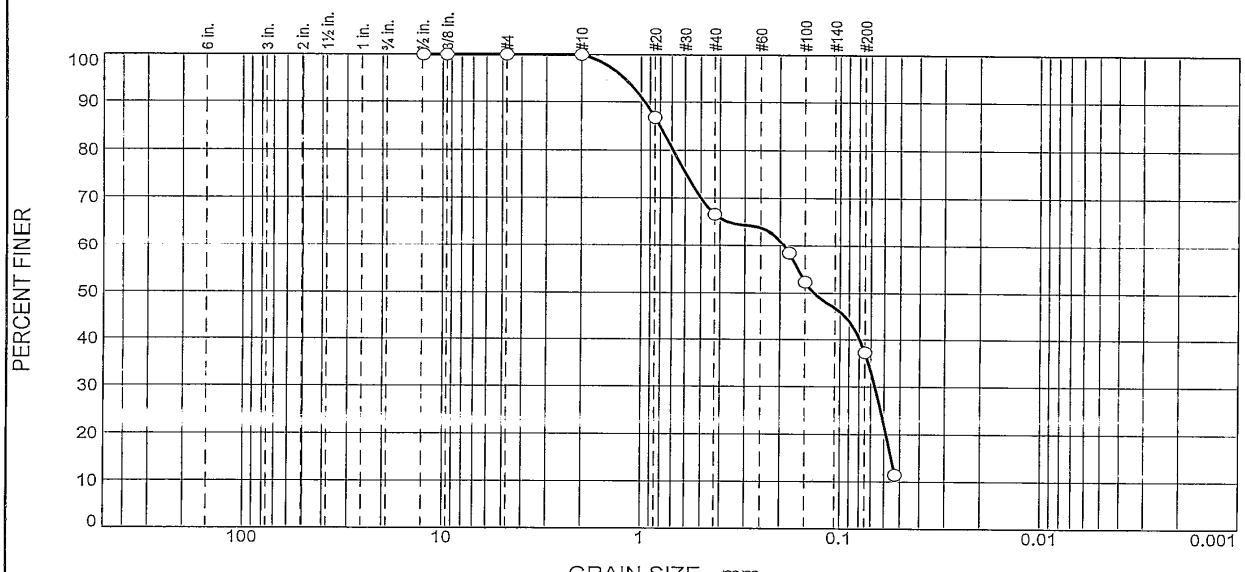
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	33.4	29.3	37.3	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	86.8		
0.425 mm	66.6		
0.180 mm	58.5		
0.150 mm	52.4		
0.075 mm	37.3		
0.053 mm	11.4		

* (no specification provided)

Material Description

Sample appears to be clay
Moisture content as received = 37.0%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.9558 D_{85}= 0.8001 D_{60}= 0.1901
D_{50}= 0.1354 D_{30}= 0.0667 D_{15}= 0.0553
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-11 **Date Sampled:** 8/16/2011
Sample Number: DS-11-07

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/8/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-13 **Sample Number:** DS-11-11
Material Description: Sample appears to be mostly fine to medium sand
Moisture content as received = 27.5%
Sample Date: 8/16/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
115.65	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	119.64	114.32	95.4
		0.425 mm	115.91	114.32	94.0
		0.180 mm	159.91	114.32	54.6
		0.150 mm	150.86	114.32	23.0
		0.075 mm	124.96	114.32	13.8
		0.053 mm	116.81	114.32	11.7

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	6.0	80.2	86.2			13.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0851	0.1254	0.1568	0.1752	0.1949	0.2794	0.3148	0.3640	0.7510

Fineness Modulus
1.02

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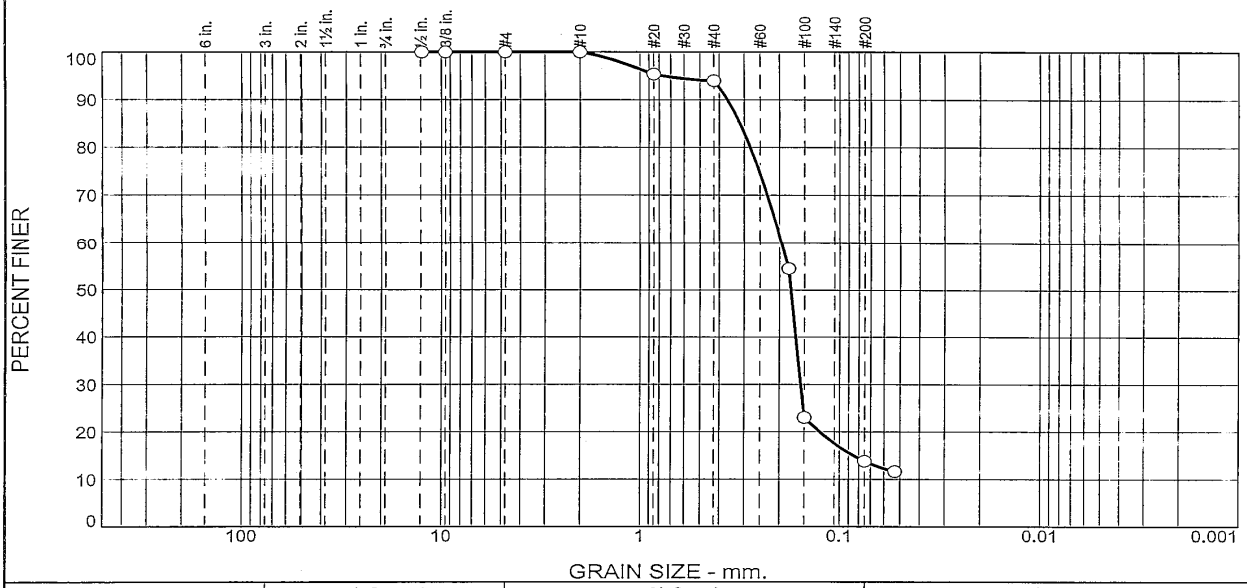
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	6.0	80.2	13.8	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	95.4		
0.425 mm	94.0		
0.180 mm	54.6		
0.150 mm	23.0		
0.075 mm	13.8		
0.053 mm	11.7		

* (no specification provided)

Material Description

Sample appears to be mostly fine to medium sand
Moisture content as received = 27.5%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.3640 D_{85}= 0.3148 D_{60}= 0.1949
D_{50}= 0.1752 D_{30}= 0.1568 D_{15}= 0.0851
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-13 **Date Sampled:** 8/16/2011
Sample Number: DS-11-11

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-14 **Sample Number:** DS-11-12
Material Description: Sample appears to be mostly medium sand
Moisture content as received = 36.5%
Sample Date: 8/16/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
115.81	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	118.64	114.32	96.3
		0.425 mm	116.41	114.32	94.5
		0.180 mm	148.80	114.32	64.7
		0.150 mm	166.17	114.32	19.9
		0.075 mm	121.88	114.32	13.4
		0.053 mm	115.10	114.32	12.7

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	5.5	81.1	86.6			13.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0969	0.1501	0.1568	0.1696	0.1765	0.2521	0.2901	0.3445	0.5479

Fineness Modulus
1.01

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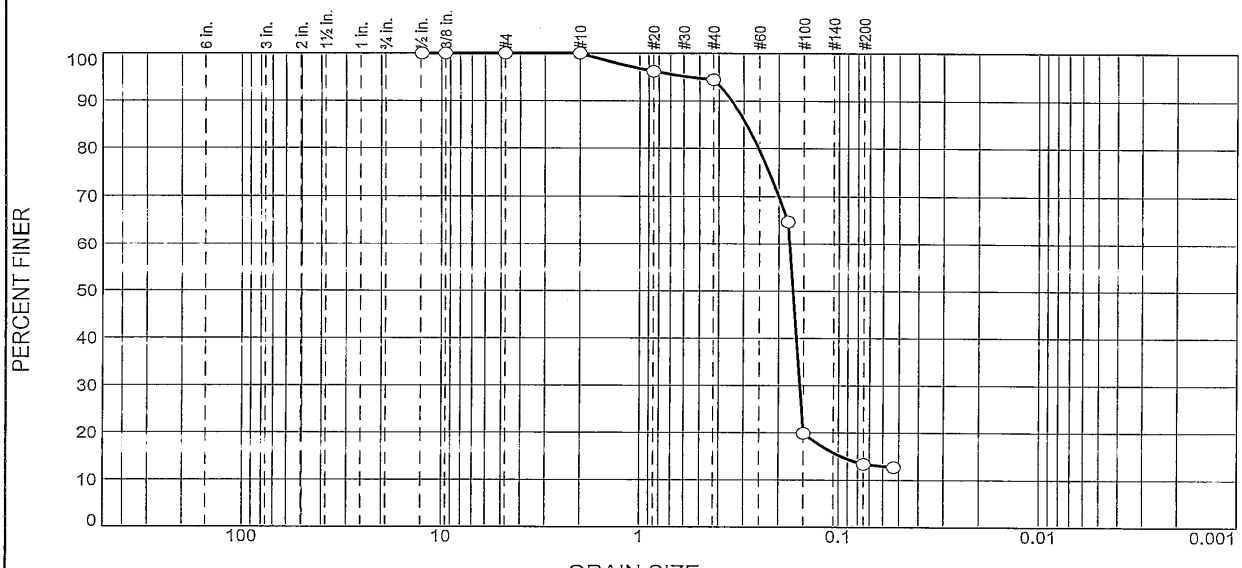
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	5.5	81.1	13.4	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	96.3		
0.425 mm	94.5		
0.180 mm	64.7		
0.150 mm	19.9		
0.075 mm	13.4		
0.053 mm	12.7		

* (no specification provided)

Material Description

Sample appears to be mostly medium sand
Moisture content as received = 36.5%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.3445 D_{85}= 0.2901 D_{60}= 0.1765
D_{50}= 0.1696 D_{30}= 0.1568 D_{15}= 0.0969
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-14 **Date Sampled:** 8/16/2011
Sample Number: DS-11-12

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-17 **Sample Number:** DS-11-13
Material Description: Sample appears to be medium sand
Moisture content as received = 38.8%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
115.71	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	122.99	114.32	92.5
		0.425 mm	116.64	114.32	90.5
		0.180 mm	151.09	114.32	58.7
		0.150 mm	159.89	114.32	19.3
		0.075 mm	129.11	114.32	6.6
		0.053 mm	117.54	114.32	3.8

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	9.5	83.9	93.4			6.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0960	0.1247	0.1505	0.1581	0.1728	0.1842	0.2870	0.3356	0.4137	1.0368

Fineness Modulus	C_u	C_c
1.12	1.92	1.41

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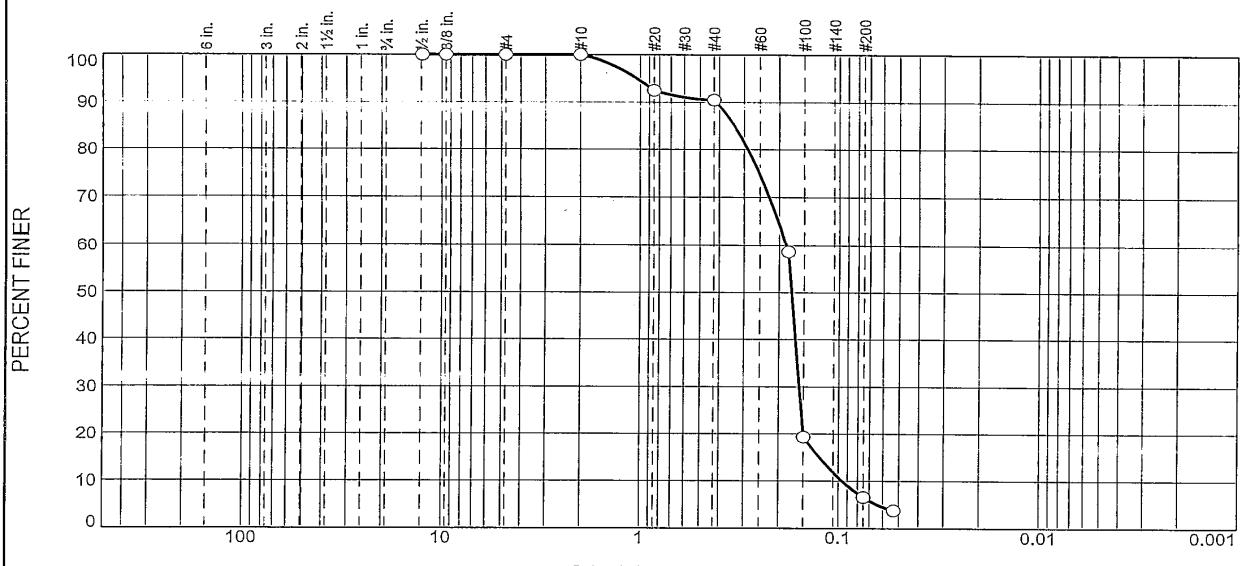
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	9.5	83.9	6.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	92.5		
0.425 mm	90.5		
0.180 mm	58.7		
0.150 mm	19.3		
0.075 mm	6.6		
0.053 mm	3.8		

* (no specification provided)

Material Description

Sample appears to be medium sand
Moisture content as received = 38.8%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.4137 D_{85}= 0.3356 D_{60}= 0.1842
D_{50}= 0.1728 D_{30}= 0.1581 D_{15}= 0.1247
D_{10}= 0.0960 C_u= 1.92 C_c= 1.41

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-17 **Date Sampled:** 8/17/2011
Sample Number: DS-11-13

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-18 **Sample Number:** DS-11-14
Material Description: Sample appears to be mixture of sand and silt
Moisture content as received = 29.5%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.54	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	118.18	114.32	94.1
		0.425 mm	118.64	114.32	87.5
		0.180 mm	134.06	114.32	57.4
		0.150 mm	122.93	114.32	44.3
		0.075 mm	133.38	114.32	15.2
		0.053 mm	118.67	114.32	8.5

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	12.5	72.3	84.8			15.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0576	0.0744	0.0901	0.1171	0.1624	0.1872	0.2922	0.3628	0.5227	0.9493

Fineness Modulus	C_u	C_c
0.87	3.25	1.27

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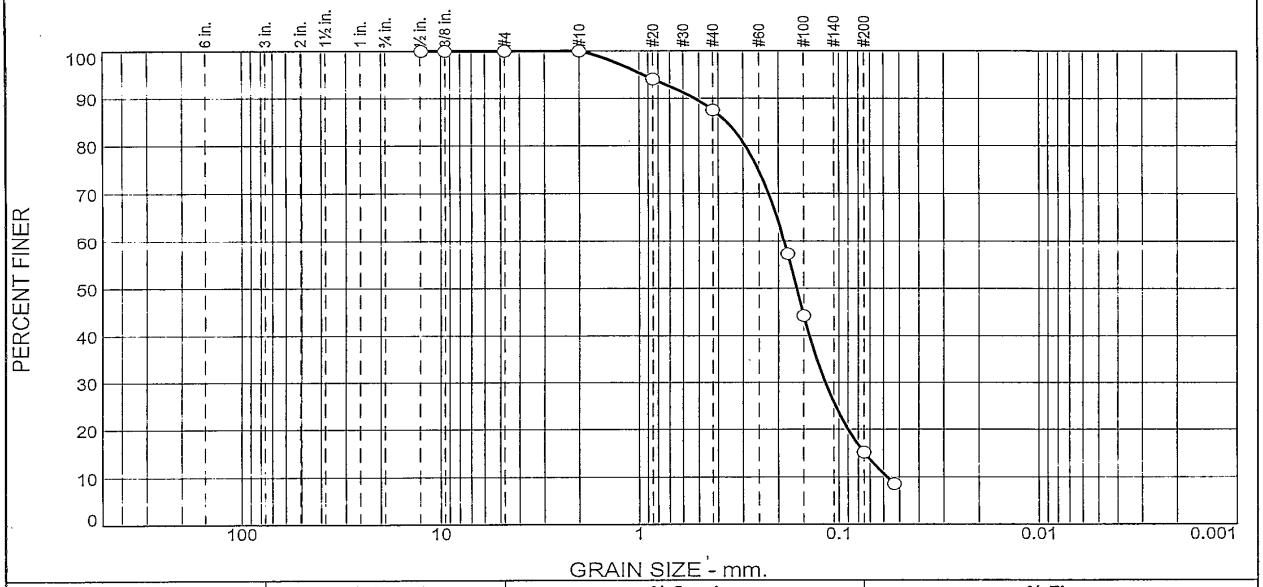
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	12.5	72.3	15.2	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	94.1		
0.425 mm	87.5		
0.180 mm	57.4		
0.150 mm	44.3		
0.075 mm	15.2		
0.053 mm	8.5		

* (no specification provided)

Material Description

Sample appears to be mixture of sand and silt
Moisture content as received = 29.5%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.5227 D_{85}= 0.3628 D_{60}= 0.1872
D_{50}= 0.1624 D_{30}= 0.1171 D_{15}= 0.0744
D_{10}= 0.0576 C_u= 3.25 C_c= 1.27

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-18 **Date Sampled:** 8/17/2011
Sample Number: DS-11-14

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/8/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-19 **Sample Number:** DS-11-15
Material Description: Sample appears to mixture of fine clay and sand
Moisture content as received = 27.2%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.81	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	119.11	114.32	92.7
		0.425 mm	122.90	114.32	79.7
		0.180 mm	130.81	114.32	54.6
		0.150 mm	129.16	114.32	32.1
		0.075 mm	119.54	114.32	24.1
		0.053 mm	120.89	114.32	14.2

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	20.3	55.6	75.9			24.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0541	0.0615	0.1251	0.1734	0.2110	0.4495	0.6077	0.7508	0.9664

Fineness Modulus
1.15

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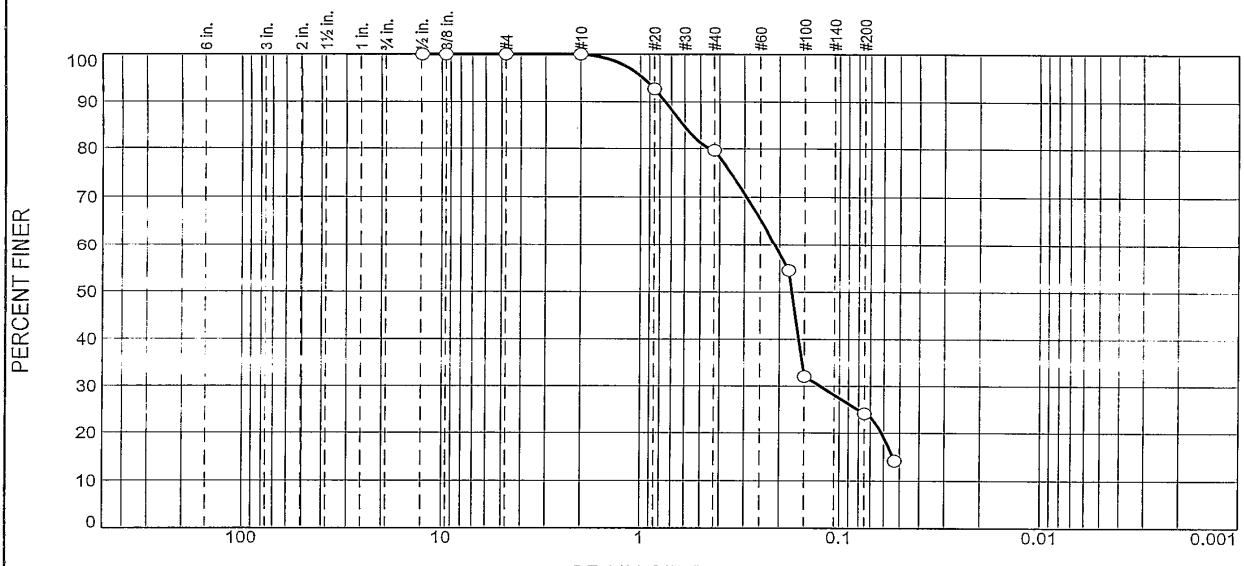
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	20.3	55.6	24.1	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	92.7		
0.425 mm	79.7		
0.180 mm	54.6		
0.150 mm	32.1		
0.075 mm	24.1		
0.053 mm	14.2		

* (no specification provided)

Material Description

Sample appears to mixture of fine clay and sand
Moisture content as received = 27.2%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.7508 D_{85}= 0.6077 D_{60}= 0.2110
D_{50}= 0.1734 D_{30}= 0.1251 D_{15}= 0.0541
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-19 **Date Sampled:** 8/17/2011
Sample Number: DS-11-15

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-22 **Sample Number:** DS-11-41
Material Description: Sample appears be mostly clay with some silt
Moisture content as received = 63.9%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.78	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	127.58	114.32	79.8
		0.425 mm	125.16	114.32	63.4
		0.180 mm	125.76	114.32	46.0
		0.150 mm	118.43	114.32	39.7
		0.075 mm	124.18	114.32	24.7
		0.053 mm	119.18	114.32	17.3

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	36.6	38.7	75.3			24.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0597	0.1002	0.2065	0.3481	0.8548	1.0200	1.2222	1.4971

Fineness Modulus
1.43

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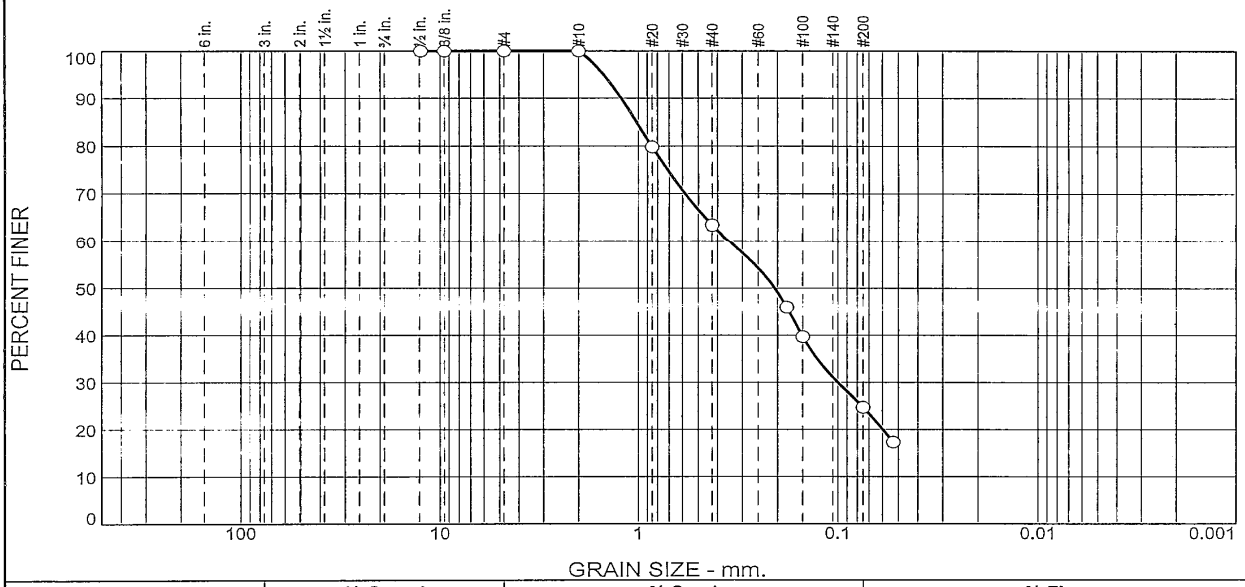
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	36.6	38.7	24.7	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	79.8		
0.425 mm	63.4		
0.180 mm	46.0		
0.150 mm	39.7		
0.075 mm	24.7		
0.053 mm	17.3		

* (no specification provided)

Material Description

Sample appears be mostly clay with some silt
Moisture content as received = 63.9%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.2222 D_{85}= 1.0200 D_{60}= 0.3481
D_{50}= 0.2065 D_{30}= 0.1002 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-22 **Date Sampled:** 8/17/2011
Sample Number: DS-11-41

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-23 **Sample Number:** DS-11-42
Material Description: Sample appears to be mostly clay
Moisture content as received = 65.4%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/1/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.96	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	119.81	114.32	91.7
		0.425 mm	124.32	114.32	76.5
		0.180 mm	131.18	114.32	51.0
		0.150 mm	123.19	114.32	37.5
		0.075 mm	120.66	114.32	27.9
		0.053 mm	117.10	114.32	23.7

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	23.5	48.6	72.1			27.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0882	0.1776	0.2093	0.5081	0.6305	0.7833	1.0368

Fineness Modulus
1.11

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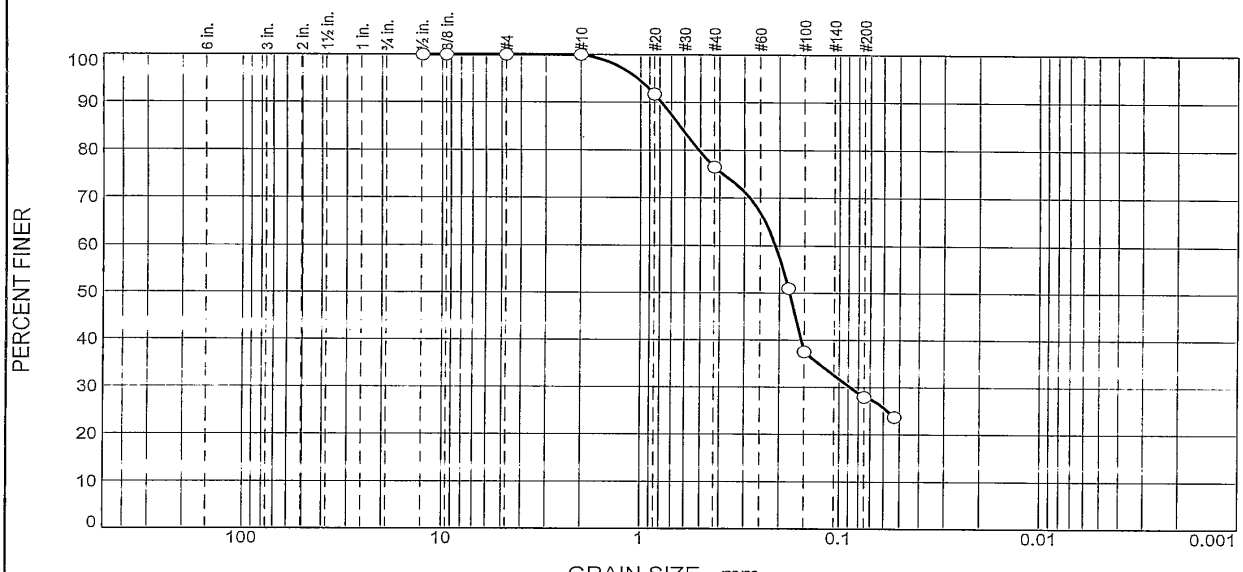
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	23.5	48.6	27.9	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	91.7		
0.425 mm	76.5		
0.180 mm	51.0		
0.150 mm	37.5		
0.075 mm	27.9		
0.053 mm	23.7		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 65.4%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.7833 D_{85}= 0.6305 D_{60}= 0.2093
D_{50}= 0.1776 D_{30}= 0.0882 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-23 **Date Sampled:** 8/17/2011
Sample Number: DS-11-42

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-24 **Sample Number:** DS-11-43
Material Description: Sample appears to be mostly clay and silt
Moisture content as received = 61.4%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.61	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	122.16	114.32	88.1
		0.425 mm	123.91	114.32	73.4
		0.180 mm	127.88	114.32	52.8
		0.150 mm	129.66	114.32	29.4
		0.075 mm	120.18	114.32	20.5
		0.053 mm	119.11	114.32	13.2

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	26.6	52.9	79.5			20.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0574	0.0732	0.1508	0.1760	0.2400	0.5741	0.7300	0.9198	1.1883

Fineness Modulus
1.29

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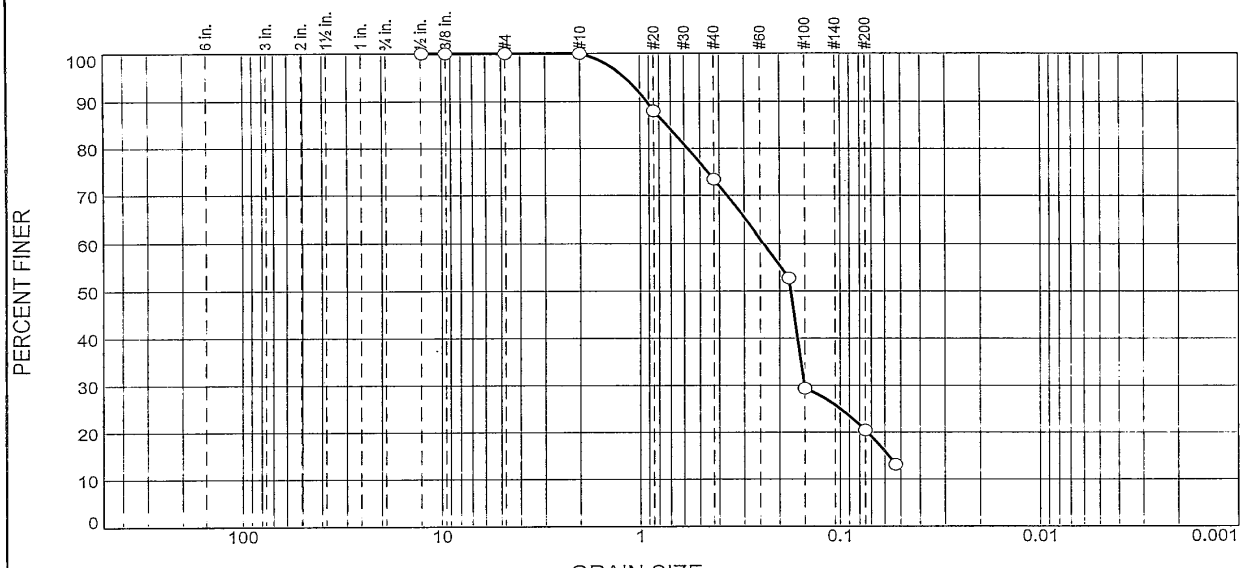
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	26.6	52.9	20.5	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	88.1		
0.425 mm	73.4		
0.180 mm	52.8		
0.150 mm	29.4		
0.075 mm	20.5		
0.053 mm	13.2		

* (no specification provided)

Material Description

Sample appears to be mostly clay and silt
Moisture content as received = 61.4%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.9198 D_{85}= 0.7300 D_{60}= 0.2400
D_{50}= 0.1760 D_{30}= 0.1508 D_{15}= 0.0574
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-24 **Date Sampled:** 8/17/2011
Sample Number: DS-11-43

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-25 **Sample Number:** DS-11-44
Material Description: Sample appears to be mostly clay
Moisture content as received = 66.2%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.16	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	126.16	114.32	81.8
		0.425 mm	121.44	114.32	70.9
		0.180 mm	130.81	114.32	45.6
		0.150 mm	124.21	114.32	30.4
		0.075 mm	119.63	114.32	22.3
		0.053 mm	117.71	114.32	17.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	29.1	48.6	77.7			22.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0612	0.1437	0.1908	0.2283	0.7814	0.9728	1.1922	1.4808

Fineness Modulus
1.37

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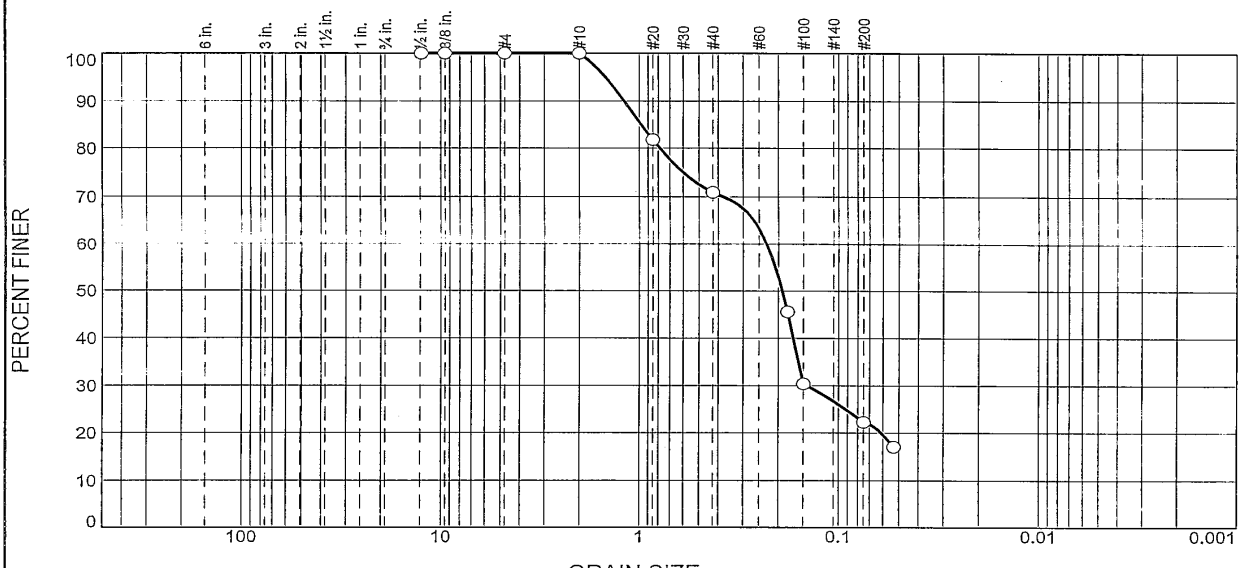
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	29.1	48.6	22.3	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	81.8		
0.425 mm	70.9		
0.180 mm	45.6		
0.150 mm	30.4		
0.075 mm	22.3		
0.053 mm	17.1		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 66.2%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.1922 D_{85}= 0.9728 D_{60}= 0.2283
D_{50}= 0.1908 D_{30}= 0.1437 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-25 **Date Sampled:** 8/17/2011
Sample Number: DS-11-44

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-26 **Sample Number:** DS-11-45
Material Description: Sample appears to be mostly clay
Moisture content as received = 63.8%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.39	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	131.58	114.32	73.6
		0.425 mm	124.04	114.32	58.7
		0.180 mm	123.49	114.32	44.7
		0.150 mm	117.34	114.32	40.1
		0.075 mm	125.24	114.32	23.4
		0.053 mm	118.19	114.32	17.5

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	41.3	35.3	76.6			23.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0620	0.1012	0.2343	0.4610	1.0305	1.1864	1.3702	1.6082

Fineness Modulus
1.56

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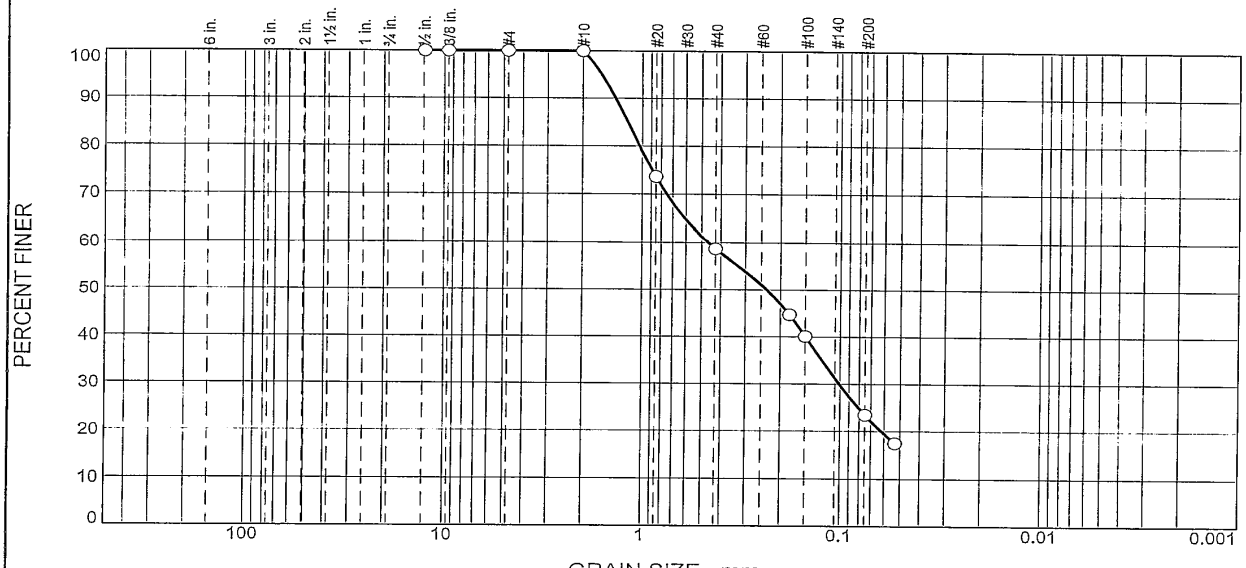
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	41.3	35.3	23.4	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	73.6		
0.425 mm	58.7		
0.180 mm	44.7		
0.150 mm	40.1		
0.075 mm	23.4		
0.053 mm	17.5		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 63.8%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.3702 D_{85}= 1.1864 D_{60}= 0.4610
D_{50}= 0.2343 D_{30}= 0.1012 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-26 **Date Sampled:** 8/17/2011
Sample Number: DS-11-45

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-28 **Sample Number:** DS-11-46
Material Description: Sample appears to be mostly clay with some silt
Moisture content as received = 53.9%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.81	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	128.61	114.32	78.3
		0.425 mm	125.51	114.32	61.3
		0.180 mm	124.99	114.32	45.1
		0.150 mm	121.81	114.32	33.7
		0.075 mm	118.19	114.32	27.8
		0.053 mm	119.10	114.32	20.5

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	38.7	33.5	72.2			27.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0868	0.1979	0.3554	0.8972	1.0522	1.2456	1.5118

Fineness Modulus
1.51

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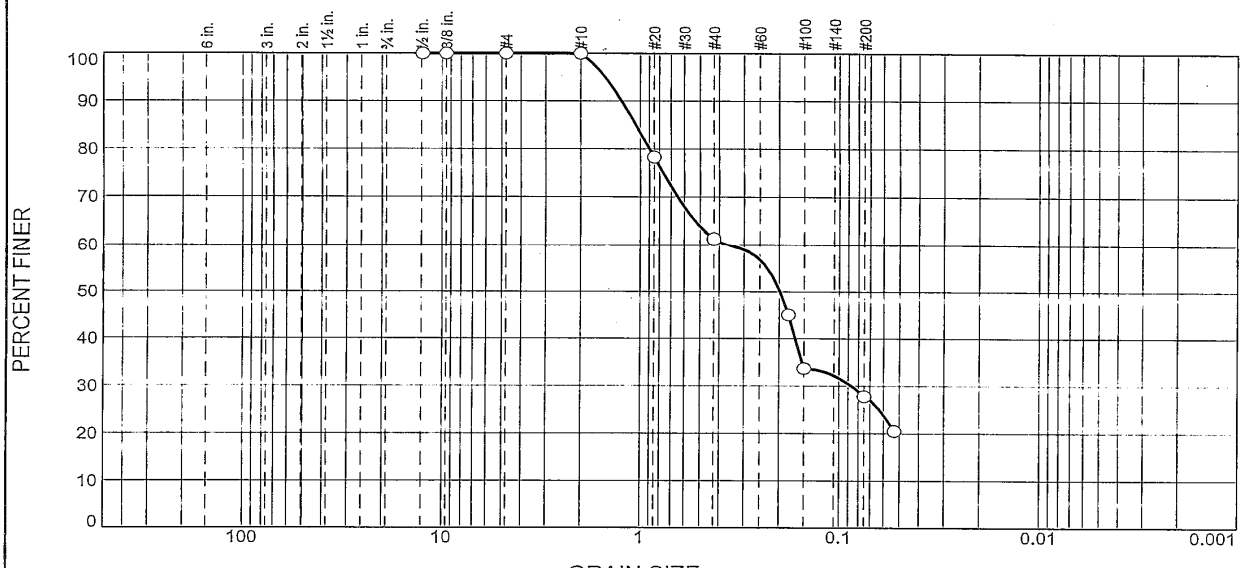
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	38.7	33.5	27.8	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	78.3		
0.425 mm	61.3		
0.180 mm	45.1		
0.150 mm	33.7		
0.075 mm	27.8		
0.053 mm	20.5		

* (no specification provided)

Material Description

Sample appears to be mostly clay with some silt
Moisture content as received = 53.9%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.2456 D_{85}= 1.0522 D_{60}= 0.3554
D_{50}= 0.1979 D_{30}= 0.0868 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-28 **Date Sampled:** 8/17/2011
Sample Number: DS-11-46

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-29 **Sample Number:** DS-11-47
Material Description: Sample appears to be mostly clay
Moisture content as received = 62.1%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.56	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	129.96	114.32	76.1
		0.425 mm	126.88	114.32	57.0
		0.180 mm	123.44	114.32	43.1
		0.150 mm	124.19	114.32	28.0
		0.075 mm	119.66	114.32	19.9
		0.053 mm	118.35	114.32	13.7

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	43.0	37.1	80.1			19.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0558	0.0756	0.1540	0.2994	0.5195	0.9444	1.0894	1.2733	1.5292

Fineness Modulus
1.70

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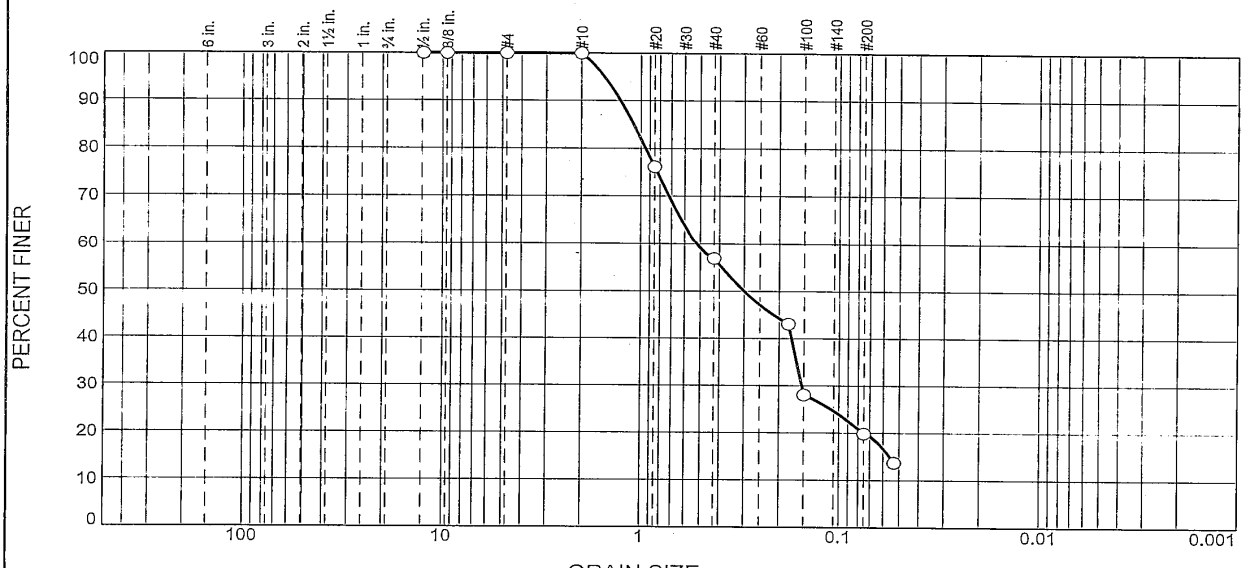
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	43.0	37.1	19.9	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	76.1		
0.425 mm	57.0		
0.180 mm	43.1		
0.150 mm	28.0		
0.075 mm	19.9		
0.053 mm	13.7		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 62.1%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.2733 D_{85}= 1.0894 D_{60}= 0.5195
D_{50}= 0.2994 D_{30}= 0.1540 D_{15}= 0.0558
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-29 **Date Sampled:** 8/17/2011
Sample Number: DS-11-47

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-30 **Sample Number:** DS-11-48
Material Description: Sample appears to be mostly clay
Moisture content as received = 60.0%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.56	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	115.08	114.32	98.8
		0.850 mm	128.14	114.32	77.8
		0.425 mm	124.30	114.32	62.5
		0.180 mm	122.81	114.32	49.6
		0.150 mm	121.61	114.32	38.5
		0.075 mm	123.19	114.32	24.9
		0.053 mm	114.32	114.32	24.9

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	1.2	36.3	37.6	75.1			24.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.1227	0.1814	0.2471	0.9161	1.0844	1.2969	1.5974

Fineness Modulus
1.45

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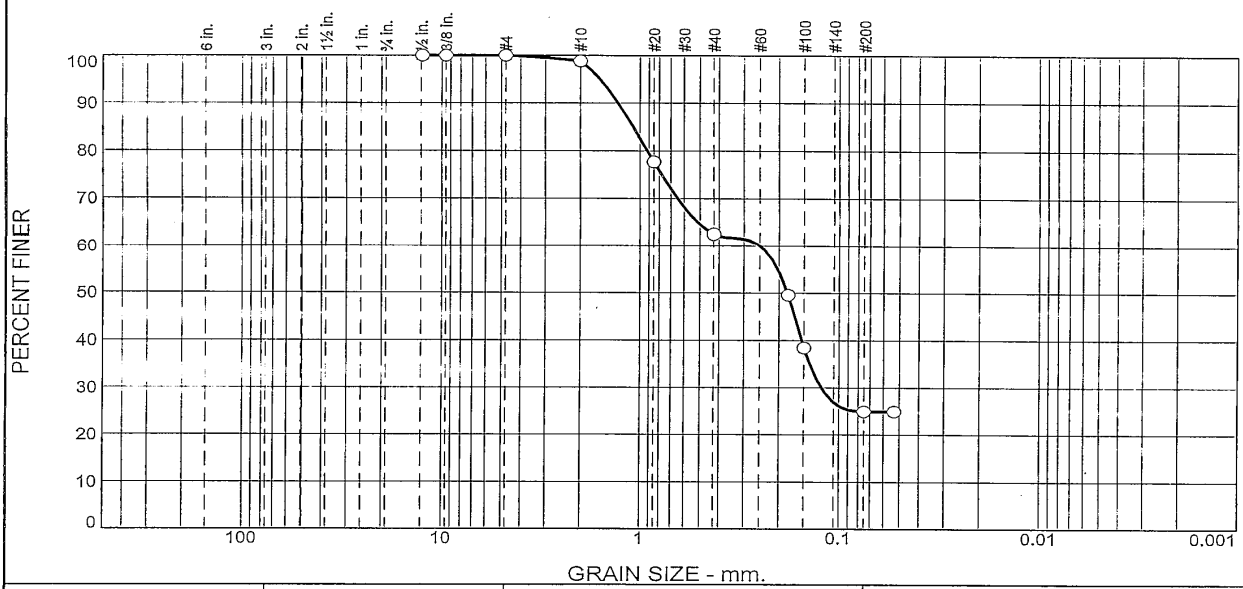
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	1.2	36.3	37.6	24.9	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	98.8		
0.850 mm	77.8		
0.425 mm	62.5		
0.180 mm	49.6		
0.150 mm	38.5		
0.075 mm	24.9		
0.053 mm	24.9		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 60.0%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.2969 D_{85}= 1.0844 D_{60}= 0.2471
D_{50}= 0.1814 D_{30}= 0.1227 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-30 **Date Sampled:** 8/17/2011
Sample Number: DS-11-48

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-31 **Sample Number:** DS-11-21
Material Description: Sample appears to be mostly clay
Moisture content as received = 55.9%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.48	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	126.61	114.32	81.2
		0.425 mm	130.38	114.32	56.7
		0.180 mm	126.28	114.32	38.4
		0.150 mm	127.76	114.32	17.9
		0.075 mm	120.18	114.32	9.0
		0.053 mm	120.14	114.32	0.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	43.3	47.7	91.0			9.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0788	0.1069	0.1532	0.1671	0.3309	0.5030	0.8247	0.9398	1.1011	1.3593

Fineness Modulus	C_u	C_c
1.76	6.38	0.70

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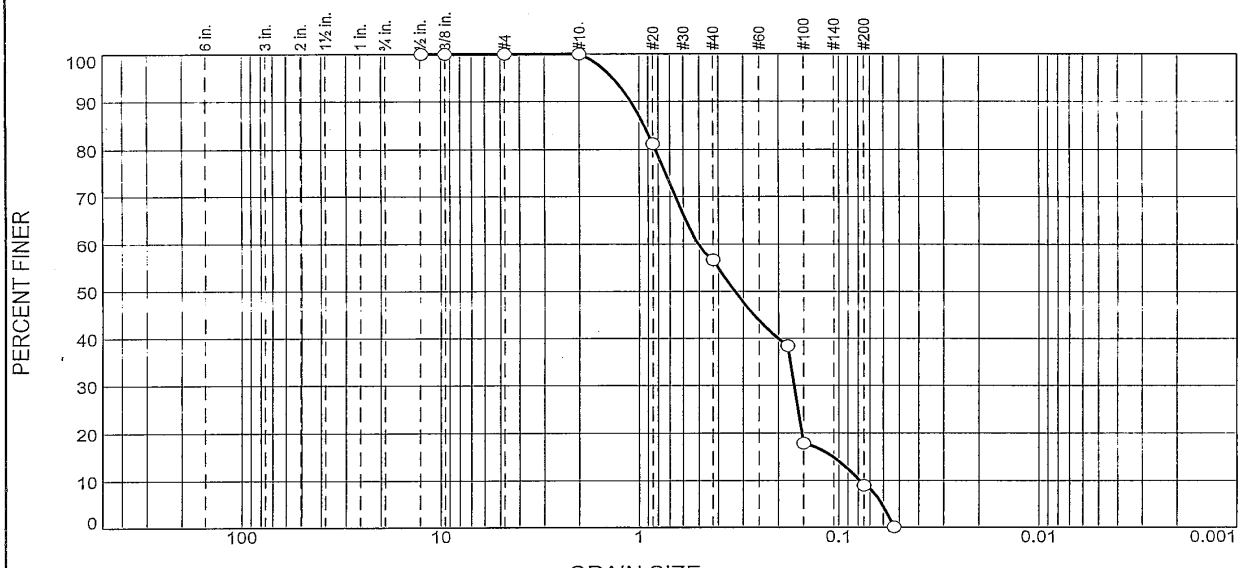
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	43.3	47.7	9.0	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	81.2		
0.425 mm	56.7		
0.180 mm	38.4		
0.150 mm	17.9		
0.075 mm	9.0		
0.053 mm	0.1		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 55.9%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.1011 D_{85}= 0.9398 D_{60}= 0.5030
D_{50}= 0.3309 D_{30}= 0.1671 D_{15}= 0.1069
D_{10}= 0.0788 C_u= 6.38 C_c= 0.70

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-31 **Date Sampled:** 8/17/2011
Sample Number: DS-11-21

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-32 **Sample Number:** DS-11-22
Material Description: Sample appears to be mostly clay
Moisture content as reveived = 47.7%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.49	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	122.16	114.32	88.0
		0.425 mm	126.89	114.32	68.8
		0.180 mm	131.40	114.32	42.8
		0.150 mm	128.01	114.32	21.9
		0.075 mm	124.32	114.32	6.6
		0.053 mm	117.66	114.32	1.5

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	31.2	62.2	93.4			6.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0903	0.1140	0.1399	0.1614	0.1941	0.2261	0.6599	0.7688	0.9149	1.1646

Fineness Modulus	C_u	C_c
1.39	2.50	1.28

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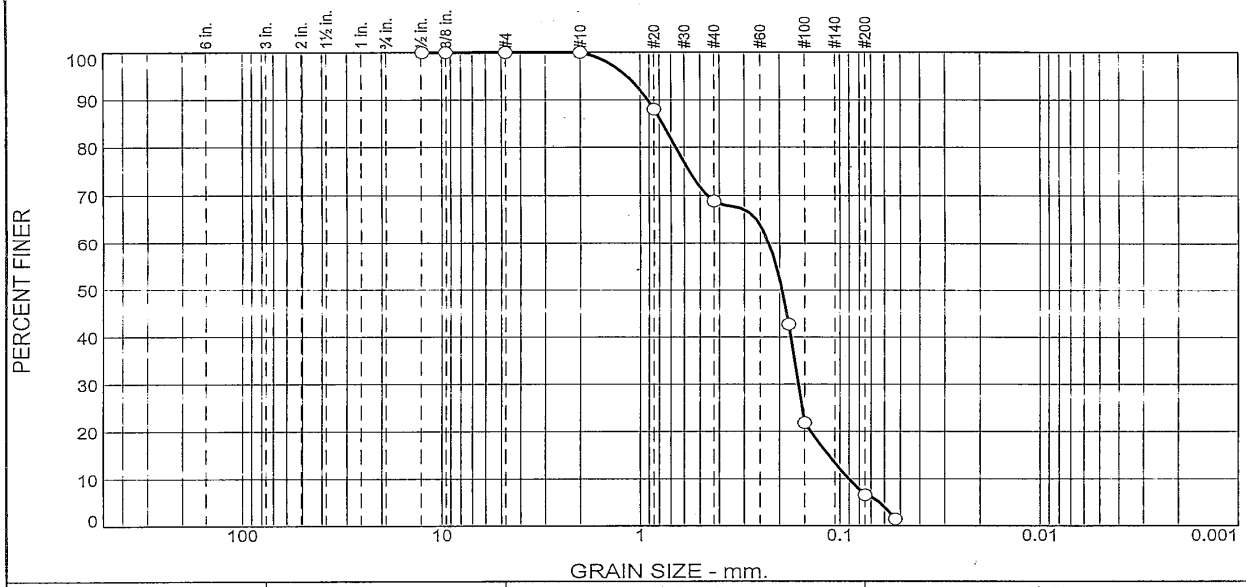
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	31.2	62.2	6.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	88.0		
0.425 mm	68.8		
0.180 mm	42.8		
0.150 mm	21.9		
0.075 mm	6.6		
0.053 mm	1.5		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as reveived = 47.7%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.9149 D_{85}= 0.7688 D_{60}= 0.2261
D_{50}= 0.1941 D_{30}= 0.1614 D_{15}= 0.1140
D_{10}= 0.0903 C_u= 2.50 C_c= 1.28

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-32 **Date Sampled:** 8/17/2011
Sample Number: DS-11-22

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-33 **Sample Number:** DS-11-36
Material Description: Sample appears to be mostly clay with some fine silt
Moisture content as received = 33.5%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.46	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	112.01	111.40	99.1
		0.425 mm	112.14	111.40	97.9
		0.180 mm	114.92	111.40	92.6
		0.150 mm	114.12	111.40	88.4
		0.075 mm	135.07	111.40	52.2
		0.053 mm	122.78	111.40	34.9

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	2.1	45.7	47.8			52.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.0720	0.0858	0.1222	0.1364	0.1588	0.2147

Fineness Modulus
0.16

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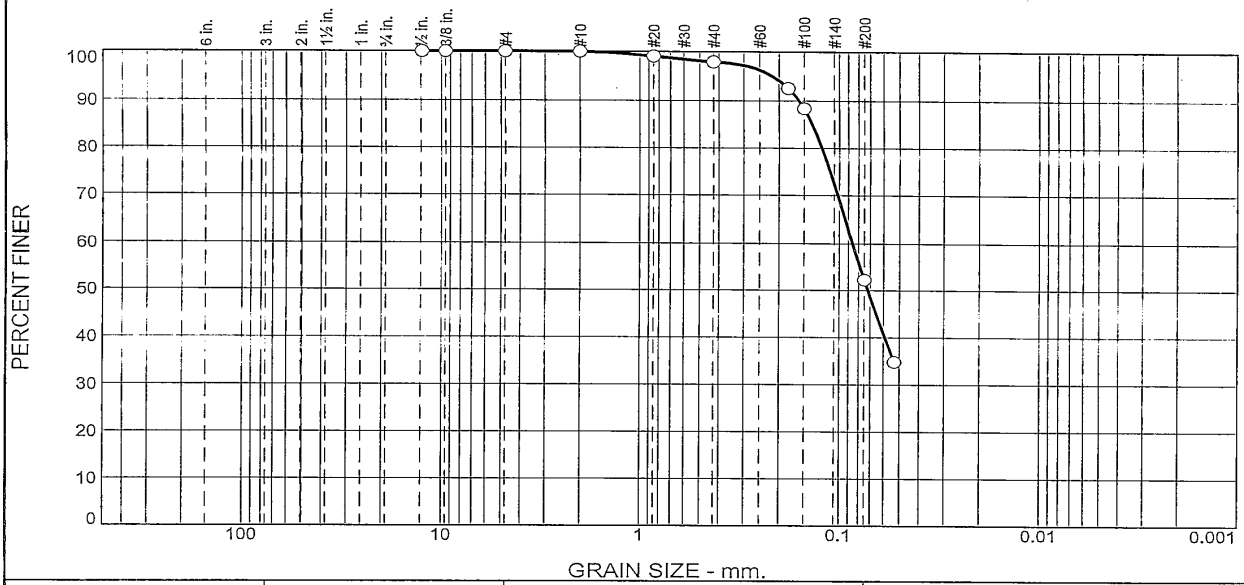
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.1	45.7	52.2	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	99.1		
0.425 mm	97.9		
0.180 mm	92.6		
0.150 mm	88.4		
0.075 mm	52.2		
0.053 mm	34.9		

* (no specification provided)

Material Description

Sample appears to be mostly clay with some fine silt
Moisture content as received = 33.5%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.1588 D_{85}= 0.1364 D_{60}= 0.0858
D_{50}= 0.0720 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-33 **Date Sampled:** 8/18/2011
Sample Number: DS-11-36

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/8/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-34 **Sample Number:** DS-11-37
Material Description: Sample appears to be mostly sand with some clay
Moisture content as received = 32.1%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.55	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	113.11	111.40	97.4
		0.850 mm	114.91	111.40	92.0
		0.425 mm	116.76	111.40	83.9
		0.180 mm	114.18	111.40	79.6
		0.150 mm	139.98	111.40	36.0
		0.075 mm	121.71	111.40	20.3
		0.053 mm	121.28	111.40	5.2

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	2.6	13.5	63.6	79.7			20.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0585	0.0655	0.0744	0.1036	0.1594	0.1659	0.2181	0.4806	0.7366	1.2316

Fineness Modulus	C_u	C_c
1.02	2.84	1.11

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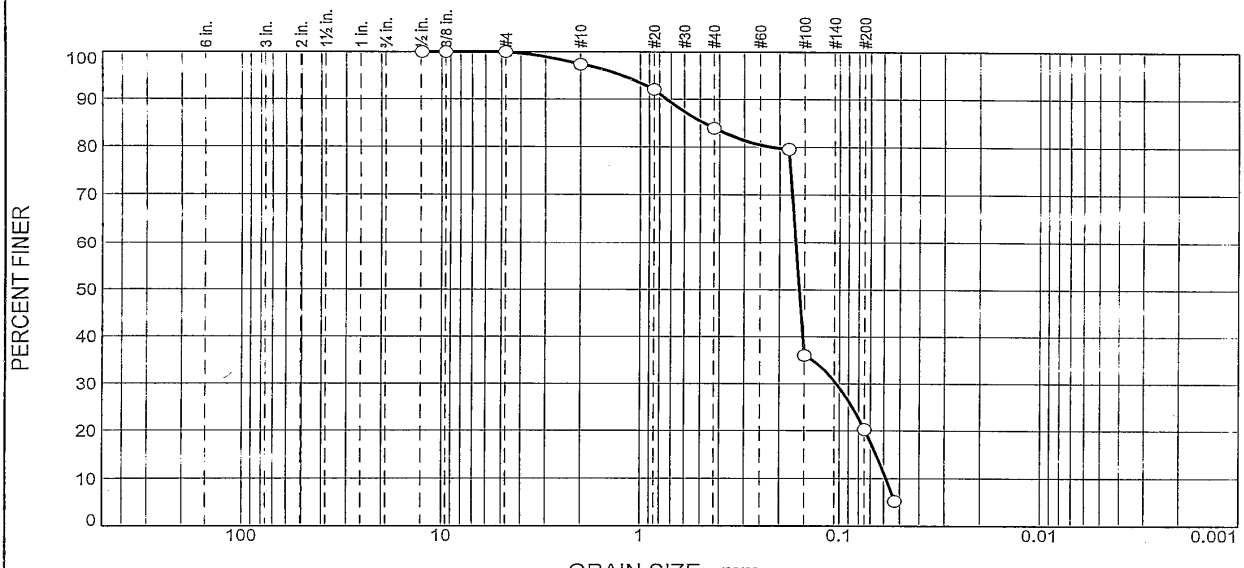
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	2.6	13.5	63.6	20.3	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	97.4		
0.850 mm	92.0		
0.425 mm	83.9		
0.180 mm	79.6		
0.150 mm	36.0		
0.075 mm	20.3		
0.053 mm	5.2		

* (no specification provided)

Material Description

Sample appears to be mostly sand with some clay
Moisture content as received = 32.1%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.7366 D_{85}= 0.4806 D_{60}= 0.1659
D_{50}= 0.1594 D_{30}= 0.1036 D_{15}= 0.0655
D_{10}= 0.0585 C_u= 2.84 C_c= 1.11

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-34 **Date Sampled:** 8/18/2011
Sample Number: DS-11-37

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-35 **Sample Number:** DS-11-38
Material Description: Sample appears to be mostly clay
Moisture content as received = 33.9%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.70	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	117.58	111.40	90.6
		0.425 mm	114.62	111.40	85.7
		0.180 mm	115.63	111.40	79.3
		0.150 mm	113.64	111.40	75.8
		0.075 mm	146.37	111.40	22.6
		0.053 mm	119.43	111.40	10.4

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	14.3	63.1	77.4			22.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0633	0.0715	0.0833	0.1046	0.1170	0.1948	0.3789	0.8001	1.2285

Fineness Modulus
0.58

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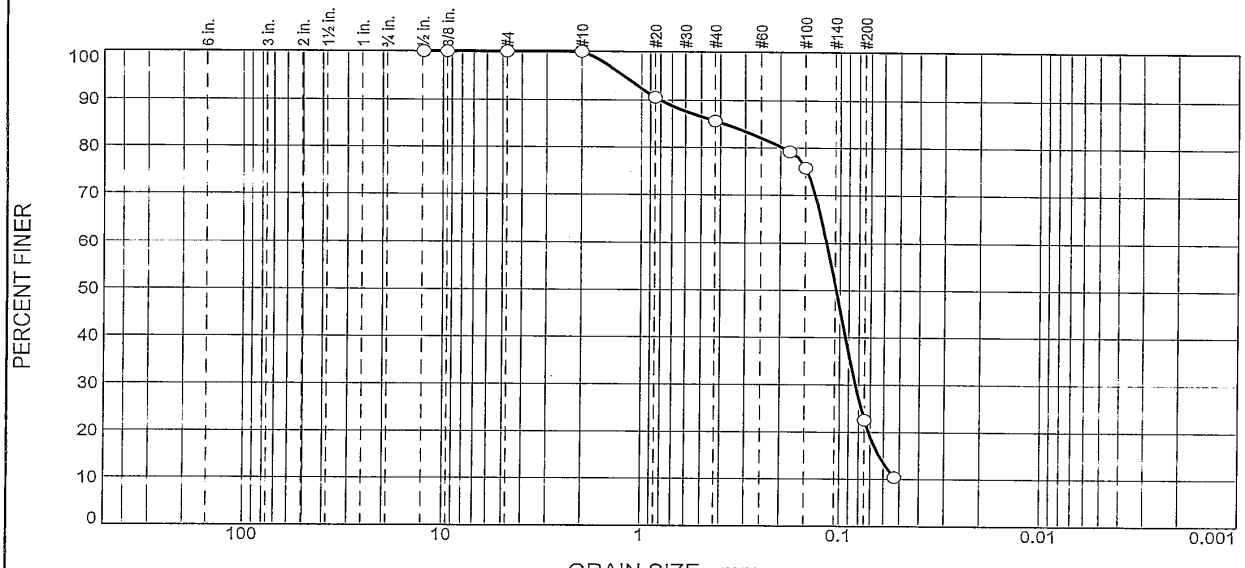
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	14.3	63.1	22.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	90.6		
0.425 mm	85.7		
0.180 mm	79.3		
0.150 mm	75.8		
0.075 mm	22.6		
0.053 mm	10.4		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 33.9%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.8001 D_{85}= 0.3789 D_{60}= 0.1170
D_{50}= 0.1046 D_{30}= 0.0833 D_{15}= 0.0633
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-35 **Date Sampled:** 8/18/2011
Sample Number: DS-11-38

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-36 **Sample Number:** DS-11-39
Material Description: Sample appears to be mostly clay
Moisture content as received = 51.0%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.43	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	112.82	111.40	97.8
		0.425 mm	116.90	111.40	89.4
		0.180 mm	124.54	111.40	69.3
		0.150 mm	129.16	111.40	42.2
		0.075 mm	119.34	111.40	30.1
		0.053 mm	122.89	111.40	12.5

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	10.6	59.3	69.9			30.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
	0.0550	0.0594	0.0747	0.1586	0.1691	0.2683	0.3361	0.4397	0.6272

Fineness Modulus
0.82

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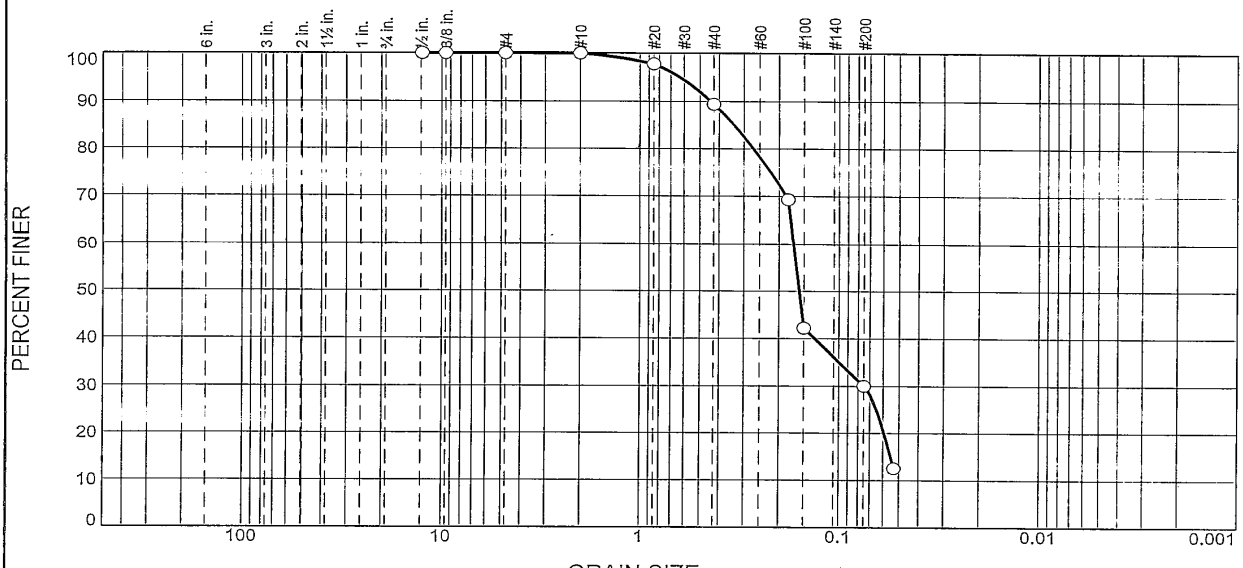
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	10.6	59.3	30.1	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	97.8		
0.425 mm	89.4		
0.180 mm	69.3		
0.150 mm	42.2		
0.075 mm	30.1		
0.053 mm	12.5		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 51.0%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.4397 D_{85}= 0.3361 D_{60}= 0.1691
D_{50}= 0.1586 D_{30}= 0.0747 D_{15}= 0.0550
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-36 **Date Sampled:** 8/18/2011
Sample Number: DS-11-39

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-37 **Sample Number:** DS-11-40
Material Description: Sample appears to be mostly clay
Moisture content as received = 42.2%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.75	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	111.61	111.40	99.7
		0.425 mm	112.48	111.40	98.0
		0.180 mm	115.79	111.40	91.4
		0.150 mm	113.93	111.40	87.5
		0.075 mm	140.60	111.40	43.1
		0.053 mm	122.15	111.40	26.8

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	2.0	54.9	56.9			43.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0574	0.0834	0.0957	0.1277	0.1406	0.1654	0.2492

Fineness Modulus
0.17

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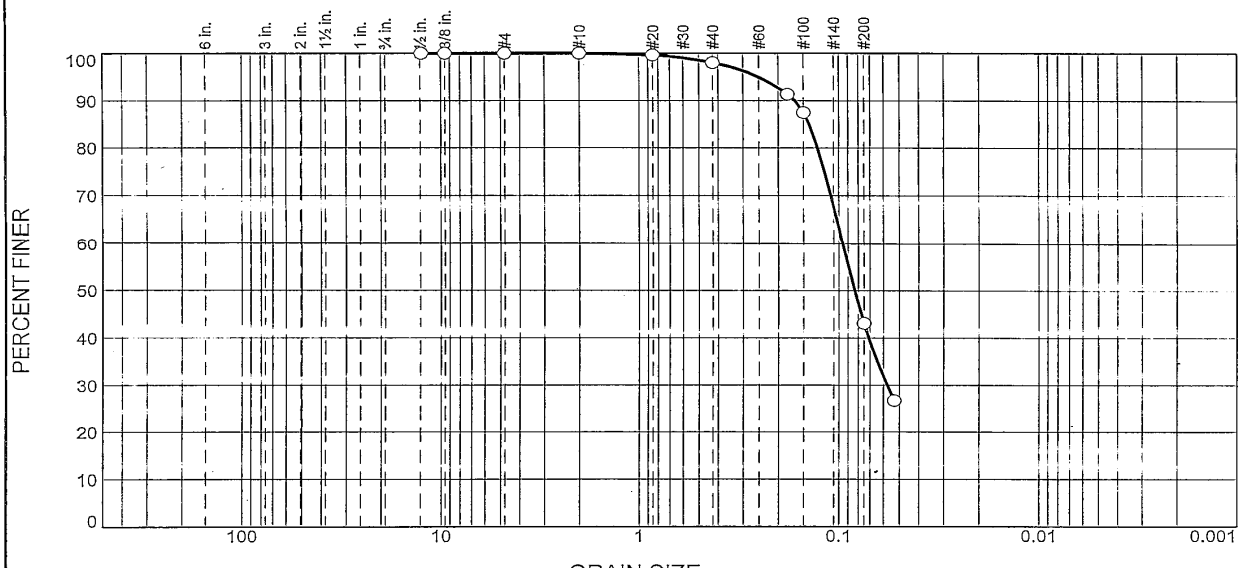
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	2.0	54.9	43.1	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	99.7		
0.425 mm	98.0		
0.180 mm	91.4		
0.150 mm	87.5		
0.075 mm	43.1		
0.053 mm	26.8		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 42.2%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.1654 D_{85}= 0.1406 D_{60}= 0.0957
D_{50}= 0.0834 D_{30}= 0.0574 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-37 **Date Sampled:** 8/18/2011
Sample Number: DS-11-40

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-39 **Sample Number:** DS-11-31
Material Description: Sample appears to be mostly fine to medium sand
Moisture content as received = 33.1%
Sample Date: 8/18/2011
Date Received: 8/20/2011
USCS Classification: SP
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
115.83	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	115.48	111.40	96.5
		0.425 mm	120.33	111.40	88.8
		0.180 mm	202.27	111.40	10.3
		0.150 mm	118.83	111.40	3.9
		0.075 mm	112.23	111.40	3.2
		0.053 mm	114.80	111.40	0.3

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	11.2	85.6	96.8			3.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1789	0.1940	0.2070	0.2310	0.2795	0.3066	0.3767	0.4015	0.4645	0.7179

Fineness Modulus	C_u	C_c
1.47	1.71	0.97

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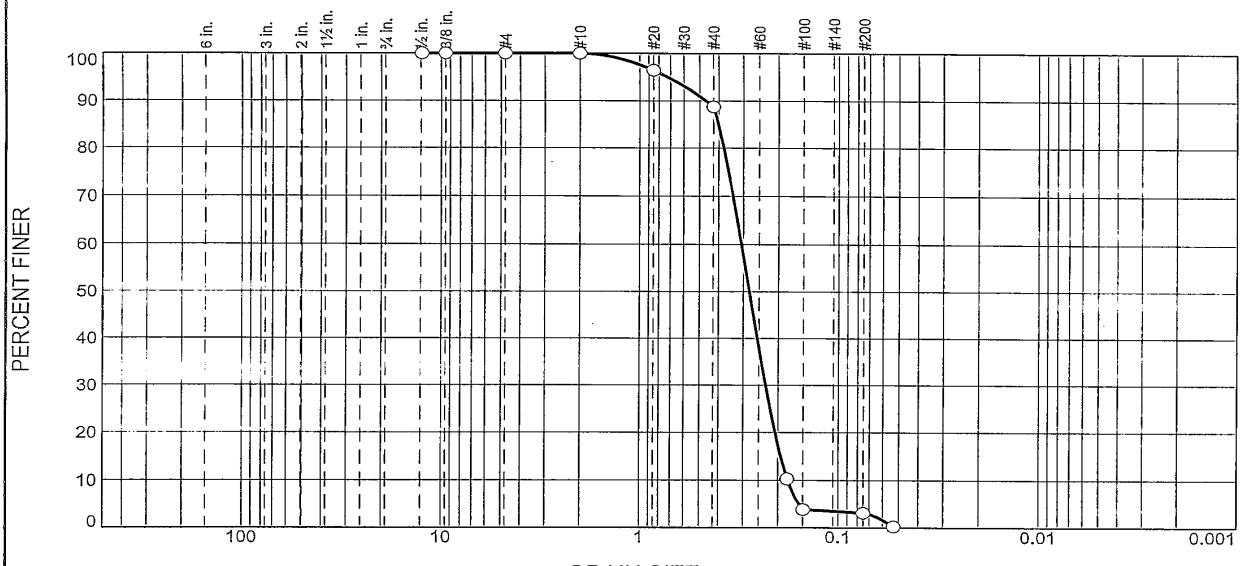
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	11.2	85.6	3.2	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	96.5		
0.425 mm	88.8		
0.180 mm	10.3		
0.150 mm	3.9		
0.075 mm	3.2		
0.053 mm	0.3		

* (no specification provided)

Material Description

Sample appears to be mostly fine to medium sand
Moisture content as received = 33.1%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= SP AASHTO (M 145)=

Coefficients

D_{90}= 0.4645 D_{85}= 0.4015 D_{60}= 0.3066
D_{50}= 0.2795 D_{30}= 0.2310 D_{15}= 0.1940
D_{10}= 0.1789 C_u= 1.71 C_c= 0.97

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-39 **Date Sampled:** 8/18/2011
Sample Number: DS-11-31

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-40 **Sample Number:** DS-11-32
Material Description: Sample appears to be mostly clay
Moisture content as received = 35.6%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.46	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	114.39	111.40	95.4
		0.425 mm	119.02	111.40	83.8
		0.180 mm	124.81	111.40	63.3
		0.150 mm	114.78	111.40	58.1
		0.075 mm	130.32	111.40	29.2
		0.053 mm	117.83	111.40	19.4

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	16.2	54.6	70.8			29.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0543	0.0766	0.1215	0.1593	0.3567	0.4506	0.5861	0.8194

Fineness Modulus
0.77

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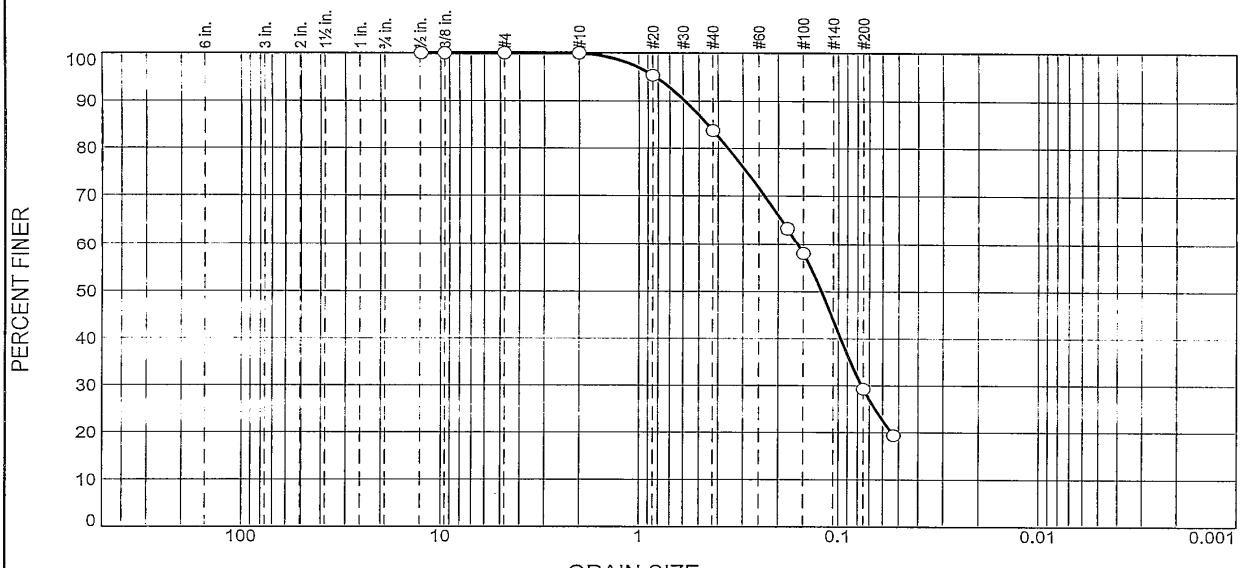
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	16.2	54.6	29.2	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	95.4		
0.425 mm	83.8		
0.180 mm	63.3		
0.150 mm	58.1		
0.075 mm	29.2		
0.053 mm	19.4		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 35.6%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.5861 D_{85}= 0.4506 D_{60}= 0.1593
D_{50}= 0.1215 D_{30}= 0.0766 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-40 **Date Sampled:** 8/18/2011
Sample Number: DS-11-32

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-41 **Sample Number:** DS-11-33
Material Description: Sample appears to be mostly medium sand
Moisture content as received = 19.2%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
115.88	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	116.11	111.40	95.9
		0.425 mm	122.84	111.40	86.1
		0.180 mm	188.31	111.40	19.7
		0.150 mm	121.45	111.40	11.0
		0.075 mm	116.58	111.40	6.5
		0.053 mm	118.86	111.40	0.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	13.9	79.6	93.5			6.5

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1281	0.1652	0.1809	0.2086	0.2641	0.2960	0.3827	0.4163	0.5352	0.7778

Fineness Modulus	C_u	C_c
1.39	2.31	1.15

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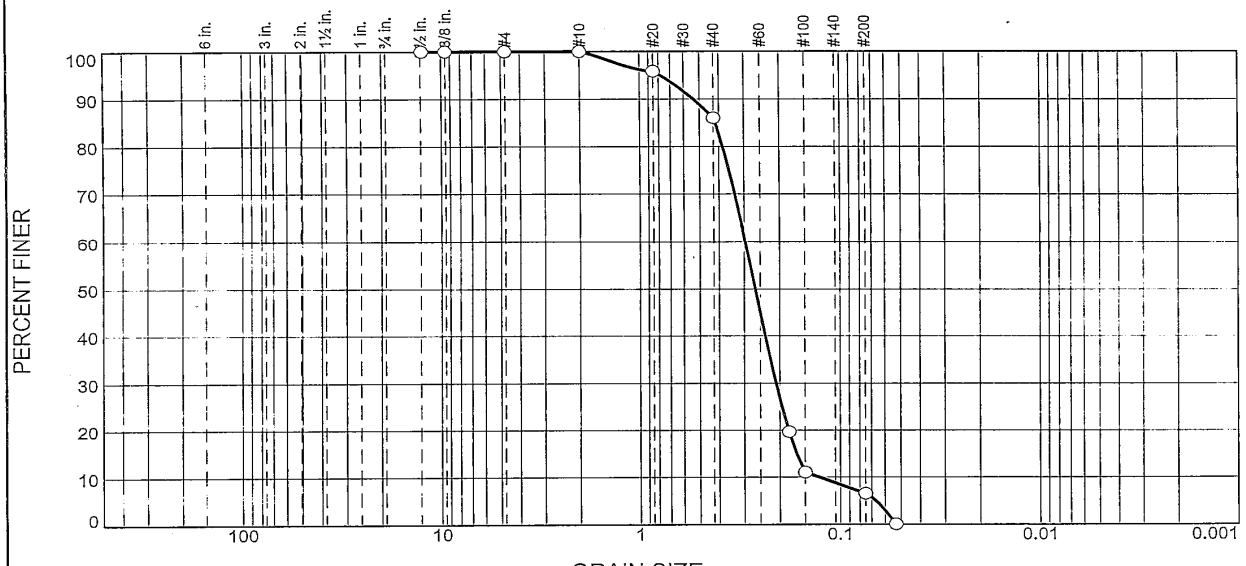
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	13.9	79.6	6.5	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	95.9		
0.425 mm	86.1		
0.180 mm	19.7		
0.150 mm	11.0		
0.075 mm	6.5		
0.053 mm	0.1		

* (no specification provided)

Material Description

Sample appears to be mostly medium sand
Moisture content as received = 19.2%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.5352 D_{85}= 0.4163 D_{60}= 0.2960
D_{50}= 0.2641 D_{30}= 0.2086 D_{15}= 0.1652
D_{10}= 0.1281 C_u= 2.31 C_c= 1.15

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title:

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-41 **Date Sampled:** 8/18/2011
Sample Number: DS-11-33

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Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-42 **Sample Number:** DS-11-34
Material Description: Sample appears to be medium sand
Moisture content as received = 25.6%
Sample Date: 8/18/2011
Date Received: 8/20/2011
USCS Classification: SP
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
115.37	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	114.77	114.32	99.6
		0.425 mm	120.87	114.32	93.9
		0.180 mm	202.82	114.32	17.2
		0.150 mm	125.35	114.32	7.7
		0.075 mm	121.99	114.32	1.0
		0.053 mm	115.36	114.32	0.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	6.1	92.9	99.0			1.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1585	0.1739	0.1872	0.2110	0.2583	0.2845	0.3500	0.3718	0.3982	0.4676

Fineness Modulus	C_u	C_c
1.30	1.80	0.99

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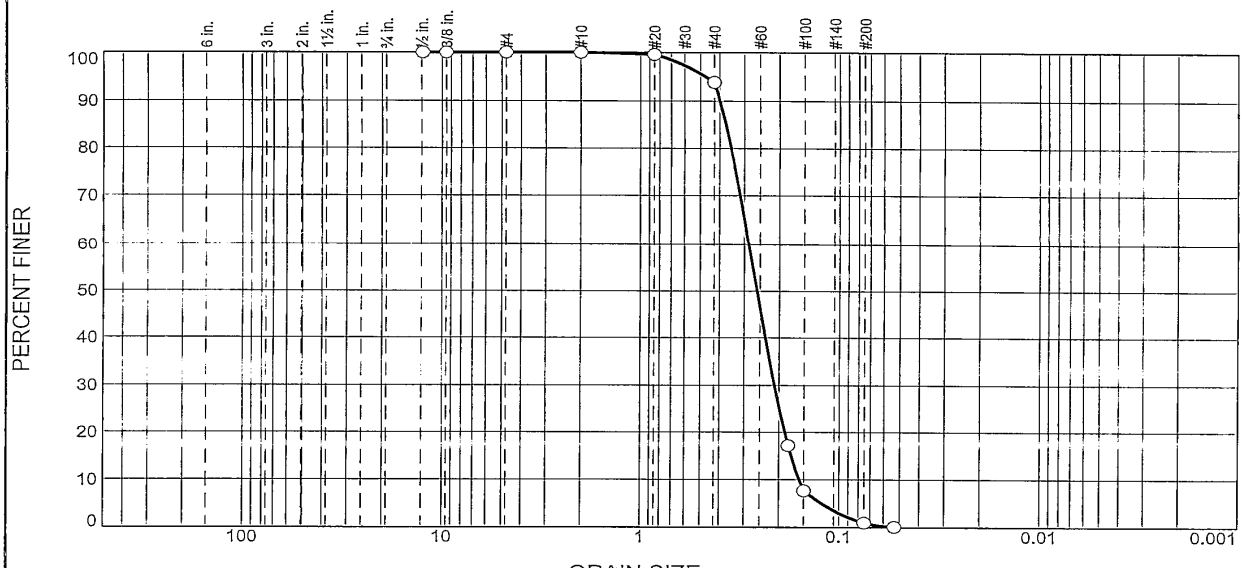
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	6.1	92.9	1.0	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	99.6		
0.425 mm	93.9		
0.180 mm	17.2		
0.150 mm	7.7		
0.075 mm	1.0		
0.053 mm	0.1		

* (no specification provided)

Material Description

Sample appears to be medium sand
Moisture content as received = 25.6%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= SP AASHTO (M 145)=

Coefficients

D_{90}= 0.3982 D_{85}= 0.3718 D_{60}= 0.2845
D_{50}= 0.2583 D_{30}= 0.2110 D_{15}= 0.1739
D_{10}= 0.1585 C_u= 1.80 C_c= 0.99

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-42 **Date Sampled:** 8/18/2011
Sample Number: DS-11-34

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-43 **Sample Number:** DS-11-35
Material Description: Sample appears to be mostly clay
Moisture content as received = 34.6%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.73	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	111.95	111.40	99.2
		0.425 mm	115.34	111.40	93.2
		0.180 mm	156.73	111.40	24.2
		0.150 mm	116.56	111.40	16.4
		0.075 mm	116.84	111.40	8.1
		0.053 mm	112.90	111.40	5.8

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	6.8	85.1	91.9			8.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1077	0.1433	0.1654	0.1970	0.2501	0.2783	0.3487	0.3723	0.4014	0.4999

Fineness Modulus	C_u	C_c
1.20	2.59	1.29

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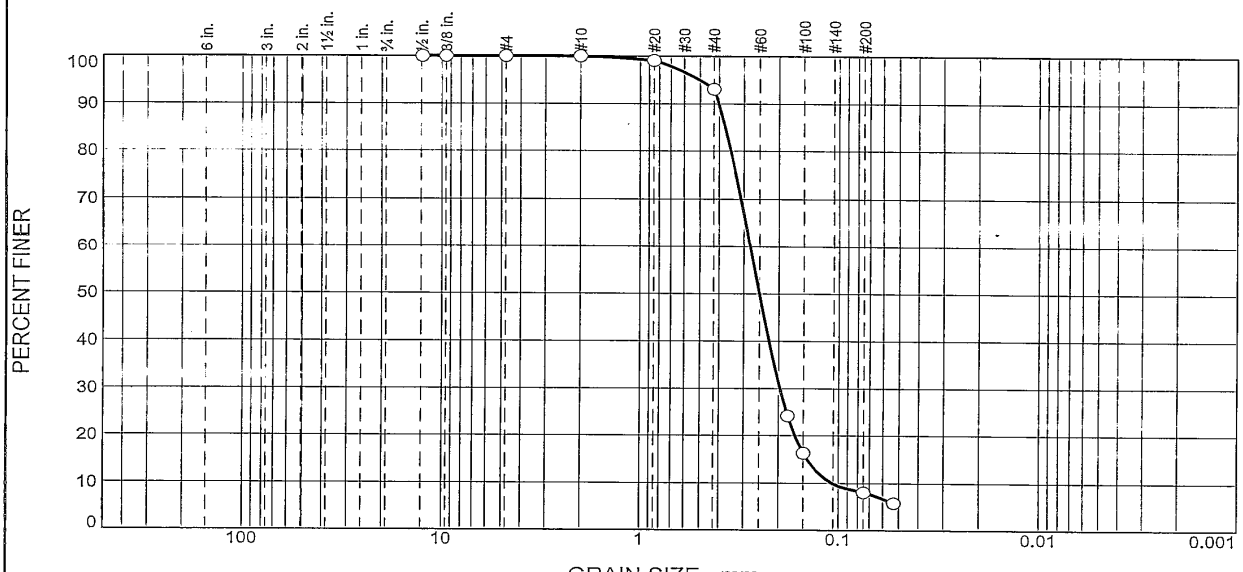
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	6.8	85.1	8.1	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	99.2		
0.425 mm	93.2		
0.180 mm	24.2		
0.150 mm	16.4		
0.075 mm	8.1		
0.053 mm	5.8		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 34.6%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.4014 D_{85}= 0.3723 D_{60}= 0.2783
D_{50}= 0.2501 D_{30}= 0.1970 D_{15}= 0.1433
D_{10}= 0.1077 C_u= 2.59 C_c= 1.29

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-43 **Date Sampled:** 8/18/2011
Sample Number: DS-11-35

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Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-45 **Sample Number:** DS-11-30
Material Description: Sample appears to be mostly clay
Moisture content as received = 31.4%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.92	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	111.86	111.40	99.3
		0.425 mm	116.25	111.40	91.9
		0.180 mm	158.04	111.40	21.2
		0.150 mm	117.11	111.40	12.5
		0.075 mm	112.02	111.40	11.6
		0.053 mm	114.29	111.40	7.2

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	8.1	80.3	88.4			11.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0627	0.1602	0.1765	0.2035	0.2548	0.2831	0.3549	0.3795	0.4102	0.5323

Fineness Modulus	C_u	C_c
1.26	4.52	2.33

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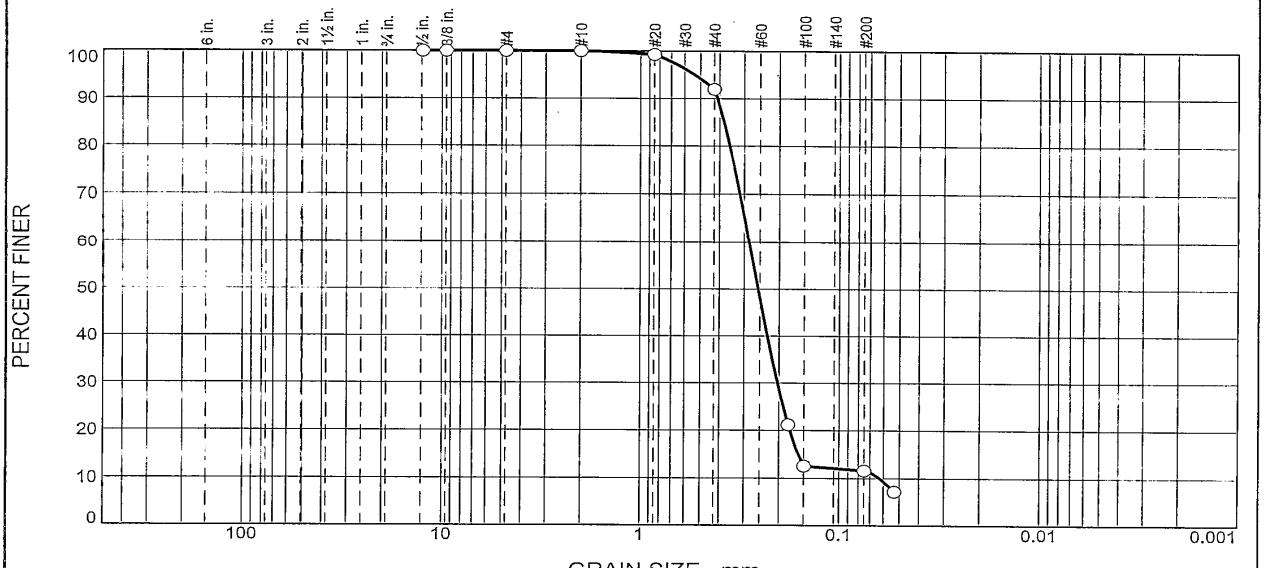
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	8.1	80.3	11.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	99.3		
0.425 mm	91.9		
0.180 mm	21.2		
0.150 mm	12.5		
0.075 mm	11.6		
0.053 mm	7.2		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 31.4%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.4102 D_{85}= 0.3795 D_{60}= 0.2831
D_{50}= 0.2548 D_{30}= 0.2035 D_{15}= 0.1602
D_{10}= 0.0627 C_u= 4.52 C_c= 2.33

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-45 **Date Sampled:** 8/18/2011
Sample Number: DS-11-30

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Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-46 **Sample Number:** DS-11-29
Material Description: Sample appears to be mostly clay
Moisture content as received = 24.7%
Sample Date: 8/18/2011
Date Received: 8/20/2011
USCS Classification: SP
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.28	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	112.05	111.40	99.0
		0.425 mm	116.16	111.40	91.7
		0.180 mm	159.02	111.40	18.8
		0.150 mm	116.18	111.40	11.4
		0.075 mm	116.23	111.40	4.0
		0.053 mm	112.21	111.40	2.8

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	8.3	87.7	96.0			4.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.1421	0.1664	0.1839	0.2114	0.2623	0.2900	0.3596	0.3832	0.4126	0.5452

Fineness Modulus	C_u	C_c
1.30	2.04	1.08

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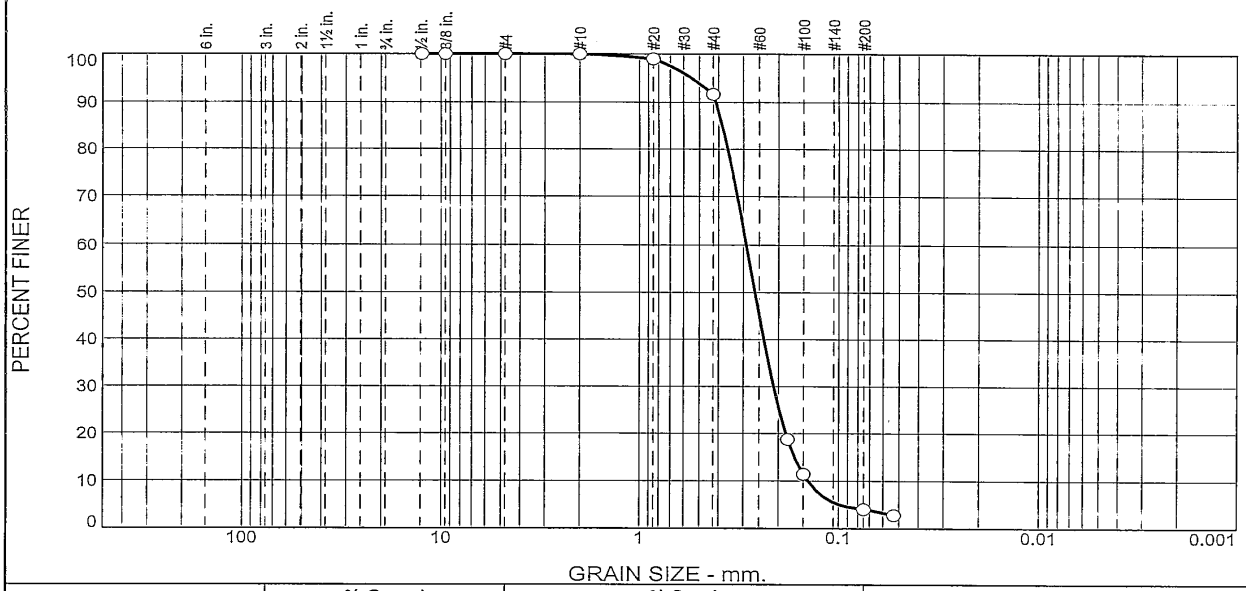
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	8.3	87.7	4.0	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	99.0		
0.425 mm	91.7		
0.180 mm	18.8		
0.150 mm	11.4		
0.075 mm	4.0		
0.053 mm	2.8		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 24.7%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= SP AASHTO (M 145)=

Coefficients

D_{90}= 0.4126 D_{85}= 0.3832 D_{60}= 0.2900
D_{50}= 0.2623 D_{30}= 0.2114 D_{15}= 0.1664
D_{10}= 0.1421 C_u= 2.04 C_c= 1.08

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-46 **Date Sampled:** 8/18/2011
Sample Number: DS-11-29

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Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-47 **Sample Number:** DS-11-28
Material Description: Sample appears to be mostly clay
Moisture content as received = 39.7%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.26	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	111.58	111.40	99.7
		0.850 mm	121.78	111.40	83.8
		0.425 mm	129.93	111.40	55.4
		0.180 mm	122.69	111.40	38.1
		0.150 mm	113.10	111.40	35.5
		0.075 mm	114.86	111.40	30.2
		0.053 mm	113.41	111.40	27.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.3	44.3	25.2	69.8			30.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0729	0.3544	0.4806	0.7686	0.8793	1.0377	1.3041

Fineness Modulus
1.56

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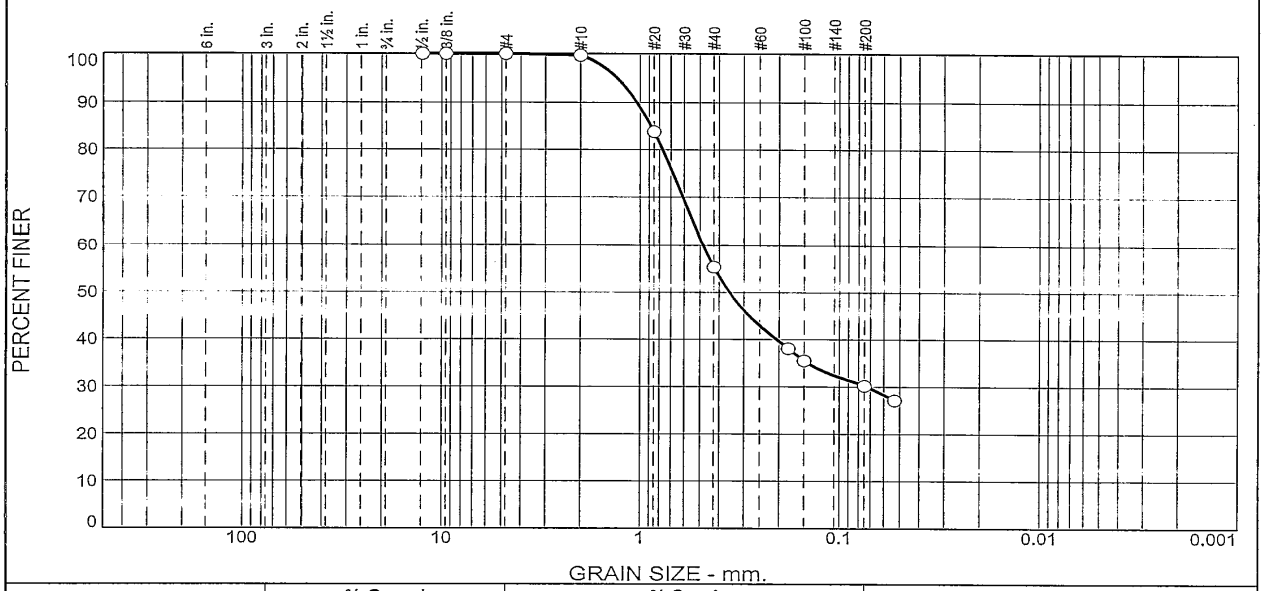
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.3	44.3	25.2	30.2	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	99.7		
0.850 mm	83.8		
0.425 mm	55.4		
0.180 mm	38.1		
0.150 mm	35.5		
0.075 mm	30.2		
0.053 mm	27.1		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 39.7%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.0377 D_{85}= 0.8793 D_{60}= 0.4806
D_{50}= 0.3544 D_{30}= 0.0729 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-47 **Date Sampled:** 8/18/2011
Sample Number: DS-11-28

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-48 **Sample Number:** DS-11-49
Material Description: Sample appears to be mostly clay
Moisture content as received = 57.3%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.27	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	112.16	111.40	98.8
		0.850 mm	130.08	111.40	70.2
		0.425 mm	120.91	111.40	55.6
		0.180 mm	120.11	111.40	42.3
		0.150 mm	113.66	111.40	38.8
		0.075 mm	113.90	111.40	35.0
		0.053 mm	114.09	111.40	30.9

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	1.2	43.2	20.6	65.0			35.0

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.2858	0.5564	1.1183	1.2749	1.4616	1.7075

Fineness Modulus
1.68

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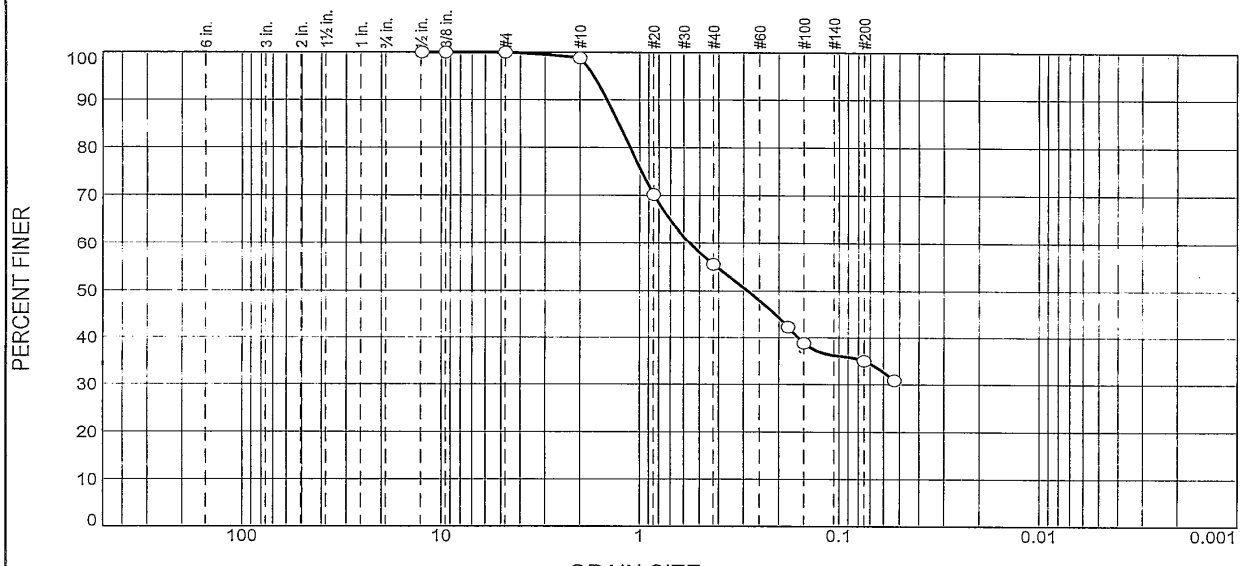
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	1.2	43.2	20.6	35.0	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	98.8		
0.850 mm	70.2		
0.425 mm	55.6		
0.180 mm	42.3		
0.150 mm	38.8		
0.075 mm	35.0		
0.053 mm	30.9		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 57.3%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.4616 D_{85}= 1.2749 D_{60}= 0.5564
D_{50}= 0.2858 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-48 **Date Sampled:** 8/18/2011
Sample Number: DS-11-49

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/8/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-49 **Sample Number:** DS-11-50
Material Description: Sample appears to be mostly clay
Moisture content as received = 60.6%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.54	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	113.00	111.40	97.6
		0.425 mm	121.44	111.40	82.2
		0.180 mm	130.87	111.40	52.5
		0.150 mm	120.16	111.40	39.2
		0.075 mm	114.41	111.40	34.6
		0.053 mm	116.61	111.40	26.6

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	17.8	47.6	65.4			34.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0592	0.1741	0.2018	0.3798	0.4806	0.5903	0.7356

Fineness Modulus
0.97

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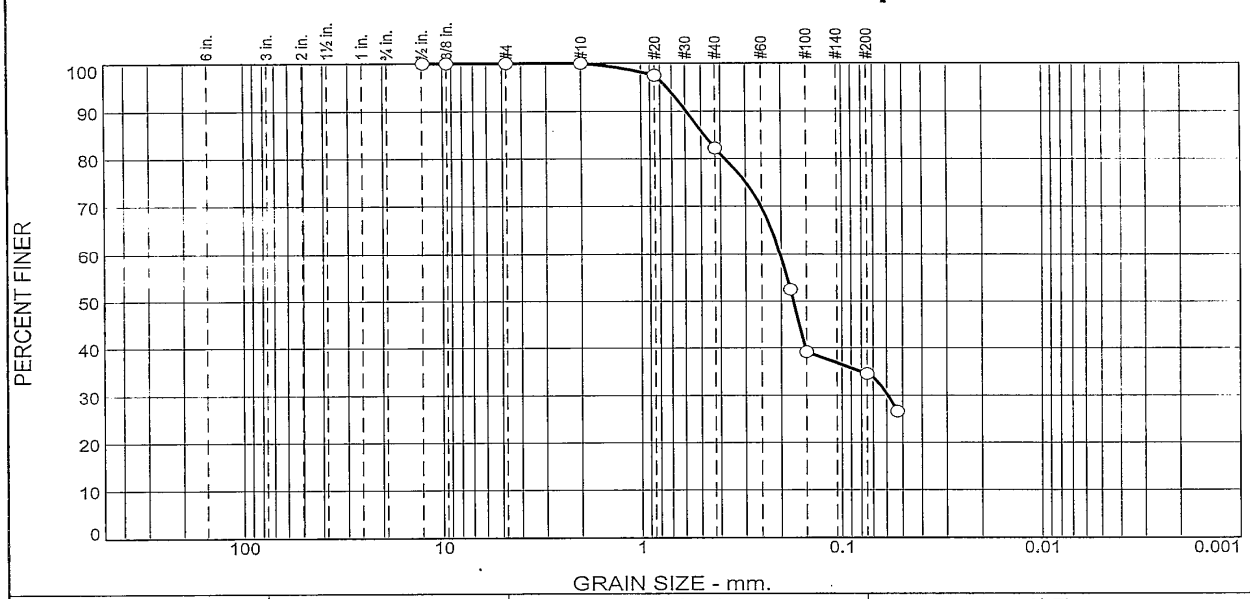
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	17.8	47.6	34.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	97.6		
0.425 mm	82.2		
0.180 mm	52.5		
0.150 mm	39.2		
0.075 mm	34.6		
0.053 mm	26.6		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 60.6%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.5903 D_{85}= 0.4806 D_{60}= 0.2018
D_{50}= 0.1741 D_{30}= 0.0592 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-49 **Date Sampled:** 8/18/2011
Sample Number: DS-11-50

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-53 **Sample Number:** DS-11-23
Material Description: Sample appears to be mostly clay
Moisture content as received = 69.3%
Sample Date: 8/20/2011
Date Received: 8/23/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.64	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	121.18	111.40	85.1
		0.425 mm	122.10	111.40	68.8
		0.180 mm	123.94	111.40	49.7
		0.150 mm	115.89	111.40	42.9
		0.075 mm	120.66	111.40	28.7
		0.053 mm	116.71	111.40	20.7

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	31.2	40.1	71.3			28.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0803	0.1815	0.2626	0.6908	0.8465	1.0516	1.3544

Fineness Modulus
1.26

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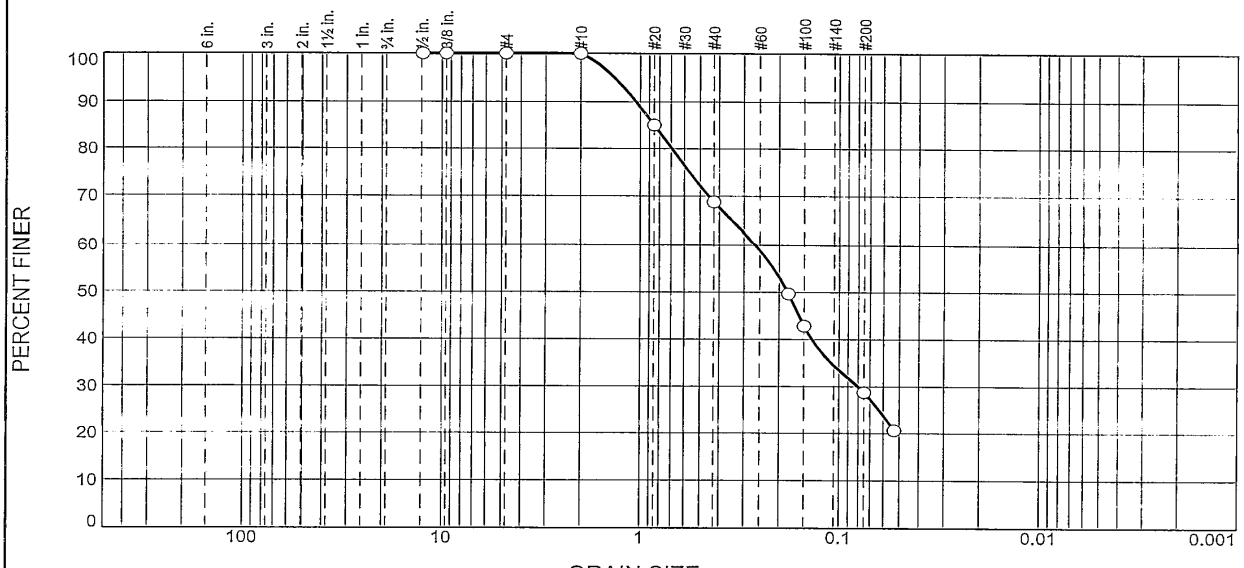
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	31.2	40.1	28.7	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	85.1		
0.425 mm	68.8		
0.180 mm	49.7		
0.150 mm	42.9		
0.075 mm	28.7		
0.053 mm	20.7		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 69.3%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.0516 D_{85}= 0.8465 D_{60}= 0.2626
D_{50}= 0.1815 D_{30}= 0.0803 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/23/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-53 **Date Sampled:** 8/20/2011
Sample Number: DS-11-23

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-54 **Sample Number:** DS-11-24
Material Description: Sample appears to be mostly clay
Moisture content as received = 62.1%
Sample Date: 8/20/2011
Date Received: 8/23/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.02	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	124.17	111.40	80.4
		0.425 mm	124.32	111.40	60.5
		0.180 mm	122.88	111.40	42.8
		0.150 mm	114.39	111.40	38.2
		0.075 mm	120.89	111.40	23.6
		0.053 mm	114.87	111.40	18.3

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	39.5	36.9	76.4			23.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0595	0.1050	0.2529	0.4163	0.8400	0.9935	1.1896	1.4665

Fineness Modulus
1.49

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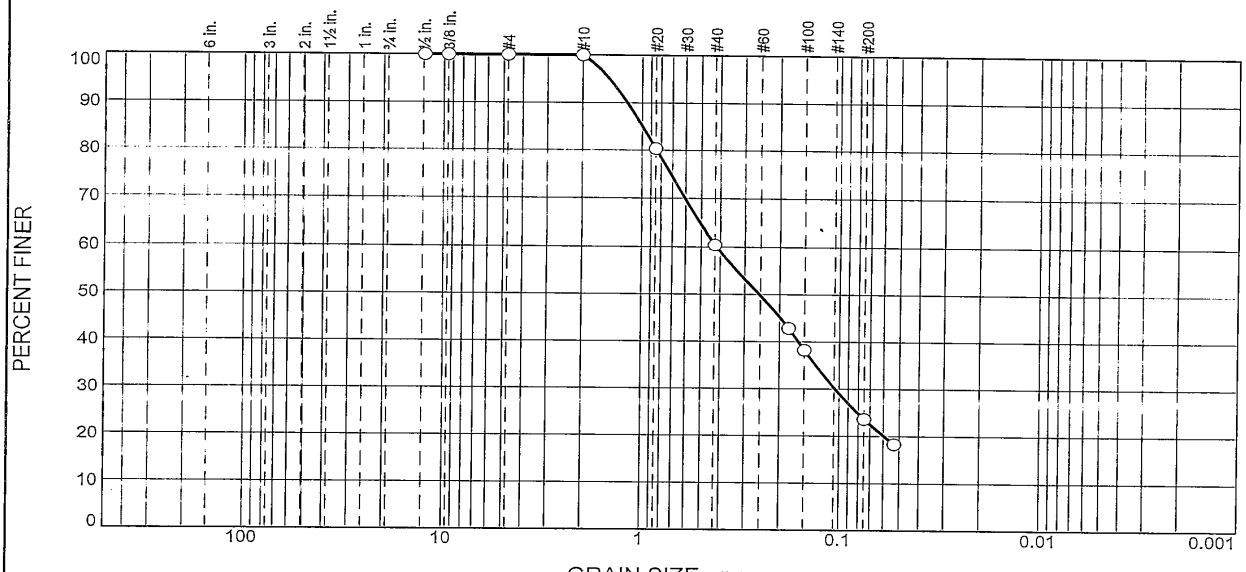
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	39.5	36.9	23.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	80.4		
0.425 mm	60.5		
0.180 mm	42.8		
0.150 mm	38.2		
0.075 mm	23.6		
0.053 mm	18.3		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 62.1%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.1896 D_{85}= 0.9935 D_{60}= 0.4163
D_{50}= 0.2529 D_{30}= 0.1050 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/23/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-54 **Date Sampled:** 8/20/2011
Sample Number: DS-11-24

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-55 **Sample Number:** DS-11-25
Material Description: Sample appears to be mostly clay
Moisture content as received = 72.1%
Sample Date: 8/20/2011
Date Received: 8/23/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
66.01	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	123.96	111.40	81.0
		0.425 mm	128.11	111.40	55.7
		0.180 mm	120.04	111.40	42.6
		0.150 mm	115.44	111.40	36.4
		0.075 mm	117.91	111.40	26.6
		0.053 mm	115.67	111.40	20.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	44.3	29.1	73.4			26.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.1057	0.2793	0.4950	0.8282	0.9539	1.1270	1.3945

Fineness Modulus
1.55

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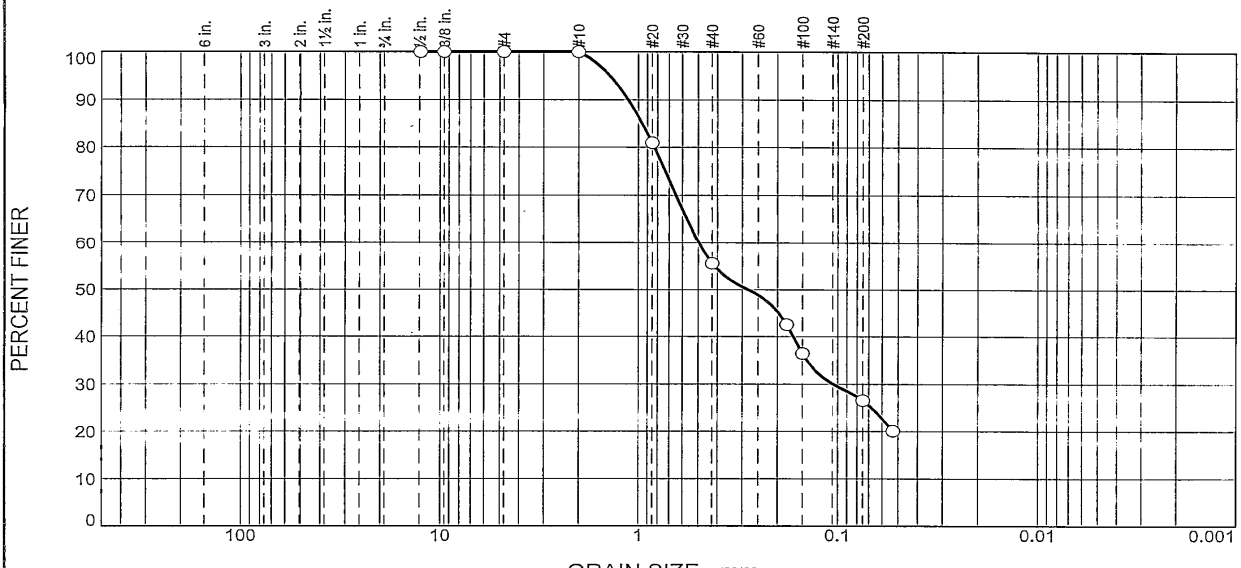
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	44.3	29.1	26.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	81.0		
0.425 mm	55.7		
0.180 mm	42.6		
0.150 mm	36.4		
0.075 mm	26.6		
0.053 mm	20.1		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 72.1%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.1270 D_{85}= 0.9539 D_{60}= 0.4950
D_{50}= 0.2793 D_{30}= 0.1057 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/23/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-55 **Date Sampled:** 8/20/2011
Sample Number: DS-11-25

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/8/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-56 **Sample Number:** DS-11-26
Material Description: Sample appears to be mostly clay
Moisture content as received = 48.3%
Sample Date: 8/20/2011
Date Received: 8/23/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.44	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	121.74	111.40	84.2
		0.425 mm	122.13	111.40	67.8
		0.180 mm	125.46	111.40	46.3
		0.150 mm	114.76	111.40	41.2
		0.075 mm	117.70	111.40	31.6
		0.053 mm	116.84	111.40	23.2

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	32.2	36.2	68.4			31.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0693	0.2050	0.3042	0.7122	0.8793	1.0922	1.3941

Fineness Modulus
1.32

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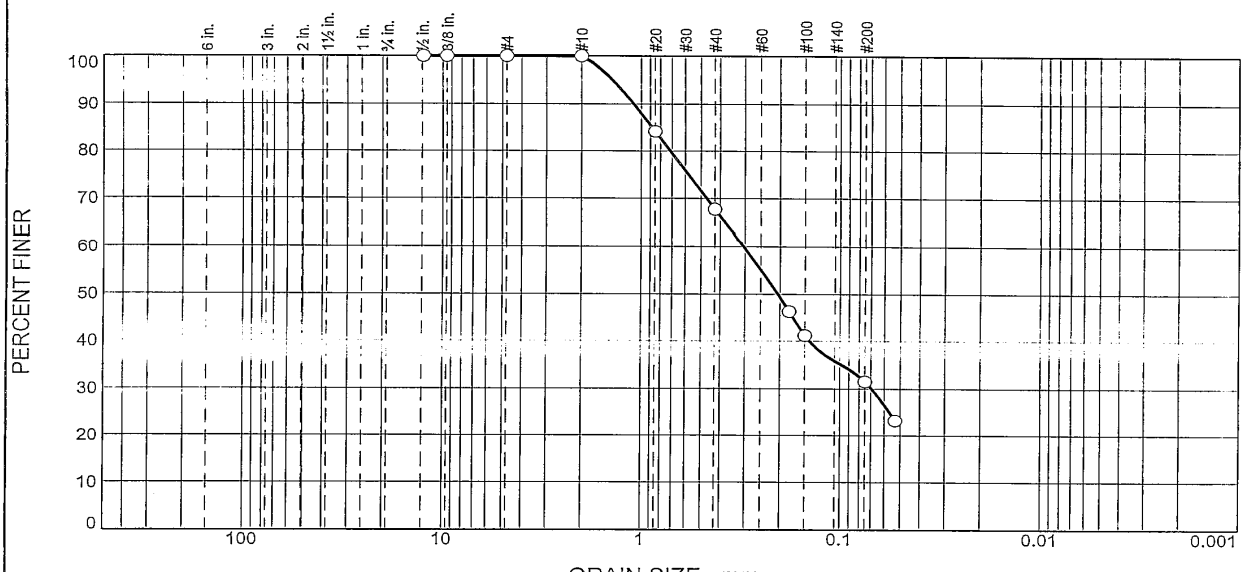
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	32.2	36.2	31.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	84.2		
0.425 mm	67.8		
0.180 mm	46.3		
0.150 mm	41.2		
0.075 mm	31.6		
0.053 mm	23.2		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 48.3%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.0922 D_{85}= 0.8793 D_{60}= 0.3042
D_{50}= 0.2050 D_{30}= 0.0693 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/23/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-56 **Date Sampled:** 8/20/2011
Sample Number: DS-11-26

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-57 **Sample Number:** DS-11-27
Material Description: Sample appears to be mostly clay
Moisture content as received = 39.3%
Sample Date: 8/20/2011
Date Received: 8/23/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.82	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	116.41	111.40	92.4
		0.425 mm	116.57	111.40	84.5
		0.180 mm	131.89	111.40	53.4
		0.150 mm	117.01	111.40	44.9
		0.075 mm	124.66	111.40	24.7
		0.053 mm	116.07	111.40	17.6

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	15.5	59.8	75.3			24.7

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
		0.0596	0.0950	0.1676	0.2076	0.3538	0.4349	0.6336	1.1151

Fineness Modulus
0.95

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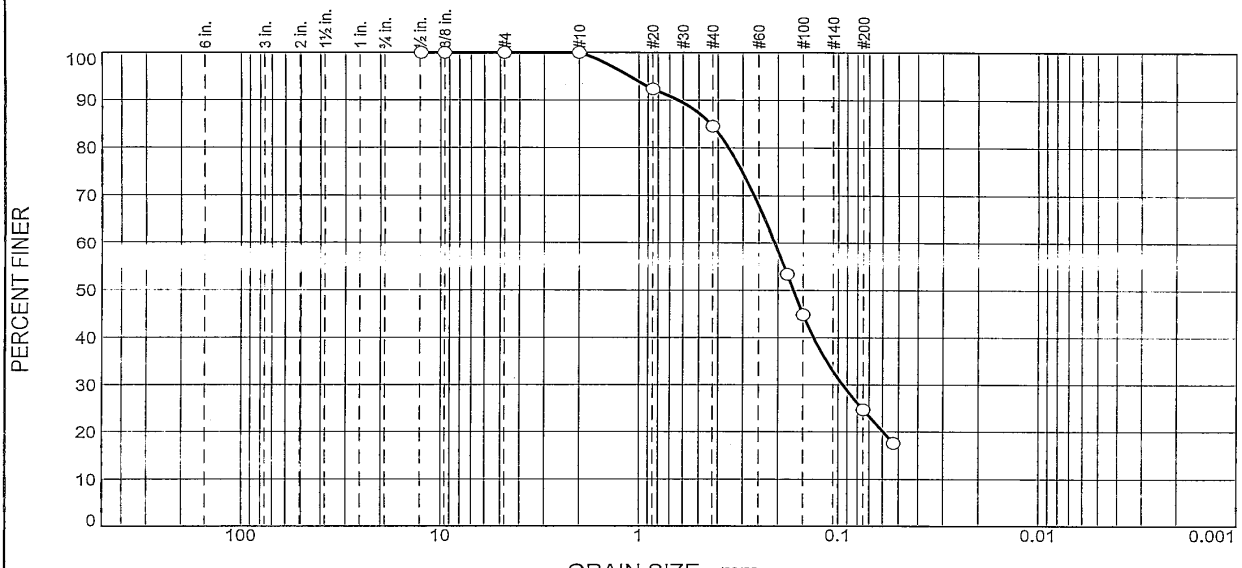
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	15.5	59.8	24.7	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	92.4		
0.425 mm	84.5		
0.180 mm	53.4		
0.150 mm	44.9		
0.075 mm	24.7		
0.053 mm	17.6		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 39.3%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.6336 D_{85}= 0.4349 D_{60}= 0.2076
D_{50}= 0.1676 D_{30}= 0.0950 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/23/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-57 **Date Sampled:** 8/20/2011
Sample Number: DS-11-27

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-61 **Sample Number:** DS-11-01
Material Description: Sample appears to be mostly clay
Moisture content as received = 67.5%
Sample Date: 8/20/2011
Date Received: 8/23/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.43	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	121.18	111.40	85.1
		0.425 mm	120.39	111.40	71.3
		0.180 mm	128.28	111.40	45.5
		0.150 mm	119.11	111.40	33.7
		0.075 mm	122.72	111.40	16.4
		0.053 mm	118.61	111.40	5.4

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	28.7	54.9	83.6			16.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0603	0.0708	0.0926	0.1394	0.1944	0.2459	0.6712	0.8479	1.0689	1.3789

Fineness Modulus	C_u	C_c
1.31	4.08	1.31

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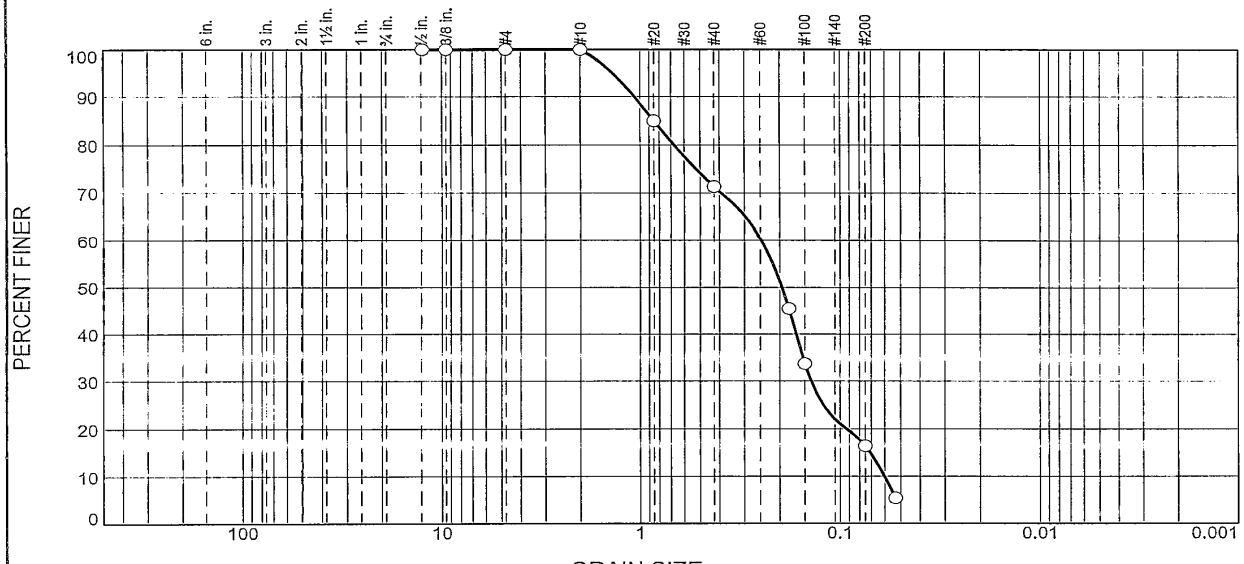
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	28.7	54.9	16.4	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	85.1		
0.425 mm	71.3		
0.180 mm	45.5		
0.150 mm	33.7		
0.075 mm	16.4		
0.053 mm	5.4		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 67.5%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.0689 D_{85}= 0.8479 D_{60}= 0.2459
D_{50}= 0.1944 D_{30}= 0.1394 D_{15}= 0.0708
D_{10}= 0.0603 C_u= 4.08 C_c= 1.31

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/23/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-61 **Date Sampled:** 8/20/2011
Sample Number: DS-11-01

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-62 **Sample Number:** DS-11-02
Material Description: Sample appears to be mostly clay
Moisture content as received = 59.8%
Sample Date: 8/20/2011
Date Received: 8/23/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.03	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	116.56	111.40	92.1
		0.425 mm	122.96	111.40	74.3
		0.180 mm	122.10	111.40	57.8
		0.150 mm	114.69	111.40	52.8
		0.075 mm	117.06	111.40	44.1
		0.053 mm	115.88	111.40	37.2

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	25.7	30.2	55.9			44.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.1305	0.1960	0.5334	0.6395	0.7754	1.0000

Fineness Modulus
0.99

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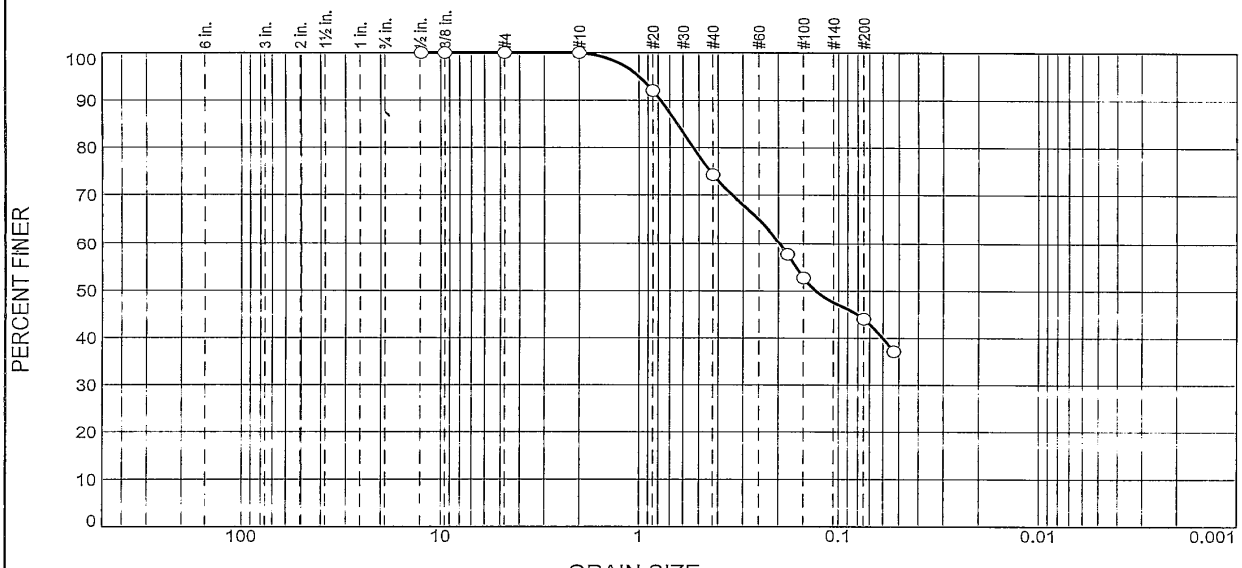
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	25.7	30.2	44.1	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	92.1		
0.425 mm	74.3		
0.180 mm	57.8		
0.150 mm	52.8		
0.075 mm	44.1		
0.053 mm	37.2		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 59.8%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.7754 D_{85}= 0.6395 D_{60}= 0.1960
D_{50}= 0.1305 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/23/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-62 **Date Sampled:** 8/20/2011
Sample Number: DS-11-02

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-63 **Sample Number:** DS-11-03
Material Description: Sample appears to be mostly clay
Moisture content as received = 61.8%
Sample Date: 8/20/2011
Date Received: 8/23/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.09	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	117.50	111.40	90.6
		0.425 mm	122.08	111.40	74.2
		0.180 mm	122.19	111.40	57.6
		0.150 mm	113.64	111.40	54.2
		0.075 mm	118.85	111.40	42.8
		0.053 mm	116.52	111.40	34.9

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	25.8	31.4	57.2			42.8

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
				0.1159	0.2043	0.5398	0.6607	0.8240	1.1013

Fineness Modulus
1.00

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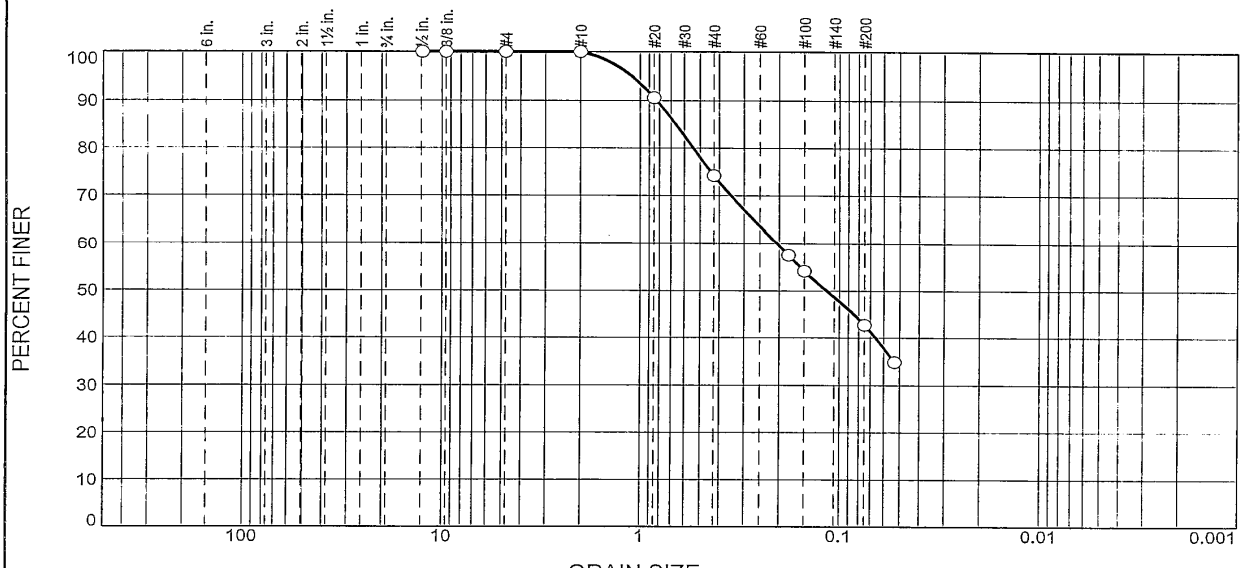
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	25.8	31.4	42.8	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	90.6		
0.425 mm	74.2		
0.180 mm	57.6		
0.150 mm	54.2		
0.075 mm	42.8		
0.053 mm	34.9		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 61.8%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.8240 D_{85}= 0.6607 D_{60}= 0.2043
D_{50}= 0.1159 D_{30}= D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/23/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-63 **Date Sampled:** 8/20/2011
Sample Number: DS-11-03

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Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-64 **Sample Number:** DS-11-04
Material Description: Sample appears to be mostly clay
Moisture content as received = 57.2%
Sample Date: 8/20/2011
Date Received: 8/23/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.57	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	115.80	111.40	93.3
		0.425 mm	119.55	111.40	80.9
		0.180 mm	120.41	111.40	67.1
		0.150 mm	113.67	111.40	63.7
		0.075 mm	124.19	111.40	44.2
		0.053 mm	123.88	111.40	25.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	19.1	36.7	55.8			44.2

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0576	0.0866	0.1249	0.4042	0.5322	0.6958	0.9641

Fineness Modulus
0.77

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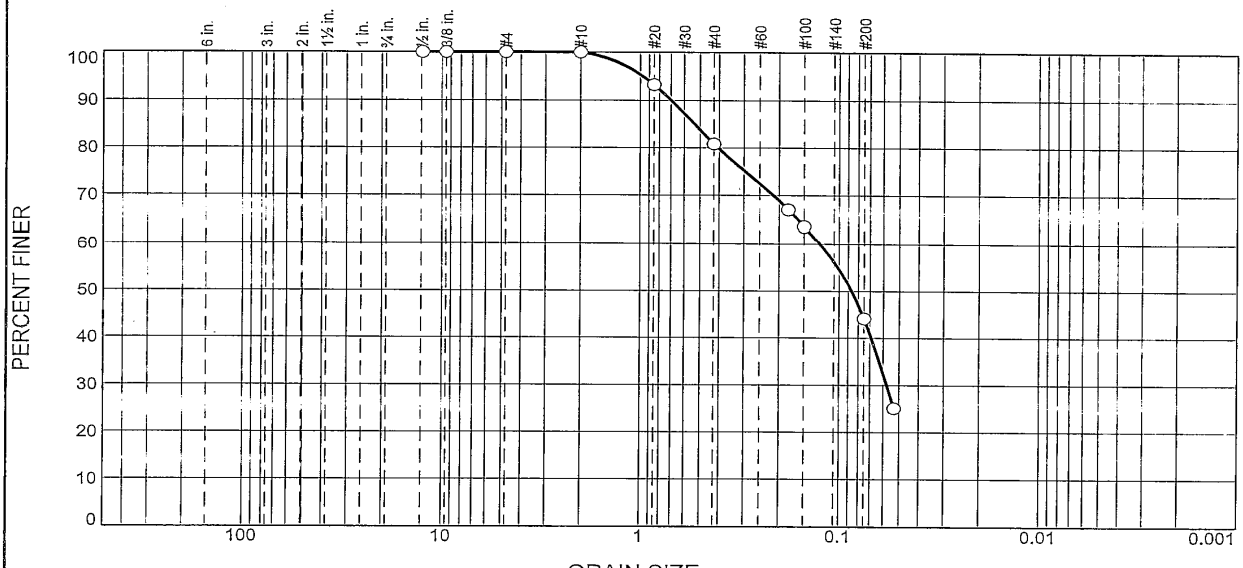
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	19.1	36.7	44.2	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	93.3		
0.425 mm	80.9		
0.180 mm	67.1		
0.150 mm	63.7		
0.075 mm	44.2		
0.053 mm	25.1		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 57.2%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.6958 D_{85}= 0.5322 D_{60}= 0.1249
D_{50}= 0.0866 D_{30}= 0.0576 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/23/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-64 **Date Sampled:** 8/20/2011
Sample Number: DS-11-04

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Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-65 **Sample Number:** DS-11-05
Material Description: Sample appears to be mostly clay
Moisture content as received = 49.3%
Sample Date: 8/20/2011
Date Received: 8/23/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.40	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	114.09	111.40	95.9
		0.425 mm	116.82	111.40	87.6
		0.180 mm	119.15	111.40	75.7
		0.150 mm	114.19	111.40	71.5
		0.075 mm	128.80	111.40	44.9
		0.053 mm	122.40	111.40	28.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	12.4	42.7	55.1			44.9

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0551	0.0839	0.1063	0.2291	0.3390	0.5155	0.7786

Fineness Modulus
0.55

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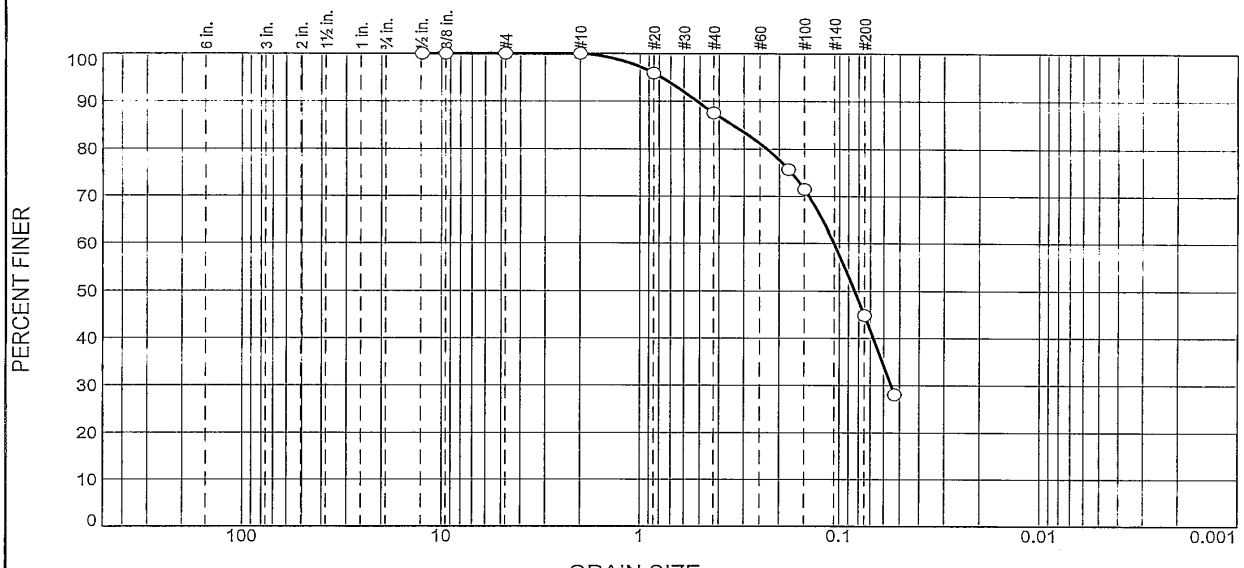
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	12.4	42.7	44.9	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	95.9		
0.425 mm	87.6		
0.180 mm	75.7		
0.150 mm	71.5		
0.075 mm	44.9		
0.053 mm	28.1		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 49.3%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.5155 D_{85}= 0.3390 D_{60}= 0.1063
D_{50}= 0.0839 D_{30}= 0.0551 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/23/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-65 **Date Sampled:** 8/20/2011
Sample Number: DS-11-05

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/8/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-03 DUP **Sample Number:** DS-11-18
Material Description: Sample appears to be mostly clay
Moisture content as received = 38.5%
Sample Date: 8/15/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.68	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	114.98	112.55	96.3
		0.850 mm	117.04	112.55	89.5
		0.425 mm	121.88	112.55	75.3
		0.180 mm	118.16	112.55	66.7
		0.150 mm	117.54	112.55	59.1
		0.075 mm	130.18	112.55	32.3
		0.053 mm	118.80	112.55	22.8

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	3.7	21.0	43.0	67.7			32.3

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0695	0.1215	0.1530	0.5581	0.6908	0.8759	1.4464

Fineness Modulus
0.95

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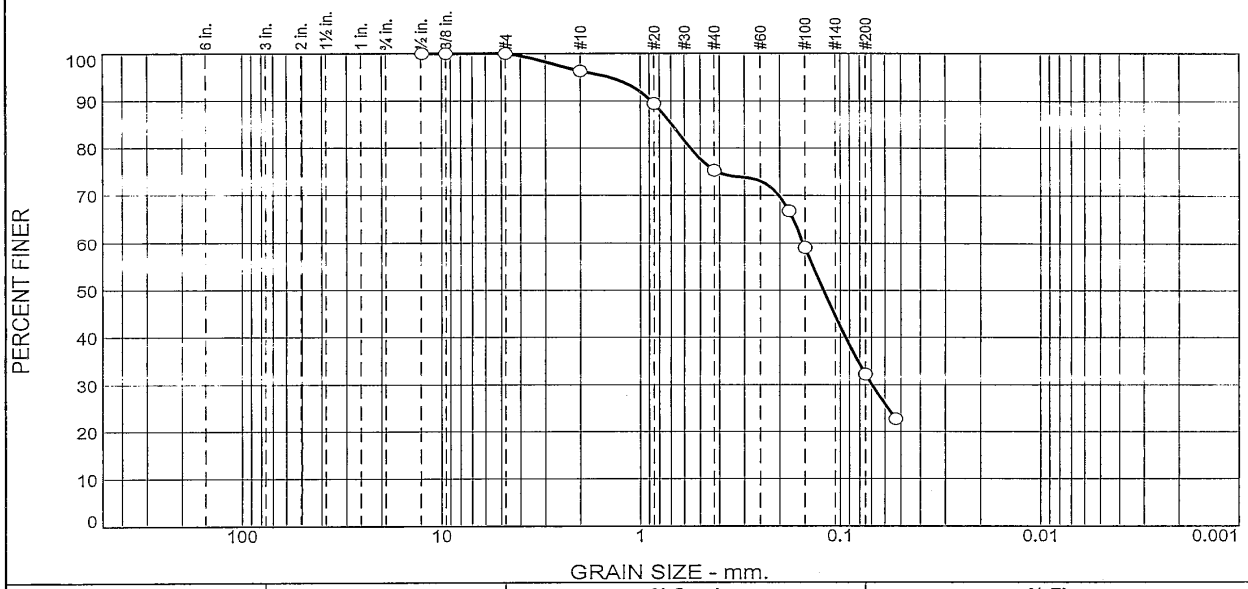
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	3.7	21.0	43.0	32.3	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	96.3		
0.850 mm	89.5		
0.425 mm	75.3		
0.180 mm	66.7		
0.150 mm	59.1		
0.075 mm	32.3		
0.053 mm	22.8		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 38.5%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.8759 D_{85}= 0.6908 D_{60}= 0.1530
D_{50}= 0.1215 D_{30}= 0.0695 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-03 DUP **Date Sampled:** 8/15/2011
Sample Number: DS-11-18

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-10 DUP
Sample Number: DS-11-06
Material Description: Sample appears to be mostly clay
Moisture content as received = 39.2%
Sample Date: 8/15/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as
Test Date: 9/1/2011
Checked By: jm
Title: project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.16	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	127.11	114.32	80.4
		0.425 mm	121.03	114.32	70.1
		0.180 mm	133.91	114.32	40.0
		0.150 mm	117.08	114.32	35.8
		0.075 mm	128.41	114.32	14.1
		0.053 mm	118.81	114.32	7.3

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	29.9	56.0	85.9			14.1

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0620	0.0774	0.0913	0.1229	0.2431	0.3133	0.8319	1.0518	1.2738	1.5472

Fineness Modulus	C_u	C_c
1.42	5.05	0.78

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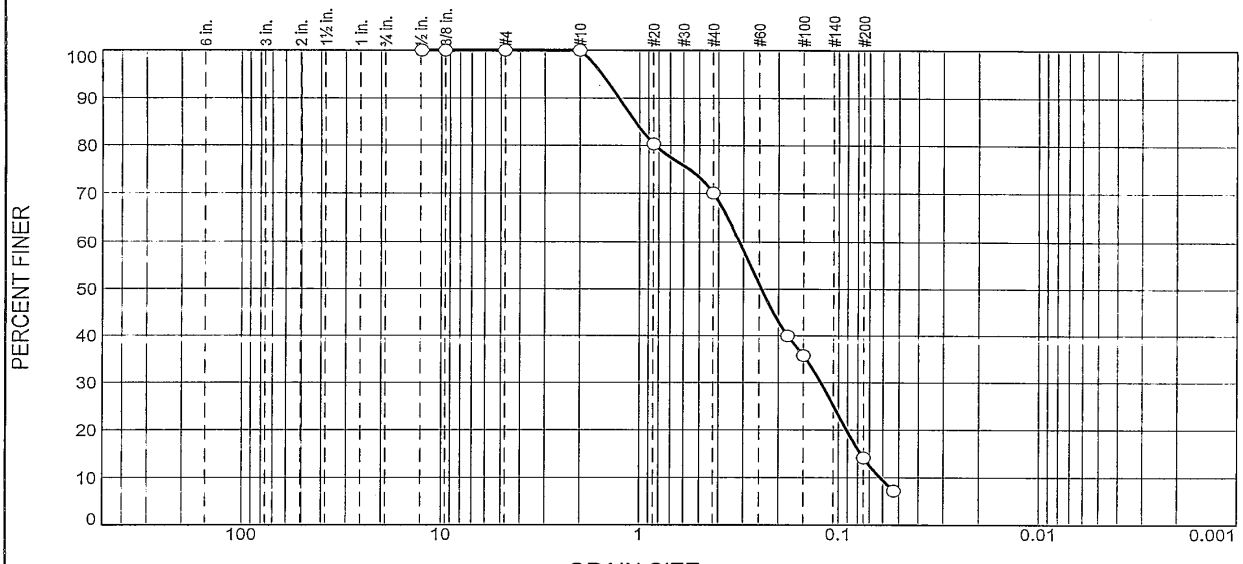
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	29.9	56.0	14.1	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	80.4		
0.425 mm	70.1		
0.180 mm	40.0		
0.150 mm	35.8		
0.075 mm	14.1		
0.053 mm	7.3		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 39.2%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.2738 D_{85}= 1.0518 D_{60}= 0.3133
D_{50}= 0.2431 D_{30}= 0.1229 D_{15}= 0.0774
D_{10}= 0.0620 C_u= 5.05 C_c= 0.78

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/1/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-10 DUP **Date Sampled:** 8/15/2011
Sample Number: DS-11-06

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-26 DUP
Sample Number: DS-11-45
Material Description: Sample appears to be mostly clay
Moisture content as received = 63.8%
Sample Date: 8/17/2011
Date Received: 8/17/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as
Test Date: 9/6/2011
Checked By: jm
Title: project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.33	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	130.96	114.32	74.5
		0.425 mm	125.08	114.32	58.1
		0.180 mm	119.19	114.32	50.6
		0.150 mm	119.65	114.32	42.4
		0.075 mm	124.14	114.32	27.4
		0.053 mm	117.65	114.32	22.3

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	41.9	30.7	72.6			27.4

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0915	0.1773	0.4989	0.9933	1.1448	1.3294	1.5758

Fineness Modulus
1.54

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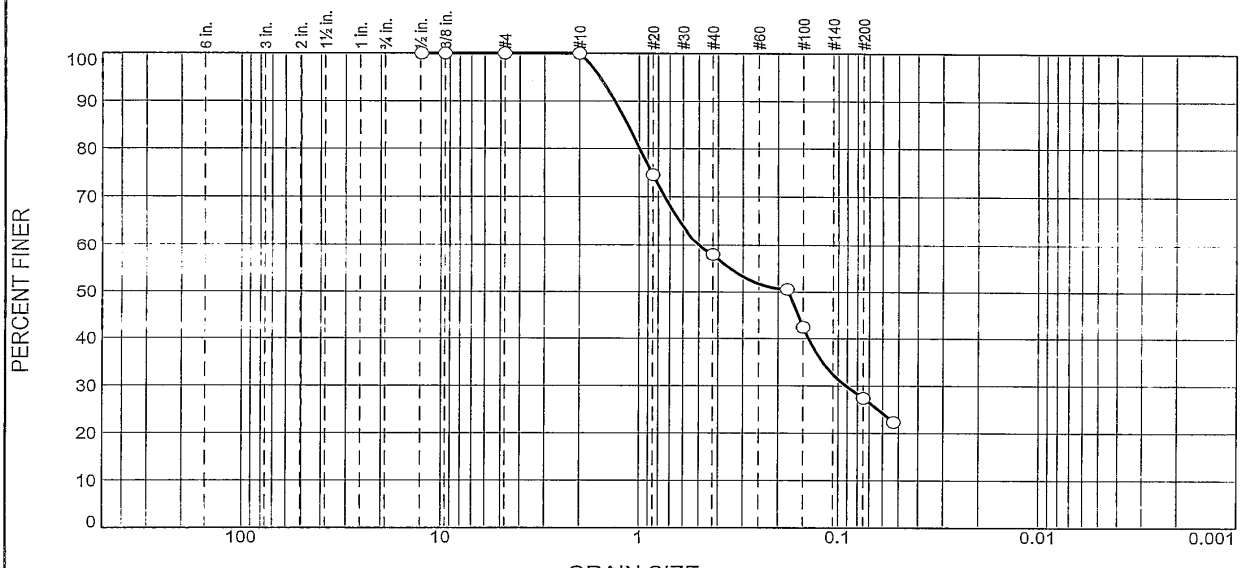
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	41.9	30.7	27.4	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	74.5		
0.425 mm	58.1		
0.180 mm	50.6		
0.150 mm	42.4		
0.075 mm	27.4		
0.053 mm	22.3		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 63.8%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 1.3294 D_{85}= 1.1448 D_{60}= 0.4989
D_{50}= 0.1773 D_{30}= 0.0915 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/17/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-26 DUP **Date Sampled:** 8/17/2011
Sample Number: DS-11-45

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-41 DUP
Sample Number: DS-11-33
Material Description: Sample appears to be mostly medium sand
Moisture content as received =19.2%
Sample Date: 8/18/2011
Date Received: 8/20/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as
Test Date: 9/6/2011
Checked By: jm
Title: project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
115.16	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	115.89	111.40	96.1
		0.425 mm	124.61	111.40	84.6
		0.180 mm	189.11	111.40	17.2
		0.150 mm	117.19	111.40	12.1
		0.075 mm	114.28	111.40	9.6
		0.053 mm	115.51	111.40	6.1

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	15.4	75.0	90.4			9.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
0.0833	0.1699	0.1908	0.2214	0.2783	0.3100	0.3949	0.4323	0.5573	0.7749

Fineness Modulus	C_u	C_c
1.42	3.72	1.90

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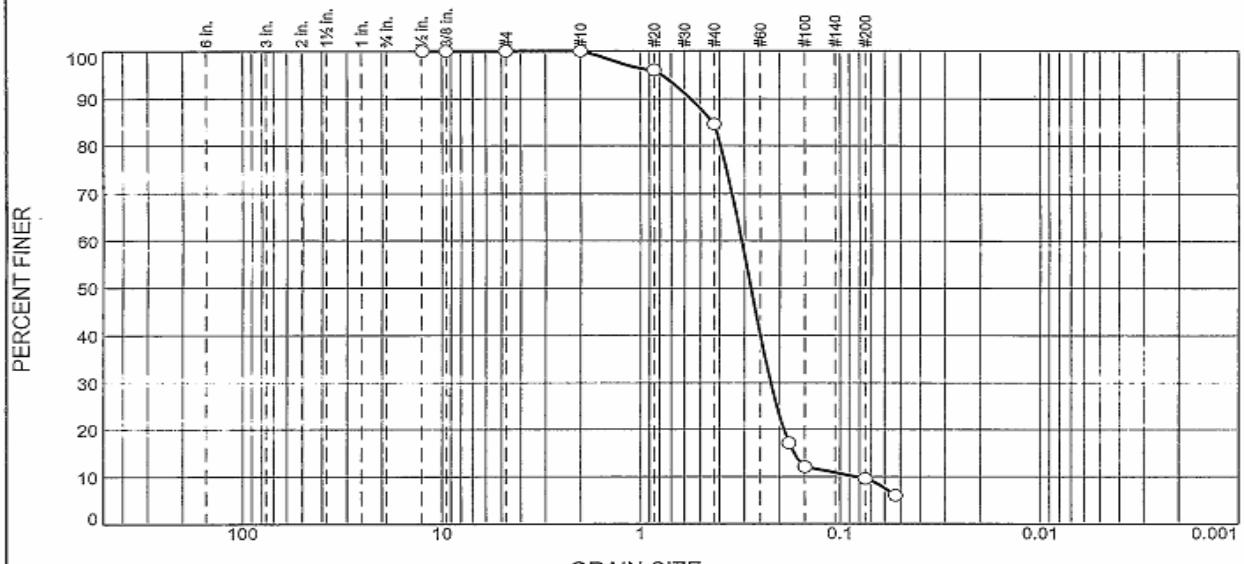
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	15.4	75.0	9.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	96.1		
0.425 mm	84.6		
0.180 mm	17.2		
0.150 mm	12.1		
0.075 mm	9.6		
0.053 mm	6.1		

* (no specification provided)

Material Description

Sample appears to be mostly medium sand
Moisture content as received =19.2%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.5573 D_{85}= 0.4323 D_{60}= 0.3100
D_{50}= 0.2783 D_{30}= 0.2214 D_{15}= 0.1699
D_{10}= 0.0833 C_u= 3.72 C_c= 1.90

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/20/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-41 DUP **Date Sampled:** 8/18/2011
Sample Number: DS-11-33

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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www.trace-labs.com

GRAIN SIZE DISTRIBUTION TEST DATA

9/7/2011

Client: FutureNet
Project: Duluth MN / Superior, WI
Project Number: 11652-0036
Location: Duluth MN / Superior WI
Depth: T11H197-57 DUP **Sample Number:** DS-11-27
Material Description: Sample appears to be mostly clay
Moisture content as received = 39.3%
Sample Date: 8/20/2011
Date Received: 8/23/2011
Testing Remarks: Test Methods Used: ASTM D-421, D-422 and D-2216
Tested By: as **Test Date:** 9/6/2011
Checked By: jm **Title:** project manager

Sieve Test Data

Dry Sample and Tare (grams)	Tare (grams)	Sieve Opening Size	Weight Retained (grams)	Sieve Weight (grams)	Percent Finer
65.91	0.00	12.5 mm	0.00	0.00	100.0
		9.5 mm	0.00	0.00	100.0
		4.75 mm	0.00	0.00	100.0
		2.00 mm	0.00	0.00	100.0
		0.850 mm	116.85	111.40	91.7
		0.425 mm	115.92	111.40	84.9
		0.180 mm	130.16	111.40	56.4
		0.150 mm	117.95	111.40	46.5
		0.075 mm	121.19	111.40	31.6
		0.053 mm	117.81	111.40	21.9

Fractional Components

Cobbles	Gravel			Sand				Fines		
	Coarse	Fine	Total	Coarse	Medium	Fine	Total	Silt	Clay	Total
0.0	0.0	0.0	0.0	0.0	15.1	53.3	68.4			31.6

D_{10}	D_{15}	D_{20}	D_{30}	D_{50}	D_{60}	D_{80}	D_{85}	D_{90}	D_{95}
			0.0698	0.1606	0.1926	0.3318	0.4285	0.6914	1.1605

Fineness Modulus
0.92

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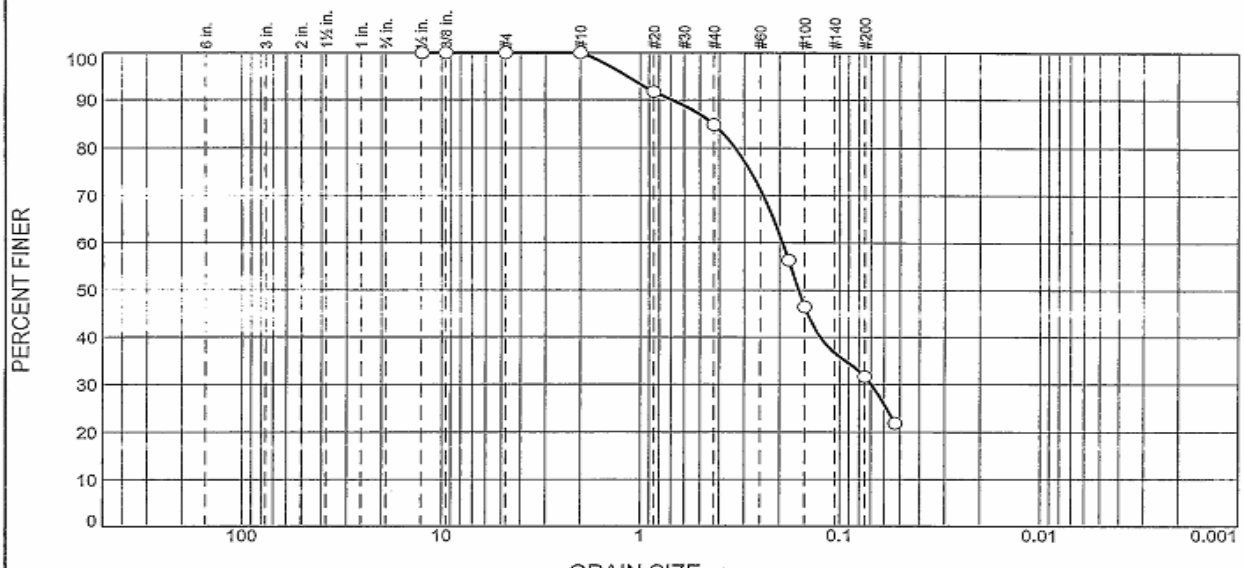
Particle Size Distribution Report



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	15.1	53.3	31.6	

TEST RESULTS

Opening Size	Percent Finer	Spec.* (Percent)	Pass? (X=Fail)
12.5 mm	100.0		
9.5 mm	100.0		
4.75 mm	100.0		
2.00 mm	100.0		
0.850 mm	91.7		
0.425 mm	84.9		
0.180 mm	56.4		
0.150 mm	46.5		
0.075 mm	31.6		
0.053 mm	21.9		

* (no specification provided)

Material Description

Sample appears to be mostly clay
Moisture content as received = 39.3%

Atterberg Limits (ASTM D 4318)

PL= LL= PI=

Classification

USCS (D 2487)= AASHTO (M 145)=

Coefficients

D_{90}= 0.6914 D_{85}= 0.4285 D_{60}= 0.1926
D_{50}= 0.1606 D_{30}= 0.0698 D_{15}=
D_{10}= C_u= C_c=

Remarks

Test Methods Used: ASTM D-421, D-422 and D-2216

Date Received: 8/23/2011 **Date Tested:** 9/6/2011
Tested By: as
Checked By: jm
Title: project manager

Source of Sample: Duluth MN / Superior WI **Depth:** T11H197-57 DUP **Date Sampled:** 8/20/2011
Sample Number: DS-11-27

TRACE ANALYTICAL LABORATORIES

Client: FutureNet
Project: Duluth MN / Superior, WI
Project No: 11652-0036 **Figure**

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Page 1 of 2

TRACE ID NO. T11H197

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Report Results To:

Client Name: FutureNet Group
Contact Person: Mariah Hope
Mailing Address: 12801 Auburn St
City, State, Zip Code: Detroit, MI 48223
Phone: 313-544-7117 Fax: 313-544-7111
Email Address: mariahh@futurenetgroup.com
Project #: 11652-0036 PO #: Trace Quote #:
Project Name: Duluth MN/Superior, WI Sampled by: M. Hope

Bill To:

Billing Address (if different)
City, State, Zip Code
Attn: Phone: Fax:

TRACE USE ONLY

Logged By: Checked By:
Received on Ice: Yes No Preservative Checked: Yes No N/A
Soil Volatiles Preserved: MeOH En Core Low Level Lab

Regulatory Requirements		Turnaround Requirements		Matrix Key	
MERA TMDL's	☐	Standard (2 wk)	☒	S = Soil	WI = Wipes
Drinking Water	☐	* 5 Day	☐	W = Water	LW = Liquid Waste
NPDES	☐	* 2-4 Day (RUSH)	☐	SE = Sediment	A = Air
USACE	☐	* 24 Hour (RUSH)	☐	OI = Oil	D = Drinking Water
Special	☐	* Requires prior approval		SO = Solid Waste	SL = Sludge

Request for Analytical Services — ANALYSIS REQUESTED

TRACE NO.	DATE TAKEN	TIME TAKEN	METALS FIELD FILTERED	CLIENT SAMPLE ID	MATRIX	NUMBER OF CONTAINERS	PCBs aroclors	PAHs	Nutrient kit	organic kit	metals kit	Physical kit	Nutrient kit C	Eluviate kit C	Nutrient kit E	Metals kit E	REMARKS	Possible Health Hazard
01	8-15-11	1000		DS-11-16	Se	3	X	X	X	X	X	X						
02		1130		DS-11-17	Se	3												
03		1330		DS-11-18	Se	6											MS/MSD	
04		830		DS-11-19	Se	3												
05		915		DS-11-20	Se	3	X	X	X	X	X	X						
06	8-15-11	1000		DS-11-MW4	S/W	3							X	X	X	X	8-16-11 900 [illegible]	
07		1115		DS-11-10	Se	3	X	X	X	X	X	X						
08		1200		DS-11-09	Se	3												
09		1800		DS-11-08	Se	3												
10		1030		DS-11-06	Se	6											MS/MSD	

Please Sign

Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME
	[illegible]	Fedex	8/16-11	1900		3)			
	2) Fed-Ex	[illegible]	8-17-11	10:27		4)			

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Client Name: FutureNet Group
Contact Person: Mariah Hope
Mailing Address: 12801 Auburn St
City, State, Zip Code: Detroit, MI 48223
Phone: 313-544-7117 Fax: 313-544-7111
Email Address: mariahh@futurenetgroup.com
Project #: 11652-0036 PO #: Trace Quote #:
Project Name: Duluth MN/Superior, WI Sampled by: M. Hope

Bill To:

Billing Address (if different)
City, State, Zip Code
Attn: Phone: Fax:

TRACE USE ONLY

Logged By: Checked By:
Received on Ice: Yes No Preservative Checked: Yes No N/A
Soil Volatiles Preserved: MeOH En Core Low Level Lab

Regulatory Requirements		Turnaround Requirements		Matrix Key	
MERA TMDLs	☐	Standard (2 wk)	☐	S = Soil	WI = Wipes
Drinking Water	☐	* 5 Day	☐	W = Water	LW = Liquid Waste
NPDES	☐	* 2-4 Day (RUSH)	☐	SE = Sediment	A = Air
USACE	☐	* 24 Hour (RUSH)	☐	OI = Oil	D = Drinking Water
Special	☐	* Requires prior approval		SO = Solid Waste	SL = Sludge

Request for Analytical Services — ANALYSIS REQUESTED

TRACE NO.	DATE TAKEN	TIME TAKEN	METALS FIELD FILTERED	CLIENT SAMPLE ID	MATRIX	NUMBER OF CONTAINERS	PCB Products	PAHs	Nutrient kit	organic kit	metals kit	physical kit	nutrient kit C	Eliminate	Nutrient kit	metals kit	REMARKS	Possible Health Hazard
11	8-16-11	1145		DS-11-07	Se	3	X	X	X	X	X	X	—	—	—	—	—	
12	8-15-11	1615		DS-11-MU2	Solid	3	—	—	—	—	—	—	X	X	X	X	8-16-11 1200	
13	8-16-11	1530		DS-11-11	Se	3	X	X	X	X	X	X	—	—	—	—	—	
14	8-16-11	1600		DS-11-12	Se	3	X	X	X	X	X	X	—	—	—	—	—	
15	8-16	04 1000		DS-11-MU4	W									X	X	X		
16	8-16-11	1200 1635		DS-11-MU2	W									X	X	X		

*TM x Samples with

Please Sign

Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME
	1)		8-16-11			3)			
	2) Fed-Ex		8-17-11	10:27		4)			

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TRACE ID NO. T11H197

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Report Results To:

Client Name: FutureNet Group
Contact Person: Mariah Hope
Mailing Address: 12801 Auburn St
City, State, Zip Code: Detroit, MI 48223
Phone: 313-544-7117 Fax: 313-544-7111
Email Address: mariahh@futurenetgroup.com
Project #: 11652-0036 PO #: Trace Quote #:
Project Name: Duluth MN/Superior, WI Sampled by: M. Hope

Bill To:

Billing Address (if different)
City, State, Zip Code
Attn: Phone: Fax:

TRACE USE ONLY

Logged By: JS Checked By: DMC
Received on Ice: Yes No Preservative Checked: Yes No N/A
Soil Volatiles Preserved: MeOH En Core Low Level Lab

Regulatory Requirements		Turnaround Requirements		Matrix Key	
MERA TMDL's	☐	Standard (2 wk)	☐	S = Soil	Wi = Wipes
Drinking Water	☐	* 5 Day	☐	W = Water	LW = Liquid Waste
NPDES	☐	* 2-4 Day (RUSH)	☐	SE = Sediment	A = Air
USACE	☐	* 24 Hour (RUSH)	☐	Oi = Oil	D = Drinking Water
Special	☐	* Requires prior approval		SO = Solid Waste	SL = Sludge

Request for Analytical Services — ANALYSIS REQUESTED

TRACE NO.	DATE TAKEN	TIME TAKEN	METALS FIELD FILTERED	CLIENT SAMPLE ID	MATRIX	NUMBER OF CONTAINERS	PCB aroclors	PAHs	metals kit	nutrient kit	organic kit	physical kit w/o cyanide	nutrient kit C	Elutriate prep	nutrient kit	metals kit E	REMARKS	Possible Health Hazard
17	8-17-11	800		DS-11-13	Se	3	X	X	X	X	X	X	—	—	—	—		
18	8-17-11	900		DS-11-14	Se	3	X	X	X	X	X	X	—	—	—	—		
19	8-17-11	1000		DS-11-15	Se	3	X	X	X	X	X	X	—	—	—	—		
20/21	8-18-11	1030		DS-11-MU3	Se	3	—	—	—	—	—	—	X	X	X	X	Mix throughout	
22	8-17-11	1145		DS-11-41	Se	3	X	X	X	X	X	X	—	—	—	—		
23		1200		DS-11-42	Se	3						X	—	—	—	—		
24		1215		DS-11-43	Se	3						X	—	—	—	—		
25		12		DS-11-44	Se	3						X	—	—	—	—		
26		1250		DS-11-45	Se	6	X	X	X	X	X	X	—	—	—	—	MS/MSD	
27		1300		DS-11-~~1400~~ HTBU	Se	1	—	—	—	—	—	—	X	—	—	—		

Please Sign

Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME
	1) [signature]	[signature]	8-17-11	1800		3)			
	2) Fed Ex	J Smith	8-18-11	10:30		4)			

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Email Address: mariahh@futurenetgroup.com
Project #: 11652-0036 PO #: Trace Quote #:
Project Name: Duluth MN/Superior, WI Sampled by: M. Hope

Bill To:

Billing Address (if different)
City, State, Zip Code
Attn: Phone: Fax:

TRACE USE ONLY

Logged By: Checked By:
Received on Ice: Yes No Preservative Checked: Yes No N/A
Soil Volatiles Preserved: MeOH En Core Low Level Lab

Regulatory Requirements		Turnaround Requirements		Matrix Key	
MERA TMDL's	☐	Standard (2 wk)	☐	S = Soil	WI = Wipes
Drinking Water	☐	* 5 Day	☐	W = Water	LW = Liquid Waste
NPDES	☐	* 2-4 Day (RUSH)	☐	SE = Sediment	A = Air
USACE	☐	* 24 Hour (RUSH)	☐	OI = Oil	D = Drinking Water
Special	☐	* Requires prior approval		SO = Solid Waste	SL = Sludge

Request for Analytical Services — ANALYSIS REQUESTED

TRACE NO.	DATE TAKEN	TIME TAKEN	METALS FIELD FILTERED	CLIENT SAMPLE ID	MATRIX	NUMBER OF CONTAINERS	PCBs aroclors	PAH	Metals kit	Nutrient kit	organochlorine pesticides	Physical test w/o NH3	Nutrient kit				REMARKS	Possible Health Hazard
28	8-17	1630		DS-11-46	Se	3	X	X	X	X	X	X	—					
29	8-17	1645		DS-11-47	Se	3							—					
30	8-17	1700		DS-11-48	Se	3							—					
~~[illegible]~~	~~[illegible]~~			~~DS-11-49~~	Se	3							—					
~~[illegible]~~	~~[illegible]~~			~~DS-11-50~~	Se	3	X	X	X	X	X		—					
				~~DS-11-TIP0~~	Se	1							X					
31		1430		DS-11-21	Se	3	X	X	X	X	X	X	—					
32		1545		DS-11-22	Se	3	X	X	X	X	X	X	—					

Please Sign

Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME
	1) [illegible]	Fedex	8-17-11	1800		3)			
	2) Fed EX	J Smith	8-18-11	10:30		4)			

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Contact Person: Mariah Hope
Mailing Address: 12801 Auburn St
City, State, Zip Code: Detroit, MI 48223
Phone: 313-544-7117 Fax: 313-544-7111
Email Address: mariahh@futurenetgroup.com
Project #: 11652-0036 PO #: Trace Quote #:
Project Name: Duluth MN/Superior, WI Sampled by: M. Hope

Bill To:

Billing Address (if different)
City, State, Zip Code
Attn: Phone: Fax:

TRACE USE ONLY

Logged By: Checked By:
Received on Ice: Yes No Preservative Checked: Yes No N/A
Soil Volatiles Preserved: MeOH En Core Low Level Lab

Regulatory Requirements		Turnaround Requirements		Matrix Key	
MERA TMDL's	☐	Standard (2 wk)	☑	S = Soil	WI = Wipes
Drinking Water	☐	* 5 Day	☐	W = Water	LW = Liquid Waste
NPDES	☐	* 2-4 Day (RUSH)	☐	SE = Sediment	A = Air
USACE	☐	* 24 Hour (RUSH)	☐	OI = Oil	D = Drinking Water
Special	☐	* Requires prior approval		SO = Solid Waste	SL = Sludge

Request for Analytical Services — ANALYSIS REQUESTED

TRACE NO.	DATE TAKEN	TIME TAKEN	METALS FIELD FILTERED	CLIENT SAMPLE ID	MATRIX	NUMBER OF CONTAINERS	PCBs products	PAHs	organic kit	nutrient kit	metals kit	Physical kit w/ nutrient kit				REMARKS	Possible Health Hazard
33	8-18-11	800		DS-11-36	S	3	X	X	X	X	X	X	—				
34		830		DS-11-37		3							—				
35		850		DS-11-38		3							—				
36		900		DS-11-39		3							—				
37		920		DS-11-40		3	X	X	X	X	X	X	—				
38		920		DS-11-MOPU		1	—	—	—	—	—	—	X			mx thoroughly	
39		1045		DS-11-31		3	X	X	X	X	X	X	—				
40		1120		DS-11-32		3							—				
41		1140		DS-11-33		6							—			MS/MSD	
42		1200		DS-11-34		3	X	X	X	X	X	X	—				

Please Sign

Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME
	1) [signature]	[signature]	8-18-11	11:00		3) [signature]	[signature]	8/20/11	1400
	2) [signature]	[signature]	8/20/11	10:30		4) LOBIK-IN	[signature]	8/22/11	8:35

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Email Address: mariahh@futurenetgroup.com
Project #: 11652-0036 PO #: Trace Quote #:
Project Name: Duluth MN/Superior, WI Sampled by: M. Hope

Bill To:

Billing Address (if different)
City, State, Zip Code
Attn: Phone: Fax:

TRACE USE ONLY

Logged By: Checked By: Bone
Received on Ice: (Yes) No Preservative Checked: Yes No (N/A)
Soil Volatiles Preserved: MeOH En Core Low Level Lab

Regulatory Requirements		Turnaround Requirements		Matrix Key	
MERA TMDL's	☐	Standard (2 wk)	☑	S = Soil	WI = Wipes
Drinking Water	☐	* 5 Day	☐	W = Water	LW = Liquid Waste
NPDES	☐	* 2-4 Day (RUSH)	☐	SE = Sediment	A = Air
USACE	☐	* 24 Hour (RUSH)	☐	OI = Oil	D = Drinking Water
Special	☐	* Requires prior approval		SO = Solid Waste	SL = Sludge

Request for Analytical Services — ANALYSIS REQUESTED

TRACE NO.	DATE TAKEN	TIME TAKEN	METALS FIELD FILTERED	CLIENT SAMPLE ID	MATRIX	NUMBER OF CONTAINERS	Bulk Asbestos	PAH	Organic Lab	Nutrient Kit	Metals Kit	Physical Kit WQ	Nutrient Kit C	Volatile Analyp	Nutrient Kit B	Metals Kit B	REMARKS	Possible Health Hazard
43	8-18-11	1255		DS-11-35	Se	3	X	X	X	X	X	X	—					
44	8-18-11	1245		DS-11-WOPU	Se	1	—	—	—	—	—	—	X				mix throughly.	
45	8-18-11	1430		DS-11-30	Se	3	X	X	X	X	X	X						
46	8-18-11	1645		DS-11-29		3							—					
47	8-18-11	1730		DS-11-28		3							—					
48	8-18-11	1845		DS-11-49		3							—					
49	8-18-11	1900		DS-11 50		3	X	X	X	X	X	X	—					
50	8-18-11	1900		DS-11-IIPU		1	—	—	—	—	—	—	X					
51	8-18-11	1700		DS-11-MW6	W	1	—	—	—	—	—	—	—	X	X	X		
52	8-19-11	800		DS-11 MW1	W	1	—	—	—	—	—	—	—	X	X	X		

Please Sign

Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME
	1) [signature]	[signature]	8-19-11	1100		3) [signature]	[signature]	8/20/11	1400
	2) [signature]	[signature]	8/20/11	10:30		4) WALK-IN	[signature]	8/22/11	8:38

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CHAIN-OF-CUSTODY RECORD

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Muskegon, MI 49444-2673
www.trace-labs.com

Page 1 of 2

TRACE ID NO. T11H197

In executing this agreement, the client acknowledges acceptance of the terms of agreement as listed on the following page of this Chain-of-Custody.

Report Results To:

Client Name: FutureNet Group
Contact Person: Mariah Hope
Mailing Address: 12801 Auburn St
City, State, Zip Code: Detroit, MI 48223
Phone: 313-544-7117 Fax: 313-544-7111
Email Address: mariahh@futurenetgroup.com
Project #: 11652-0036 PO #: Trace Quote #:
Project Name: Duluth MN/Superior, WI Sampled by: M. Hope

TRACE USE ONLY

Logged By: Bme Checked By: LS
Received on Ice: Yes No Preservative Checked: Yes No N/A
Soil Volatiles Preserved: MeOH En Core Low Level Lab

Regulatory Requirements		Turnaround Requirements		Matrix Key	
MERA TMDL's	☐	Standard (2 wk)	☐	S = Soil	WI = Wipes
Drinking Water	☐	* 5 Day	☐	W = Water	LW = Liquid Waste
NPDES	☐	* 2-4 Day (RUSH)	☐	SE = Sediment	A = Air
USACE	☐	* 24 Hour (RUSH)	☐	OI = Oil	D = Drinking Water
Special	☐	* Requires prior approval		SO = Solid Waste	SL = Sludge

Bill To:

Billing Address (if different)
City, State, Zip Code
Attn: Phone: Fax:

Request for Analytical Services — ANALYSIS REQUESTED

TRACE NO.	DATE TAKEN	TIME TAKEN	METALS FIELD FILTERED	CLIENT SAMPLE ID	MATRIX	NUMBER OF CONTAINERS	PCB, Aroclors	PAHs	organic kit	nutrient kit	metals kit	physical kit	nutrient kit C	Eliminate prep	nutrient kit B	metals kit C	REMARKS	Possible Health Hazard
53	8-20	700		DS-11-23	Se	3	X	X	X	X	X	X	—	—	—	—		
54		725		DS-11-24		3							—	—	—	—		
55		800		DS-11-25		3							—	—	—	—		
56		845		DS-11-26		3							—	—	—	—		
57		900		DS-11-27	Se	6	X	X	X	X	X	X	—	—	—	—	MS/MSD	
58/59		800		DS-11-MU5	Se W	3	—	—	—	—	—	—	X	X	X	X		
51/60		900		DS-11 MU6	Se	2	—	—	—	—	—	—	X	X	X	X		
60		1040		DS-11-01	Se	3	X	X	X	X	X	X	—	—	—	—		
62		1100		DS-11 02	Se	3							—	—	—	—		
63		1125		DS-11 03	Se	3	X	X	X	X	X	X	—	—	—	—		

Please Sign

Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME
	1) [signature]	[signature]	8-20-11	1300	3)				
	2) Fed Ex	[signature]	8-23-11	10:47	4)				

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Page 2 of 2

TRACE ID NO. T11H197

In executing this agreement, the client acknowledges acceptance of the terms of agreement as listed on the following page of this Chain-of-Custody.

Report Results To:

Client Name: FutureNet Group
Contact Person: Mariah Hope
Mailing Address: 12801 Auburn St
City, State, Zip Code: Detroit, MI 48223
Phone: 313-544-7117 Fax: 313-544-7111
Email Address: mariahh@futurenetgroup.com
Project #: 11652-0036 PO #: Trace Quote #:
Project Name: Duluth MN/Superior, WI Sampled by: M. Hope

TRACE USE ONLY

Logged By: BME Checked By: [illegible]
Received on Ice: (Yes) No Preservative Checked: Yes No N/A
Soil Volatiles Preserved: MeOH En Core Low Level Lab

Regulatory Requirements		Turnaround Requirements		Matrix Key	
MERA TMDL's	☐	Standard (2 wk)	☐	S = Soil	Wi = Wipes
Drinking Water	☐	* 5 Day	☐	W = Water	LW = Liquid Waste
NPDES	☐	* 2-4 Day (RUSH)	☐	SE = Sediment	A = Air
USACE	☐	* 24 Hour (RUSH)	☐	OI = Oil	D = Drinking Water
Special	☐	* Requires prior approval		SO = Solid Waste	SL = Sludge

Bill To:

Billing Address (if different)
City, State, Zip Code
Attn: Phone: Fax:

Request for Analytical Services

ANALYSIS REQUESTED

TRACE NO.	DATE TAKEN	TIME TAKEN	METALS FIELD FILTERED	CLIENT SAMPLE ID	MATRIX	NUMBER OF CONTAINERS	PCBs aroclors	PAHs	metals kit	nutrient kit	organic kit	Physical pH/wo hyd	nutrient kit-C	Nitrate only	nutrient kit-E	metals kit-E	REMARKS	Possible Health Hazard
04	8-20-11	1140		DS-11-04	Se	3	X	X	X	X	X	X						
05	8-20-11	1200		DS-11-05	Se	3	X	X	X	X	X	X						
52/	8-20-11	1200		DS-11-MU1	Se/Wi	3							X	X	X	X		
				~~DS-11-~~														
				~~DS-11-~~														
				~~DS-11-~~														

Please Sign

Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME
	1) [illegible]	[illegible]	8-20-11	1300		3)			
	2) Red Ox	BMcDonald	8-23-11	10:47		4)			

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SAMPLE LOG IN CHECKLIST

Date: 8-17-11 Client Name: Futurenet # of Coolers: 2

Trace ID #: T11H197 Project Name: Cooler #s:

Logged in by: Cooler #s:

Cooler Receipt

Cooler/samples delivered by: Trace courier [ ] Hand delivered [ ] Commercial courier [X] Name of delivery person: UPS [ ] DHL [ ] FED EX [X] US Mail [ ]

Did cooler come with a bill of lading? No [ ] Yes [X] [ ] Not Applicable Way Bill or Tracking #:

COC Seals present and intact on cooler? No [ ] Yes [X] [ ] Not Applicable

Custody seals signed by Client? No [ ] Yes [X] Client custody seal # (If applicable):

Coolant and Temperature

Type of Coolant Used

	Yes	No
Slurry w/ crushed, cubed, or chip ice?	[ ]	[ ]
Multiple bags of ice around samples?	[X]	[ ]
Ice Packs/ Blue Ice :	[ ]	[ ]
No Coolant Present:	[ ]	

Cooler Temperature

Correction Factor -0.2°C

Date: 8-17-11 Time: 10:27

Temperature Blank: 4.1 °C

Range of 3 samples: 2 3 °C

Melt Water: °C

Ice still present upon receipt: [X] Yes [ ] No

General

	Yes	No	NA
COC taped to inside of cooler lid?	[X]	[ ]	[ ]
All bottles arrived unbroken with labels in good condition?	[X]	[ ]	[ ]
Each sample point is in a sealed plastic bag?	[X]	[ ]	[ ]
Labels filled out completely?	[X]	[ ]	[ ]
All bottle labels agree with Chain of Custody (COC)?	[X]	[ ]	[ ]
Sufficient sample to run tests requested?	[X]	[ ]	[ ]
pH checked and samples at correct pH?	[ ]	[ ]	[X]
Correct preservative added to samples?	[ ]	[ ]	[X]
DRO/GRO samples received and appropriate check in form completed?	[ ]	[ ]	[X]
Air bubbles absent from VOAs?	[ ]	[ ]	[X]
COC filled out properly and signed by client?	[X]	[ ]	[ ]
COC signed in by TRACE sample custodian?	[X]	[ ]	[ ]
Was project manager called and samples discussed?	[ ]	[ ]	[ ]

Contact: Date:

Notes:

Rev.8 11/21/06

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SAMPLE LOG IN CHECKLIST

Date: 8-18-11 Client Name: Futurenet # of Coolers: 4
Trace ID #: T11H197 Project Name: Cooler #s:
Logged in by: Cooler #s:

Cooler Receipt

Cooler/samples delivered by: Trace courier [ ] Hand delivered [ ] Commercial courier [X] Name of delivery person: UPS [ ] DHL [ ] FED EX [X] US Mail [ ]

Did cooler come with a bill of lading? No [ ] Yes [X] [ ] Not Applicable Way Bill or Tracking #:

COC Seals present and intact on cooler? No [ ] Yes [X] [ ] Not Applicable

Custody seals signed by Client? No [ ] Yes [X] Client custody seal # (if applicable):

Coolant and Temperature

Type of Coolant Used

	Yes	No
Slurry w/ crushed, cubed, or chip ice?	[ ]	[ ]
Multiple bags of ice around samples?	[X]	[ ]
Ice Packs/ Blue Ice :	[ ]	[ ]
No Coolant Present:	[ ]	

Cooler Temperature

Correction Factor -0.3°C

Date: 8-18-11 Time: 10:30

Temperature Blank: °C

Range of 3 samples: 2 °C

Melt Water: °C

Ice still present upon receipt: [X] Yes [ ] No

General

	Yes	No	NA
COC taped to inside of cooler lid?	[ ]	[X]	[ ]
All bottles arrived unbroken with labels in good condition?	[X]	[ ]	[ ]
Each sample point is in a sealed plastic bag?	[X]	[ ]	[ ]
Labels filled out completely?	[X]	[ ]	[ ]
All bottle labels agree with Chain of Custody (COC)?	[X]	[ ]	[ ]
Sufficient sample to run tests requested?	[X]	[ ]	[ ]
pH checked and samples at correct pH?	[ ]	[ ]	[X]
Correct preservative added to samples?	[ ]	[ ]	[X]
DRO/GRO samples received and appropriate check in form completed?	[ ]	[ ]	[X]
Air bubbles absent from VOAs?	[ ]	[ ]	[X]
COC filled out properly and signed by client?	[X]	[ ]	[ ]
COC signed in by TRACE sample custodian?	[X]	[ ]	[ ]
Was project manager called and samples discussed?	[ ]	[ ]	[ ]

Contact: Date:

Notes:

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www.trace-labs.com

SAMPLE LOG IN CHECKLIST

Date: 8-22-11 Client Name: FutureNet # of Coolers: 2
Trace ID #: T11H197 Project Name: Cooler #s:
Logged in by: Cooler #s:

Cooler Receipt

Cooler/samples delivered by: Trace courier [ ] Hand delivered [ ] Commercial courier [X] Name of delivery person: UPS [ ] DHL [ ] FED EX [X] US Mail [ ]

Did cooler come with a bill of lading? No [ ] Yes [X] [ ] Not Applicable Way Bill or Tracking #:

COC Seals present and intact on cooler? No [ ] Yes [X] [ ] Not Applicable

Custody seals signed by Client? No [ ] Yes [X] Client custody seal # (if applicable):

Coolant and Temperature

Type of Coolant Used

	Yes	No
Slurry w/ crushed, cubed, or chip ice?	[ ]	[ ]
Multiple bags of ice around samples?	[X]	[ ]
Ice Packs/ Blue Ice :	[ ]	[ ]
No Coolant Present:	[ ]	

Cooler Temperature

Correction Factor: -0.2°C

Date: 8-22-11 Time: 8:38

Temperature Blank: 1.0 °C

Range of 3 samples: °C

Melt Water: °C

Ice still present upon receipt: [X] Yes [ ] No

General

	Yes	No	NA
COC taped to inside of cooler lid?	[X]	[ ]	[ ]
All bottles arrived unbroken with labels in good condition?	[✓]	[X]	[ ]
Each sample point is in a sealed plastic bag?	[X]	[ ]	[ ]
Labels filled out completely?	[X]	[ ]	[ ]
All bottle labels agree with Chain of Custody (COC)?	[X]	[ ]	[ ]
Sufficient sample to run tests requested?	[X]	[ ]	[ ]
pH checked and samples at correct pH?	[ ]	[ ]	[X]
Correct preservative added to samples?	[ ]	[ ]	[X]
DRO/GRO samples received and appropriate check in form completed?	[ ]	[ ]	[X]
Air bubbles absent from VOAs?	[ ]	[ ]	[X]
COC filled out properly and signed by client?	[X]	[ ]	[ ]
COC signed in by TRACE sample custodian?	[X]	[ ]	[ ]
Was project manager called and samples discussed?	[ ]	[ ]	[ ]

Contact: Date:

Notes:

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2241 Black Creek Road
Muskegon, MI 49444-2673
info@trace-labs.com
www.trace-labs.com

SAMPLE LOG IN CHECKLIST

Date: 8/23/11 Client Name: Future Net # of Coolers: 2
Trace ID #: T11H197 Project Name: Duluth Cooler #s:
Logged in by: BMC Cooler #s:

Cooler Receipt

Cooler/samples delivered by: Trace courier [ ] Hand delivered [ ] Commercial courier [ ] Name of delivery person: UPS [ ] DHL [ ] FED EX [X] US Mail [ ]

Did cooler come with a bill of lading? No [ ] Yes [X] [ ] Not Applicable Way Bill or Tracking #:

COC Seals present and intact on cooler? No [ ] Yes [X] [ ] Not Applicable

Custody seals signed by Client? No [ ] Yes [X] Client custody seal # (if applicable):

Coolant and Temperature

Type of Coolant Used

	Yes	No
Slurry w/ crushed, cubed, or chip ice?	[ ]	[ ]
Multiple bags of ice around samples?	[X]	[ ]
Ice Packs/ Blue Ice :	[ ]	[ ]
No Coolant Present:	[ ]	

Cooler Temperature

Correction Factor +0.2°C

Date: 8/23/11 Time: 10:47

Temperature Blank: 6 °C

Range of 3 samples: 5-6 °C

Melt Water: °C

Ice still present upon receipt: [X] Yes [ ] No

General

	Yes	No	NA
COC taped to inside of cooler lid?	[X]	[ ]	[ ]
All bottles arrived unbroken with labels in good condition?	[X]	[ ]	[ ]
Each sample point is in a sealed plastic bag?	[X]	[ ]	[ ]
Labels filled out completely?	[X]	[ ]	[ ]
All bottle labels agree with Chain of Custody (COC)?	[X]	[ ]	[ ]
Sufficient sample to run tests requested?	[X]	[ ]	[ ]
pH checked and samples at correct pH?	[ ]	[ ]	[X]
Correct preservative added to samples?	[ ]	[ ]	[X]
DRO/GRO samples received and appropriate check in form completed?	[ ]	[ ]	[X]
Air bubbles absent from VOAs?	[ ]	[ ]	[X]
COC filled out properly and signed by client?	[X]	[ ]	[ ]
COC signed in by TRACE sample custodian?	[X]	[ ]	[ ]
Was project manager called and samples discussed?	[ ]	[X]	[ ]

Contact: Date:

Notes:

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www.trace-labs.com

Boni McDonald

From: Jon Mink [jmink@trace-labs.com]
Sent: Thursday, September 15, 2011 8:29 AM
To: Boni McDonald
Subject: FW: Chain of Custodies

Jon Mink
Project Manager
Trace Analytical Laboratories, Inc.
231-773-5998 x241
jmink@trace-labs.com
-----Original Message-----
From: Mariah Hope [mailto:MariahH@futurenetgroup.com]
Sent: Wednesday, September 14, 2011 3:26 PM
To: Jon Mink
Subject: RE: Chain of Custodies

Jon,
Enclosed is the revised coc with the corrected date for the Duluth project. I am still waiting to hear about the background waters. I have enclosed the COC for the background water.

Thank you,

Mariah G. Hope P.E.

FutureNet Group Inc.
12801 Auburn Street
Detroit, Michigan 48223
Cell (313) 333-0147
Office (313) 544-7117
Fax (313) 544-7111
mariahh@futurenetgroup.com

From: Jon Mink [mailto:jmink@trace-labs.com]
Sent: Friday, September 09, 2011 11:36 AM
To: Mariah Hope
Subject: RE: Chain of Custodies

Here you go.

Jon Mink
Project Manager
Trace Analytical Laboratories, Inc.
231-773-5998 x241
jmink@trace-labs.com

-----Original Message-----
From: Mariah Hope [mailto:MariahH@futurenetgroup.com]

9/15/2011

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Page 1 of 2

TRACE ID NO. T11H197

In consideration for agreement to the client's knowledge acceptance of the terms of agreement as provided on the original signed chain of custody.

Report Results To:

Client Name: FutureNet Group
Contact Person: Mariah Hope
Mailing Address: 12801 Auburn St
City, State, Zip Code: Detroit, MI 48223
Phone: 313-544-7117 Fax: 313-544-7111
Email Address: mariahh@futurenetgroup.com
Project #: 11652-0036 PO #: Trace Quote #:
Project Name: Duluth MN/Superior, WI Sampled by: M. Hope

Bill To:

Billing Address (if different):
City, State, Zip Code:
Attn: Phone: Fax:

TRACE USE ONLY

Logged By: Checked By:
Received on ice: Yes No Preservative Checked: Yes No N/A
Soil Volatiles Preserved: MeOH En Core Low Level Lab

Regulatory Requirements		Turnaround Requirements		Matrix Key	
MERA TMDLs	☐	Standard (2 wk)	☒	S = Soil	Wi = Wipes
Drinking Water	☐	* 5 Day	☐	W = Water	LW = Liquid Waste
NPDES	☐	* 2-4 Day (RUSH)	☐	SE = Sediment	A = Air
USACE	☐	* 24 Hour (RUSH)	☐	Oi = Oil	D = Drinking Water
Special	☐	* Requires prior approval		SO = Solid Waste	SL = Sludge

Request for Analytical Services — ANALYSIS REQUESTED

TRACE NO.	DATE TAKEN	TIME TAKEN	METALS FIELD FILTERED	CLIENT SAMPLE ID	MATRIX	NUMBER OF CONTAINERS	PCBs as Aroclors	Pathogens	Nutrient Kit	Organic Kit	Metals Kit	Physical Kit	Nutrient Kit C	Elutriate	Nutrient Kit E	Metals Kit E	REMARKS	Possible Health Hazard
01	8-15-11	1000		DS-11-16	Se	3	X	X	X	X	X	X	—	—	—	—		
02	8-15-11	1130		DS-11-17	Se	3							—	—	—	—		
03	8-15-11	1330		DS-11-18	Se	6							—	—	—	—	MS/MSD	
04	8-16-11	830		DS-11-19	Se	3							—	—	—	—		
05	8-16-11	914		DS-11-20	Se	3	X	X	X	X	X	X	—	—	—	—		
06	8-16-11	1000		DS-11-MU4	S/W	3	—	—	—	—	—	—	X	X	X	X	8-16-11 900 [illegible]	
07	8-15-11	1115		DS-11-10	Se	3	X	X	X	X	X	X	—	—	—	—		
08	8-15-11	1200		DS-11-09	Se	3							—	—	—	—		
09	8-15-11	1800		DS-11-08	Se	3							—	—	—	—		
10	8-16-11	1030		DS-11-06	Se	6							—	—	—	—	MS/MSD	

Please Sign

Item #	RELEASED BY	RECEIVED BY	DATE	TIME	Item #	RELEASED BY	RECEIVED BY	DATE	TIME
	1) [signature]	[signature]	8/16-11	1500		3)			
	2) Fed-Ex	[signature]	8-17-11	10:27		4)			

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APPENDIX I

RTI Soil Bulk Laboratory Reports

Table 13: Laboratory Analytical Results Table

RTI Analytical Reports and Chain-of Custodies

APPENDIX I

Table 13: RTI Analysis Summary Data Table

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	877-09-8	Surr: Tetrachloro-m-xylene	7.0	0	0			%REC	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.12	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.14	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.11	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.10	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.13	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.19	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.12	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.17	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.12	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.19	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.20	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.20	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.22	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.21	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.26	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	37680-65-2	2,2´,5-TrCB	ND	0.23	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.12	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.19	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.16	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	7012-37-5	2,4,4´-TrCB	ND	0.098	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	34883-43-7	2,4´-DiCB	ND	0.31	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.22	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.18	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.26	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001a	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	2051-24-3	DeCB	ND	0.14	0	1.3	U	µg/Kg-dry	9/25/2011	SW8082CON
1108806-001A	DS-11-MU1	Duluth Sediment	8/20/2011	8/23/2011	E-11870	Percent Moisture	50	1.0		1.0		wt%	8/25/2011	D2216
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	877-09-8	Surr: Tetrachloro-m-xylene	7.4	0	0			%REC	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.11	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.13	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	0.44	0.10	0	1.3	J	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.096	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	0.59	0.12	0	1.3	J	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.18	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	0.80	0.12	0	1.3	Jm	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.16	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON

APPENDIX I

Table 13: RTI Analysis Summary Data Table

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.11	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.18	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.18	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	0.68	0.18	0	1.3	J	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	37680-73-2	2,2´,4,5,5´-PeCB	0.51	0.21	0	1.3	J	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.20	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.24	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	37680-65-2	2,2´,5-TrCB	ND	0.22	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.12	0	1.3	dU	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.18	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.15	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	7012-37-5	2,4,4´-TrCB	ND	0.092	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	34883-43-7	2,4´-DiCB	ND	0.30	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.21	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.17	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.25	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002a	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	2051-24-3	DeCB	ND	0.13	0	1.3	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-002A	DS-11-MU2	Duluth Sediment	8/15/2011	8/23/2011	E-11870	Percent Moisture	47	1.0		1.0		wt%	8/25/2011	D2216
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	877-09-8	Surr: Tetrachloro-m-xylene	4.9	0	0			%REC	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.077	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.087	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.070	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.065	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.082	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.12	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.079	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.11	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.074	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.12	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.13	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.13	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.14	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.14	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.16	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	37680-65-2	2,2´,5-TrCB	ND	0.15	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.079	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON

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Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.12	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.10	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	7012-37-5	2,4,4´-TrCB	ND	0.063	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	34883-43-7	2,4´-DiCB	ND	0.20	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.14	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.12	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.17	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003a	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	2051-24-3	DeCB	ND	0.091	0	0.86	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-003A	DS-11-MU3	Duluth Sediment	8/17/2011	8/23/2011	E-11870	Percent Moisture	23	1.0		1.0		wt%	8/25/2011	D2216
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	877-09-8	Surr: Tetrachloro-m-xylene	5.1	0	0			%REC	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.076	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.086	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.070	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.065	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.081	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.12	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.079	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.11	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.074	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.12	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.12	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.12	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.14	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.14	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.16	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	37680-65-2	2,2´,5-TrCB	ND	0.15	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.079	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.12	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.10	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	7012-37-5	2,4,4´-TrCB	ND	0.062	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	34883-43-7	2,4´-DiCB	ND	0.20	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.14	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.12	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.17	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004a	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	2051-24-3	DeCB	ND	0.090	0	0.85	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-004A	DS-11-MU4	Duluth Sediment	8/16/2011	8/23/2011	E-11870	Percent Moisture	21	1.0		1.0		wt%	8/25/2011	D2216

APPENDIX I

Table 13: RTI Analysis Summary Data Table

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	877-09-8	Surr: Tetrachloro-m-xylene	13	0	0			%REC	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.20	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.22	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	1.0	0.18	0	2.2	Jm	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.17	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	1.6	0.21	0	2.2	J	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.32	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	0.50	0.20	0	2.2	Jm	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.27	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.19	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.32	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.32	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	0.64	0.32	0	2.2	J	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.36	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.35	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.42	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	37680-65-2	2,2´,5-TrCB	ND	0.38	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.20	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.30	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.26	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	7012-37-5	2,4,4´-TrCB	ND	0.16	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	34883-43-7	2,4´-DiCB	ND	0.51	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.36	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.30	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.43	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005a	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	2051-24-3	DeCB	ND	0.23	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-005A	DS-11-MU5	Duluth Sediment	8/20/2011	8/23/2011	E-11870	Percent Moisture	70	1.0		1.0		wt%	8/25/2011	D2216
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	877-09-8	Surr: Tetrachloro-m-xylene	6.3	0	0			%REC	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.11	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.13	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.10	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.094	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.12	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.18	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.11	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.15	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON

APPENDIX I

Table 13: RTI Analysis Summary Data Table

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.11	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.18	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.18	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.18	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.20	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.20	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.24	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	37680-65-2	2,2´,5-TrCB	ND	0.21	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.11	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.17	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.15	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	7012-37-5	2,4,4´-TrCB	ND	0.090	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	34883-43-7	2,4´-DiCB	ND	0.29	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.20	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.17	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.24	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006a	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	2051-24-3	DeCB	ND	0.13	0	1.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-006A	DS-11-MU6	Duluth Sediment	8/20/2011	8/23/2011	E-11870	Percent Moisture	46	1.0		1.0		wt%	8/25/2011	D2216
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	877-09-8	Surr: Tetrachloro-m-xylene	4.8	0	0			%REC	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.074	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.084	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.068	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.063	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.079	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.12	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.077	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.10	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.072	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.12	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.12	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.12	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.14	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.13	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.16	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	37680-65-2	2,2´,5-TrCB	ND	0.14	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.077	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON

APPENDIX I

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Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.12	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.098	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	7012-37-5	2,4,4´-TrCB	ND	0.061	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	34883-43-7	2,4´-DiCB	ND	0.19	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.14	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.11	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.16	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007a	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	2051-24-3	DeCB	ND	0.088	0	0.83	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-007A	DS-11-WOPU	Duluth Sediment	8/18/2011	8/23/2011	E-11870	Percent Moisture	20	1.0		1.0		wt%	8/25/2011	D2216
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	877-09-8	Surr: Tetrachloro-m-xylene	5.1	0	0			%REC	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.080	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.091	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.074	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.068	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.086	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.13	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.083	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.11	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.078	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.13	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.13	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.13	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.15	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.14	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.17	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	37680-65-2	2,2´,5-TrCB	ND	0.15	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.083	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.12	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.11	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	7012-37-5	2,4,4´-TrCB	ND	0.066	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	34883-43-7	2,4´-DiCB	ND	0.21	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.15	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.12	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.18	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008a	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	2051-24-3	DeCB	ND	0.095	0	0.90	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-008A	DS-11-MOPU	Duluth Sediment	8/18/2011	8/23/2011	E-11870	Percent Moisture	26	1.0		1.0		wt%	8/25/2011	D2216

APPENDIX I

Table 13: RTI Analysis Summary Data Table

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.3	0	0			%REC	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.16	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.18	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.14	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.13	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.17	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.25	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.16	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.21	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.15	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.25	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.25	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.25	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.29	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.28	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.33	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	37680-65-2	2,2´,5-TrCB	ND	0.30	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.16	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.24	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.20	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	7012-37-5	2,4,4´-TrCB	ND	0.13	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	34883-43-7	2,4´-DiCB	ND	0.41	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.28	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.24	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.34	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009a	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	2051-24-3	DeCB	ND	0.18	0	1.7	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-009A	DS-11-IIPU	Duluth Sediment	8/18/2011	8/23/2011	E-11870	Percent Moisture	61	1.0		1.0		wt%	8/25/2011	D2216
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	877-09-8	Surr: Tetrachloro-m-xylene	13	0	0			%REC	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.20	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.23	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.18	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.17	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.21	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.32	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.21	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.28	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON

APPENDIX I

Table 13: RTI Analysis Summary Data Table

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.19	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.32	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.33	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.33	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.37	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.36	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.43	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	37680-65-2	2,2´,5-TrCB	ND	0.38	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.21	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.31	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.26	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	7012-37-5	2,4,4´-TrCB	ND	0.16	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	34883-43-7	2,4´-DiCB	ND	0.52	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.37	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.30	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.44	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010a	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	2051-24-3	DeCB	ND	0.24	0	2.2	U	µg/Kg-dry	9/26/2011	SW8082CON
1108806-010A	DS-11-HIPU	Duluth Sediment	8/17/2011	8/23/2011	E-11870	Percent Moisture	70	1.0		1.0		wt%	8/25/2011	D2216

RTI LABORATORIES, INC.

Analytical Report

Level IV Data Package
for RTI WO 1108806

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Project: Duluth Sediment – 11652-0040

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TABLE OF CONTENTS
FutureNet Group, Inc.
Project: Duluth Sediment – 11652-0040
RTI Laboratories, Inc. Work Order # 1108806

I	Case Narrative	1-2
II	Chain of Custody/Sample Receiving Documents	3-6
III	Work Order Sample Summary	7
IV	Dates Report	8
V	Analytical Report	9-18
VI	QC Summary Report	19-23
VII	Polychlorinated Biphenyls Congeners (PCBs) Data	
	1. Prep Batch Report 9/20/2011	24
	2. Analytical Sequence Log 9/25/2011 (Run No. 43049)	25
	3. Analytical Run Summary	26-45
	4. Surrogates Report	46-48
	5. Spikes Report	49-55
	6. Method Blank Contamination Report	56
	7. Injection Log/CCV/Raw Data	57-130
	8. Second Column RPD Report	131
	9. Injection Log/ICal	132-190
VIII	Percent Moisture	
	1. Analytical Sequence Log 8/5/2011 (Run No. 42465)	191
	2. Analytical Run Summary	192-194
	3. Balance Verification Log	195
	4. Raw Data/Temperature Log	196

RTI Laboratories, Inc. **Date:** *24-Oct.-2011*

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment – 11652-0040
Lab Orders: 1108806

CASE NARRATIVE

SAMPLE RECEIPT:
Samples were received at the RTI Laboratory, Livonia, MI on 8/23/2011. Samples were received on wet ice and sample blank temperatures are recorded on the chain of custody and sample receiving documents. Sample preservation is checked on receipt and noted on the chain of custody. Adjustments required for sample preservation are recorded for the affected samples. The sample set consisted of 10 sediment samples.

Note: On data review minor discrepancies were noted for the following samples:

Sample ID	Congener	Original results	Actual results
1108806-002	2,2',3,3',4,4',5-HpCB	0.43 µg/kg-dry	0.44 µg/kg-dry
1108806-002	2,2'3,4,4',5'-HxCB	0.79 µg/kg-dry	0.80 µg/kg-dry
1108806-004	Surr.Tetrachloro-m-xylene	121%	122%
1108806-005	2,2'3,4,4',5'-HxCB	0.51 µg/kg-dry	0.50 µg/kg-dry
1108806-005	2,2',4,4',5,5'-HxCB	0.65 µg/kg-dry	0.64 µg/kg-dry

These discrepancies were due to inadvertent re-processing of the instrument data.

SAMPLE ANALYSIS:
Samples were analyzed at the RTI Livonia Laboratory for:
Polychlorinated Biphenyl Congeners – EPA Methods 3550C/8082
Percent Moisture – ASTM D2216

Sample ID 1108806-002: Second column RPD for 2,2',3,3',4,4',5-HpCB was >40%.

Analytical sample results are reported to the RL (reporting limit). Data points less than the RL but greater than the MDL (J qualified) have been excluded from the report on client request.

QUALITY CONTROL:

Polychlorinated Biphenyls Analyes:

All sample analyses included a Method Blank, LCS and MS/MSD where applicable. All QC parameters were within established control limits except where noted on the QC summary forms or below. Initial and continuing calibration results were within method specifications.

Surrogate recoveries were within established control limits.

Wet Chemistry Analyses:

All sample analyses included the method specified quality control samples.

RTI Laboratories, Inc.

Date: *24-Oct.-2011*

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment – 11652-0040
Lab Orders: 1108806

CASE NARRATIVE

No other problems were noted during the analytical events associated with this report.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Laboratory Director or his designee, as verified by the following signature

Signed: Charles O'Bryan
Charles O'Bryan, Director, Quality Management

Date: 10/24/2011

RTI LABORATORIES, INC.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

MAIN LAB & HEADQUARTERS
RTI LABORATORIES, INC.
11625 [illegible]

AIHA Cert #[illegible] NELAC Cert #[illegible] MBE Cert #[illegible]

110806

Please Include Email Address of Report Recipient Whenever Possible !!!

SUBMITTING COMPANY: FUTURENET GROUP INC		REPORT TO: MARIAH HOPE	BILL TO: FUTURENET GROUP
PROJECT NAME: DULUTH SEDIMENT	PROJECT #: 11652-0040 / QUOTE #:	COMPANY: FUTURENET GROUP	12801 AUBURN ST.
SPECIAL INSTRUCTIONS / COMMENTS: Mix thoroughly at laboratory		PHONE: 313-544-7117	DETROIT, MI 48223
		FAX: 313-544-7111	EMAIL: MARIAHH@FUTURENETGROUP.COM
SAMPLER(S) PRINTED NAME: Mariah Hope	SAMPLER'S SIGNATURE: [signature]		

ITEM #	SAMPLE ID	DATE SAMPLED	TIME SAMPLED	AIR	SOLID	FILTER	VOLUME	SAMPLE DESCRIPTION	# OF CONTAINERS	[illegible]							COMMENTS (Method/Preserved Weights HOF Sample Volumes etc.)
1	DS-11-MU1	8-20	1200					Composite Sediment	1	X							STANDARD TURN
2	DS-11-MU2	8-15	1800						1								Mix thoroughly at lab
3	DS-11-MU3	8-17	930						1								
4	DS-11-MU4	8-16	1400						1								
5	DS-11-MU5	8-20	800		X			Composite Sediment	1	X							
6	DS-11-MU6	8-20	900						1								
7	DS-11-WOPU	8-18	1445						1								
8	DS-11-MOPU	8-18	920						1								
9	DS-11-[illegible]PU	8-18	1900						1								
10	DS-11-HIPU	8-20	1300						1								

	Date	Time		Date	Time
Relinquished By: [signature]	8-20	1300	Received By: [signature]	8/20	1300
Relinquished By:	Date	Time	Received By:	Date	Time
Relinquished By:	Date	Time	Received By: [signature]	8/21	0745

TAT: Standard ☒ RUSH: Next B/D ☒ 2nd B/D ☐ 3rd B/D ☐
Note: RUSH requests will incur surcharges!

FOR LAB USE ONLY
Were samples preserved: ☐ In field ☐ In lab ☐ N/A
Were samples filtered: ☐ In field ☐ In lab ☐ N/A
Temp of Samples: 00-50 °C Do Well for ? Y
Comments: Coolers Sm. Dn but ice melted Temp Blank = 0.6°C

Distribution: White and Yellow - Lab; Pink - Client

See reverse side for Laboratory Terms and Conditions of service

www.ammara.com

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e 1 of 1

From: (313) 542-[illegible]117
Mariah Hope
Futurenet Group, Inc
12801 Auburn Street
Detroit, MI 48223

Origin ID: DETA

FedEx Express

E

Ship Date: 15AUG11
ActWgt: 0.0 B
CAD: 5304006/INET3180

Delivery Address Bar Code

SHIP TO: (734) 422-8000
BILL SENDER

RTI Laboratories
31628 GLENDALE ST
LIVONIA, MI 48150

Ref # 11652-0040
Invoice #
PO #
Dept #

TUE - 16 AUG A1
PRIORITY OVERNIGHT

TRK# 7974 0741 4987
0201

48150
MI US
DTW

66 DEOA

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Sample Receipt Checklist

Client Name: **FUT01**

Date and Time Received: **8/23/2011 9:45:00 AM**

Work Order Number **1108806** RcptNo: **1**

Received by: **Christine Conradis**

Completed by: Kathy Jones

Reviewed by:

Completed Date: 8/23/2011 1:05:03 PM

Reviewed Date: 8/29/2011 11:59:18 AM

Carrier name: FedEx

Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐	Not Present	☐
Are matrices correctly identified on Chain of custody?	Yes ☑	No ☐		
Is it clear what analyses were requested?	Yes ☑	No ☐		
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present	☑
Samples in proper container/bottle?	Yes ☑	No ☐		
Were correct preservatives used and noted?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
Were container lables complete (ID, Pres, Date)?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Was an attempt made to cool the samples?	Yes ☑	No ☐		
All samples received at a temp. of > 0° C to 6.0° C?	Yes ☑	No ☐		
Response when temperature is outside of range:				
Preservative added to bottles:				
Sample Temp. taken and recorded upon receipt?	Yes ☑	No ☐	0 To	5 °C
Water - Were bubbles absent in VOC vials?	Yes ☐	No ☐	No Vials	☑
Water - Was there Chlorine Present?	Yes ☐	No ☐	NA	☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	No Water	☑
Are Samples considered acceptable?	Yes ☑	No ☐		
Custody Seals present?	Yes ☐	No ☑		
Traffic Report or Packing Lists present?	Yes ☐	No ☑		
Airbill or Sticker?	Air Bill ☑	Sticker ☐	Not Present	☐
Airbill No:	797407417987			
Sample Tags Present?	Yes ☐	No ☑		
Sample Tags Listed on COC?	Yes ☐	No ☑		
Tag Numbers:				
Sample Condition?	Intact ☑	Broken ☐	Leaking	☐

Case Number: SDG: SAS:

Adjusted? _____ Checked by

Any No and/or NA (not applicable) response must be detailed in the comments section below.

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH
1108806-001A	Container-01 of 01	Bottle				
1108806-002A	Container-01 of 01	Bottle				
1108806-003A	Container-01 of 01	Bottle				
1108806-004A	Container-01 of 01	Bottle				
1108806-005A	Container-01 of 01	Bottle				
1108806-006A	Container-01 of 01	Bottle				
1108806-007A	Container-01 of 01	Bottle				
1108806-008A	Container-01 of 01	Bottle				
1108806-009A	Container-01 of 01	Bottle				
1108806-010A	Container-01 of 01	Bottle				

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
DK Blue	0-5	Good	Yes		8/22/2011	Barry Serburg

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section below.

Client Contacted? ☐ Yes ☑ No ☐ NA Person Contacted: Comments:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

CorrectiveAction:

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Workorder Sample Summary

WO#: **1108806**

24-Oct-11

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1108806-001	DS-11-MU1		8/20/2011 12:00:00 PM	8/23/2011 9:45:00 AM	Sediment
1108806-002	DS-11-MU2		8/15/2011 6:00:00 PM	8/23/2011 9:45:00 AM	Sediment
1108806-003	DS-11-MU3		8/17/2011 9:50:00 AM	8/23/2011 9:45:00 AM	Sediment
1108806-004	DS-11-MU4		8/16/2011 2:00:00 PM	8/23/2011 9:45:00 AM	Sediment
1108806-005	DS-11-MU5		8/20/2011 8:00:00 AM	8/23/2011 9:45:00 AM	Sediment
1108806-006	DS-11-MU6		8/20/2011 9:00:00 AM	8/23/2011 9:45:00 AM	Sediment
1108806-007	DS-11-WOPU		8/18/2011 12:45:00 PM	8/23/2011 9:45:00 AM	Sediment
1108806-008	DS-11-MOPU		8/18/2011 9:20:00 AM	8/23/2011 9:45:00 AM	Sediment
1108806-009	DS-11-11PU		8/18/2011 7:00:00 PM	8/23/2011 9:45:00 AM	Sediment
1108806-010	DS-11-HIPU		8/17/2011 1:00:00 PM	8/23/2011 9:45:00 AM	Sediment

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

DATES REPORT

WO#: **1108806**

24-Oct-11

Client: FutureNet Group, Inc.
Project: Duluth Sediment

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1108806-001A	DS-11-MU1	8/20/2011 12:00:00 PM	Sediment	PERCENT MOISTURE			8/25/2011 1:00:00 PM
				Polychlorinated Biphenyl Congeners		9/20/2011 1:30:04 PM	9/25/2011 11:21:00 PM
1108806-002A	DS-11-MU2	8/15/2011 6:00:00 PM		PERCENT MOISTURE			8/25/2011 1:00:00 PM
				Polychlorinated Biphenyl Congeners		9/20/2011 1:30:04 PM	9/26/2011 12:07:00 AM
1108806-003A	DS-11-MU3	8/17/2011 9:50:00 AM		PERCENT MOISTURE			8/25/2011 1:00:00 PM
				Polychlorinated Biphenyl Congeners		9/20/2011 1:30:04 PM	9/26/2011 12:52:00 AM
1108806-004A	DS-11-MU4	8/16/2011 2:00:00 PM		PERCENT MOISTURE			8/25/2011 1:00:00 PM
				Polychlorinated Biphenyl Congeners		9/20/2011 1:30:04 PM	9/26/2011 1:37:00 AM
1108806-005A	DS-11-MU5	8/20/2011 8:00:00 AM		PERCENT MOISTURE			8/25/2011 1:00:00 PM
				Polychlorinated Biphenyl Congeners		9/20/2011 1:30:04 PM	9/26/2011 2:23:00 AM
1108806-006A	DS-11-MU6	8/20/2011 9:00:00 AM		PERCENT MOISTURE			8/25/2011 1:00:00 PM
				Polychlorinated Biphenyl Congeners		9/20/2011 1:30:04 PM	9/26/2011 3:08:00 AM
1108806-007A	DS-11-WOPU	8/18/2011 12:45:00 PM		PERCENT MOISTURE			8/25/2011 1:00:00 PM
				Polychlorinated Biphenyl Congeners		9/20/2011 1:30:04 PM	9/26/2011 3:54:00 AM
1108806-008A	DS-11-MOPU	8/18/2011 9:20:00 AM		PERCENT MOISTURE			8/25/2011 1:00:00 PM
				Polychlorinated Biphenyl Congeners		9/20/2011 1:30:04 PM	9/26/2011 4:39:00 AM
1108806-009A	DS-11-11PU	8/18/2011 7:00:00 PM		PERCENT MOISTURE			8/25/2011 1:00:00 PM
				Polychlorinated Biphenyl Congeners		9/20/2011 1:30:04 PM	9/26/2011 5:24:00 AM
1108806-010A	DS-11-HIPU	8/17/2011 1:00:00 PM		PERCENT MOISTURE			8/25/2011 1:00:00 PM
				Polychlorinated Biphenyl Congeners		9/20/2011 1:30:04 PM	9/26/2011 6:10:00 AM

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1108806**

Date Reported: **10/21/2011**

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment
Lab ID: 1108806-001
Client Sample ID DS-11-MU1

Collection Date: 8/20/2011 12:00:00 PM

Matrix: SEDIMENT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',3,3',4,4',5,6-OcCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',3,3',4,4',5-HpCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',3,3',4,4'-HxCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',3,4,4',5,5'-HpCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',3,4,4',5',6-HpCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',3,4,4',5'-HxCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',3,4,4',6,6'-HpCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',3,4,5'-PeCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',3,4',5,5',6-HpCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',3,5'-TeCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',4,4',5,5'-HxCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',4,5,5'-PeCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',4,5'-TeCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',5,5'-TeCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,2',5-TrCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,3,3',4,4'-PeCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,3',4,4',5-PeCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,3',4,4'-TeCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,4,4'-TrCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
2,4'-DiCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
3,3',4,4',5,5'-HxCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
3,3',4,4',5-PeCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
3,3',4,4'-TeCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
DeCB	ND	1.3	U	µg/Kg-dry	1	9/25/2011 11:21:00 PM
Surr: Tetrachloro-m-xylene	105	70-130		%REC	1	9/25/2011 11:21:00 PM
PERCENT MOISTURE				**D2216**		Analyst: **NK**
Percent Moisture	50	1.0		wt%	1	8/25/2011 1:00:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v4

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1108806**

Date Reported: **10/21/2011**

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment
Lab ID: 1108806-002
Client Sample ID DS-11-MU2

Collection Date: 8/15/2011 6:00:00 PM

Matrix: SEDIMENT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,3,3´,4,4´,5-HpCB	0.44	1.3	J	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,3,3´,4,4´-HxCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,3,4,4´,5,5´-HpCB	0.59	1.3	J	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,3,4,4´,5´-HxCB	0.80	1.3	Jm	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,3,4,5´-PeCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,3,4´,5,5´,6-HpCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,3,5´-TeCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,4,4´,5,5´-HxCB	0.68	1.3	J	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,4,5,5´-PeCB	0.51	1.3	J	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,4,5´-TeCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,5,5´-TeCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,2´,5-TrCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,3,3´,4,4´-PeCB	ND	1.3	dU	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,3´,4,4´,5-PeCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,3´,4,4´-TeCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,4,4´-TrCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
2,4´-DiCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
3,3´,4,4´,5,5´-HxCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
3,3´,4,4´,5-PeCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
3,3´,4,4´-TeCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
DeCB	ND	1.3	U	µg/Kg-dry	1	9/26/2011 12:07:00 AM
Surr: Tetrachloro-m-xylene	118	70-130		%REC	1	9/26/2011 12:07:00 AM
PERCENT MOISTURE				**D2216**		Analyst: **NK**
Percent Moisture	47	1.0		wt%	1	8/25/2011 1:00:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v4

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1108806

Date Reported: 10/21/2011

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment
Lab ID: 1108806-003
Client Sample ID DS-11-MU3

Collection Date: 8/17/2011 9:50:00 AM

Matrix: SEDIMENT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,3,3´,4,4´-HxCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,3,4,4´,5´-HxCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,3,4,5´-PeCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,3,4´,5,5´,6-HpCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,3,5´-TeCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,4,4´,5,5´-HxCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,4,5,5´-PeCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,4,5´-TeCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,5,5´-TeCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,2´,5-TrCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,3,3´,4,4´-PeCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,3´,4,4´,5-PeCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,3´,4,4´-TeCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,4,4´-TrCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
2,4´-DiCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
3,3´,4,4´,5,5´-HxCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
3,3´,4,4´,5-PeCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
3,3´,4,4´-TeCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
DeCB	ND	0.86	U	µg/Kg-dry	1	9/26/2011 12:52:00 AM
Surr: Tetrachloro-m-xylene	115	70-130		%REC	1	9/26/2011 12:52:00 AM
PERCENT MOISTURE				**D2216**		Analyst: **NK**
Percent Moisture	23	1.0		wt%	1	8/25/2011 1:00:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v4

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1108806

Date Reported: 10/21/2011

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment
Lab ID: 1108806-004
Client Sample ID DS-11-MU4

Collection Date: 8/16/2011 2:00:00 PM

Matrix: SEDIMENT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',3,3',4,4',5-HpCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',3,3',4,4'-HxCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',3,4,4',5,5'-HpCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',3,4,4',5',6-HpCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',3,4,4',5'-HxCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',3,4,4',6,6'-HpCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',3,4,5'-PeCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',3,4',5,5',6-HpCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',3,5'-TeCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',4,4',5,5'-HxCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',4,5,5'-PeCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',4,5'-TeCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',5,5'-TeCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,2',5-TrCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,3,3',4,4'-PeCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,3',4,4',5-PeCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,3',4,4'-TeCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,4,4'-TrCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
2,4'-DiCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
3,3',4,4',5,5'-HxCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
3,3',4,4',5-PeCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
3,3',4,4'-TeCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
DeCB	ND	0.85	U	µg/Kg-dry	1	9/26/2011 1:37:00 AM
Surr: Tetrachloro-m-xylene	122	70-130		%REC	1	9/26/2011 1:37:00 AM
PERCENT MOISTURE				**D2216**		Analyst: **NK**
Percent Moisture	21	1.0		wt%	1	8/25/2011 1:00:00 PM

Qualifiers:

*IX	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v4

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1108806**

Date Reported: **10/21/2011**

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment
Lab ID: 1108806-005
Client Sample ID DS-11-MU5

Collection Date: 8/20/2011 8:00:00 AM

Matrix: SEDIMENT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,3,3´,4,4´,5-HpCB	1.0	2.2	Jm	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,3,4,4´,5,5´-HpCB	1.6	2.2	J	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,3,4,4´,5´-HxCB	0.50	2.2	Jm	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,3,4,5´-PeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,3,4´,5,5´,6-HpCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,3,5´-TeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,4,4´,5,5´-HxCB	0.64	2.2	J	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,4,5,5´-PeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,4,5´-TeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,5,5´-TeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,2´,5-TrCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,3,3´,4,4´-PeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,3´,4,4´,5-PeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,3´,4,4´-TeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,4,4´-TrCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
2,4´-DiCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
3,3´,4,4´,5-PeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
3,3´,4,4´-TeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
DeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 2:23:00 AM
Surr: Tetrachloro-m-xylene	115	70-130		%REC	1	9/26/2011 2:23:00 AM
PERCENT MOISTURE				**D2216**		Analyst: **NK**
Percent Moisture	70	1.0		wt%	1	8/25/2011 1:00:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v4

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1108806**

Date Reported: **10/21/2011**

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment
Lab ID: 1108806-006
Client Sample ID DS-11-MU6

Collection Date: 8/20/2011 9:00:00 AM

Matrix: SEDIMENT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,3,3´,4,4´-HxCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,3,4,4´,5´-HxCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,3,4,5´-PeCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,3,4´,5,5´,6-HpCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,3,5´-TeCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,4,4´,5,5´-HxCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,4,5,5´-PeCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,4,5´-TeCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,5,5´-TeCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,2´,5-TrCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,3,3´,4,4´-PeCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,3´,4,4´,5-PeCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,3´,4,4´-TeCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,4,4´-TrCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
2,4´-DiCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
3,3´,4,4´,5,5´-HxCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
3,3´,4,4´,5-PeCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
3,3´,4,4´-TeCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
DeCB	ND	1.2	U	µg/Kg-dry	1	9/26/2011 3:08:00 AM
Surr: Tetrachloro-m-xylene	102	70-130		%REC	1	9/26/2011 3:08:00 AM
PERCENT MOISTURE				**D2216**		Analyst: **NK**
Percent Moisture	46	1.0		wt%	1	8/25/2011 1:00:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v4

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: 1108806

Date Reported: 10/21/2011

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment
Lab ID: 1108806-007
Client Sample ID DS-11-WOPU

Collection Date: 8/18/2011 12:45:00 PM

Matrix: SEDIMENT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,3,3´,4,4´-HxCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,3,4,4´,5´-HxCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,3,4,5´-PeCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,3,4´,5,5´,6-HpCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,3,5´-TeCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,4,4´,5,5´-HxCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,4,5,5´-PeCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,4,5´-TeCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,5,5´-TeCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,2´,5-TrCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,3,3´,4,4´-PeCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,3´,4,4´,5-PeCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,3´,4,4´-TeCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,4,4´-TrCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
2,4´-DiCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
3,3´,4,4´,5,5´-HxCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
3,3´,4,4´,5-PeCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
3,3´,4,4´-TeCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
DeCB	ND	0.83	U	µg/Kg-dry	1	9/26/2011 3:54:00 AM
Surr: Tetrachloro-m-xylene	117	70-130		%REC	1	9/26/2011 3:54:00 AM
PERCENT MOISTURE				**D2216**		Analyst: **NK**
Percent Moisture	20	1.0		wt%	1	8/25/2011 1:00:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v4

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1108806**

Date Reported: **10/21/2011**

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment
Lab ID: 1108806-008
Client Sample ID DS-11-MOPU

Collection Date: 8/18/2011 9:20:00 AM

Matrix: SEDIMENT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',3,3',4,4',5-HpCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',3,3',4,4'-HxCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',3,4,4',5,5'-HpCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',3,4,4',5',6-HpCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',3,4,4',5'-HxCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',3,4,4',6,6'-HpCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',3,4,5'-PeCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',3,4',5,5',6-HpCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',3,5'-TeCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',4,4',5,5'-HxCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',4,5,5'-PeCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',4,5'-TeCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',5,5'-TeCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,2',5-TrCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,3,3',4,4'-PeCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,3',4,4',5-PeCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,3',4,4'-TeCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,4,4'-TrCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
2,4'-DiCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
3,3',4,4',5,5'-HxCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
3,3',4,4',5-PeCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
3,3',4,4'-TeCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
DeCB	ND	0.90	U	µg/Kg-dry	1	9/26/2011 4:39:00 AM
Surr: Tetrachloro-m-xylene	113	70-130		%REC	1	9/26/2011 4:39:00 AM
PERCENT MOISTURE				**D2216**		Analyst: **NK**
Percent Moisture	26	1.0		wt%	1	8/25/2011 1:00:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1108806**

Date Reported: **10/21/2011**

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment
Lab ID: 1108806-009
Client Sample ID DS-11-11PU

Collection Date: 8/18/2011 7:00:00 PM

Matrix: SEDIMENT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,3,3´,4,4´-HxCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,3,4,4´,5´-HxCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,3,4,5´-PeCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,3,4´,5,5´,6-HpCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,3,5´-TeCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,4,4´,5,5´-HxCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,4,5,5´-PeCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,4,5´-TeCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,5,5´-TeCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,2´,5-TrCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,3,3´,4,4´-PeCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,3´,4,4´,5-PeCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,3´,4,4´-TeCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,4,4´-TrCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
2,4´-DiCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
3,3´,4,4´,5,5´-HxCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
3,3´,4,4´,5-PeCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
3,3´,4,4´-TeCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
DeCB	ND	1.7	U	µg/Kg-dry	1	9/26/2011 5:24:00 AM
Surr: Tetrachloro-m-xylene	107	70-130		%REC	1	9/26/2011 5:24:00 AM
PERCENT MOISTURE				**D2216**		Analyst: **NK**
Percent Moisture	61	1.0		wt%	1	8/25/2011 1:00:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v4

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1108806**

Date Reported: **10/21/2011**

CLIENT: FutureNet Group, Inc.
Project: Duluth Sediment
Lab ID: 1108806-010
Client Sample ID DS-11-HIPU

Collection Date: 8/17/2011 1:00:00 PM

Matrix: SEDIMENT

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,3,4,4´,5´-HxCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,3,4,5´-PeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,3,4´,5,5´,6-HpCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,3,5´-TeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,4,4´,5,5´-HxCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,4,5,5´-PeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,4,5´-TeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,5,5´-TeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,2´,5-TrCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,3,3´,4,4´-PeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,3´,4,4´,5-PeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,3´,4,4´-TeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,4,4´-TrCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
2,4´-DiCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
3,3´,4,4´,5-PeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
3,3´,4,4´-TeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
DeCB	ND	2.2	U	µg/Kg-dry	1	9/26/2011 6:10:00 AM
Surr: Tetrachloro-m-xylene	113	70-130		%REC	1	9/26/2011 6:10:00 AM
PERCENT MOISTURE				**D2216**		Analyst: **NK**
Percent Moisture	70	1.0		wt%	1	8/25/2011 1:00:00 PM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v4

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: **1108806**

24-Oct-11

Client: FutureNet Group, Inc.
Project: Duluth Sediment

BatchID: 23690

Sample ID: **lcs-23690** SampType: **LCS** TestCode: **SW_8082S-C** Units: **µg/Kg** Prep Date: **9/20/2011** RunNo: **43049**
Client ID: **LCSS** Batch ID: **23690** TestNo: **SW8082CON SW3550C** Analysis Date: **9/25/2011** SeqNo: **837965**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	3.4	0.67	3.327	0	101	70	130				
2,2´,3,3´,4,4´,5,6-OcCB	3.4	0.67	3.327	0	101	70	130				
2,2´,3,3´,4,4´,5-HpCB	3.3	0.67	3.327	0	100	70	130				
2,2´,3,3´,4,4´-HxCB	3.3	0.67	3.327	0	98.7	70	130				
2,2´,3,4,4´,5,5´-HpCB	3.4	0.67	3.327	0	102	70	130				
2,2´,3,4,4´,5´,6-HpCB	3.3	0.67	3.327	0	100	70	130				
2,2´,3,4,4´,5´-HxCB	3.3	0.67	3.327	0	101	70	130				
2,2´,3,4,4´,6,6´-HpCB	3.4	0.67	3.327	0	102	70	130				
2,2´,3,4,5´-PeCB	3.3	0.67	3.327	0	101	70	130				
2,2´,3,4´,5,5´,6-HpCB	3.3	0.67	3.327	0	100	70	130				
2,2´,3,5´-TeCB	3.3	0.67	3.327	0	99.3	70	130				
2,2´,4,4´,5,5´-HxCB	3.4	0.67	3.327	0	101	70	130				
2,2´,4,5,5´-PeCB	3.3	0.67	3.327	0	100	70	130				
2,2´,4,5´-TeCB	3.1	0.67	3.327	0	93.9	70	130				
2,2´,5,5´-TeCB	3.3	0.67	3.327	0	98.9	70	130				
2,2´,5-TrCB	3.3	0.67	3.327	0	98.7	70	130				
2,3,3´,4,4´-PeCB	3.3	0.67	3.327	0	100	70	130				
2,3´,4,4´,5-PeCB	3.4	0.67	3.327	0	101	70	130				
2,3´,4,4´-TeCB	3.3	0.67	3.327	0	100	70	130				
2,4,4´-TrCB	3.3	0.67	3.327	0	99.4	70	130				
2,4´-DiCB	3.2	0.67	3.327	0	97.7	70	130				
3,3´,4,4´,5,5´-HxCB	3.3	0.67	3.327	0	98.7	70	130				
3,3´,4,4´,5-PeCB	3.4	0.67	3.327	0	101	70	130				
3,3´,4,4´-TeCB	3.3	0.67	3.327	0	99.9	70	130				
DeCB	3.4	0.67	3.327	0	101	70	130				
Surr: Tetrachloro-m-xylene	3.3		3.327		98.4	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceed
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: 1108806
24-Oct-11

Client: FutureNet Group, Inc.
Project: Duluth Sediment
BatchID: 23690

Sample ID: **mb-23690** SampType: **MBLK** TestCode: **SW_8082S-C** Units: **µg/Kg** Prep Date: **9/20/2011** RunNo: **43049**
Client ID: **PBS** Batch ID: **23690** TestNo: **SW8082CON SW3550C** Analysis Date: **9/25/2011** SeqNo: **837966**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	ND	0.66									U
2,2´,3,3´,4,4´,5,6-OcCB	ND	0.66									U
2,2´,3,3´,4,4´,5-HpCB	ND	0.66									U
2,2´,3,3´,4,4´-HxCB	ND	0.66									U
2,2´,3,4,4´,5,5´-HpCB	ND	0.66									U
2,2´,3,4,4´,5´,6-HpCB	ND	0.66									U
2,2´,3,4,4´,5´-HxCB	ND	0.66									U
2,2´,3,4,4´,6,6´-HpCB	ND	0.66									U
2,2´,3,4,5´-PeCB	ND	0.66									U
2,2´,3,4´,5,5´,6-HpCB	ND	0.66									U
2,2´,3,5´-TeCB	ND	0.66									U
2,2´,4,4´,5,5´-HxCB	ND	0.66									U
2,2´,4,5,5´-PeCB	ND	0.66									U
2,2´,4,5´-TeCB	ND	0.66									U
2,2´,5,5´-TeCB	ND	0.66									U
2,2´,5-TrCB	ND	0.66									U
2,3,3´,4,4´-PeCB	ND	0.66									U
2,3´,4,4´,5-PeCB	ND	0.66									U
2,3´,4,4´-TeCB	ND	0.66									U
2,4,4´-TrCB	ND	0.66									U
2,4´-DiCB	ND	0.66									U
3,3´,4,4´,5,5´-HxCB	ND	0.66									U
3,3´,4,4´,5-PeCB	ND	0.66									U
3,3´,4,4´-TeCB	ND	0.66									U
DeCB	ND	0.66									U
Surr: Tetrachloro-m-xylene	3.8		3.321		114	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: **1108806**
24-Oct-11

Client: FutureNet Group, Inc.
Project: Duluth Sediment

BatchID: 23690

Sample ID: **1108806-001ams** SampType: **MS** TestCode: **SW_8082S-C** Units: **µg/Kg-dry** Prep Date: **9/20/2011** RunNo: **43049**
Client ID: **DS-11-MU1** Batch ID: **23690** TestNo: **SW8082CON SW3550C** Analysis Date: **9/26/2011** SeqNo: **837977**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	6.8	1.3	6.690	0	102	70	130				
2,2',3,3',4,4',5,6-OcCB	6.7	1.3	6.690	0	100	70	130				
2,2',3,3',4,4',5-HpCB	6.5	1.3	6.690	0	97.8	70	130				
2,2',3,3',4,4'-HxCB	6.8	1.3	6.690	0	101	70	130				
2,2',3,4,4',5,5'-HpCB	6.7	1.3	6.690	0	100	70	130				
2,2',3,4,4',5',6-HpCB	6.8	1.3	6.690	0	102	70	130				
2,2',3,4,4',5'-HxCB	6.8	1.3	6.690	0	102	70	130				
2,2',3,4,4',6,6'-HpCB	6.7	1.3	6.690	0	100	70	130				
2,2',3,4,5'-PeCB	6.7	1.3	6.690	0	100	70	130				
2,2',3,4',5,5',6-HpCB	6.8	1.3	6.690	0	102	70	130				
2,2',3,5'-TeCB	6.5	1.3	6.690	0	97.7	70	130				
2,2',4,4',5,5'-HxCB	6.7	1.3	6.690	0	99.9	70	130				
2,2',4,5,5'-PeCB	6.6	1.3	6.690	0	99.3	70	130				
2,2',4,5'-TeCB	6.4	1.3	6.690	0	95.7	70	130				
2,2',5,5'-TeCB	6.5	1.3	6.690	0	96.8	70	130				
2,2',5-TrCB	6.4	1.3	6.690	0	95.6	70	130				
2,3,3',4,4'-PeCB	6.7	1.3	6.690	0	101	70	130				
2,3',4,4',5-PeCB	6.7	1.3	6.690	0	100	70	130				
2,3',4,4'-TeCB	7.2	1.3	6.690	0	108	70	130				
2,4,4'-TrCB	6.7	1.3	6.690	0	100	70	130				
2,4'-DiCB	6.4	1.3	6.690	0	96.0	70	130				
3,3',4,4',5,5'-HxCB	6.8	1.3	6.690	0	101	70	130				
3,3',4,4',5-PeCB	6.7	1.3	6.690	0	101	70	130				
3,3',4,4'-TeCB	6.5	1.3	6.690	0	97.8	70	130				
DeCB	6.9	1.3	6.690	0	103	70	130				
Surr: Tetrachloro-m-xylene	6.7		6.690		99.7	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: **1108806**

24-Oct-11

Client: FutureNet Group, Inc.
Project: Duluth Sediment

BatchID: **23690**

Sample ID: **1108806-001amsd** SampType: **MSD** TestCode: **SW_8082S-C** Units: **µg/Kg-dry** Prep Date: **9/20/2011** RunNo: **43049**
Client ID: **DS-11-MU1** Batch ID: **23690** TestNo: **SW8082CON SW3550C** Analysis Date: **9/26/2011** SeqNo: **837978**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	6.7	1.3	6.692	0	99.7	70	130	6.836	2.44	25	
2,2´,3,3´,4,4´,5,6-OcCB	6.5	1.3	6.692	0	97.0	70	130	6.704	3.21	25	
2,2´,3,3´,4,4´,5-HpCB	6.4	1.3	6.692	0	95.2	70	130	6.545	2.73	25	
2,2´,3,3´,4,4´-HxCB	6.5	1.3	6.692	0	96.9	70	130	6.777	4.45	25	
2,2´,3,4,4´,5,5´-HpCB	6.5	1.3	6.692	0	97.1	70	130	6.706	3.11	25	
2,2´,3,4,4´,5´,6-HpCB	6.6	1.3	6.692	0	98.8	70	130	6.799	2.79	25	
2,2´,3,4,4´,5´-HxCB	6.6	1.3	6.692	0	98.9	70	130	6.810	2.81	25	
2,2´,3,4,4´,6,6´-HpCB	6.5	1.3	6.692	0	97.6	70	130	6.717	2.80	25	
2,2´,3,4,5´-PeCB	6.5	1.3	6.692	0	97.3	70	130	6.701	2.85	25	
2,2´,3,4´,5,5´,6-HpCB	6.6	1.3	6.692	0	98.8	70	130	6.799	2.79	25	
2,2´,3,5´-TeCB	6.3	1.3	6.692	0	94.3	70	130	6.538	3.50	25	
2,2´,4,4´,5,5´-HxCB	6.5	1.3	6.692	0	97.6	70	130	6.685	2.36	25	
2,2´,4,5,5´-PeCB	6.4	1.3	6.692	0	96.1	70	130	6.641	3.16	25	
2,2´,4,5´-TeCB	6.2	1.3	6.692	0	93.1	70	130	6.400	2.73	25	
2,2´,5,5´-TeCB	6.3	1.3	6.692	0	93.8	70	130	6.479	3.17	25	
2,2´,5-TrCB	6.2	1.3	6.692	0	92.6	70	130	6.392	3.08	25	
2,3,3´,4,4´-PeCB	6.6	1.3	6.692	0	98.3	70	130	6.743	2.45	25	
2,3´,4,4´,5-PeCB	6.5	1.3	6.692	0	97.5	70	130	6.713	2.81	25	
2,3´,4,4´-TeCB	7.0	1.3	6.692	0	104	70	130	7.203	3.23	25	
2,4,4´-TrCB	6.5	1.3	6.692	0	97.5	70	130	6.710	2.83	25	
2,4´-DiCB	6.4	1.3	6.692	0	95.3	70	130	6.420	0.680	25	
3,3´,4,4´,5,5´-HxCB	6.5	1.3	6.692	0	96.9	70	130	6.777	4.45	25	
3,3´,4,4´,5-PeCB	6.5	1.3	6.692	0	97.9	70	130	6.747	2.97	25	
3,3´,4,4´-TeCB	6.4	1.3	6.692	0	95.6	70	130	6.543	2.21	25	
DeCB	6.7	1.3	6.692	0	100	70	130	6.888	2.62	25	
Surr: Tetrachloro-m-xylene	6.6		6.692		98.1	70	130		0	25	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
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QC SUMMARY REPORT

WO#: **1108806**

24-Oct-11

Client: FutureNet Group, Inc.
Project: Duluth Sediment

BatchID: **R42465**

Sample ID: **1108806-001ADUP** SampType: **DUP** TestCode: **PMOIST** Units: **wt%** Prep Date: RunNo: **42465**
Client ID: **DS-11-MU1** Batch ID: **R42465** TestNo: **D2216** Analysis Date: **8/25/2011** SeqNo: **822344**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Percent Moisture	47	1.0						50.29	6.39	20	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

APPENDIX J

GLEC Laboratory Report
Sediment Elutriate Acute Toxicity Test Results

Great Lakes Environmental Center

Applied Environmental Sciences
www.glec.com

Traverse City Operations
739 Hastings St.
Traverse City
MI 49686

231 941-2230
231 941-2240 fax

Columbus Operations
1295 King Ave.
Columbus
OH 43212

614 487-1040
614 487-1920 fax

October 3, 2011

Mariah Hope, PE
Project Manager
FutureNet Group, Inc.
12801 Auburn Street
Detroit, MI 48223

RE: Final Report: Sediment Elutriate Test Results for *Ceriodaphnia dubia* and *Pimephales promelas*
Sample Collection Dates: August 15-August 20, 2011
USACE Duluth-Superior, MN-WI Open Water Evaluation
Sediment Sampling, Analysis, and Biological Testing

Dear Ms. Hope:

Great Lakes Environmental Center, Inc. (GLEC) has completed our analyses of the 48-hour *Ceriodaphnia dubia* (*C. dubia*) and 96-hour *Pimephales promelas* (fathead minnow) sediment elutriate acute toxicity tests. These tests were performed on six sediment samples including: DS-11-MU1, DS-11-MU2, DS-11-MU3, DS-11-MU4, DS-11-MU5, and DS-11-MU6.

The DS-11-MU1, DS-11-MU2, DS-11-MU3, DS-11-MU4, DS-11-MU5, and DS-11-MU6 sediment samples and their respective unfiltered, disposal site waters for the elutriate preparation, were collected by FutureNet Group personnel on behalf of the USACE-Detroit District. The sediment samples were collected at the Duluth-Superior, MN-WI Open Water Evaluation sampling site on August 15 through August 20, 2011. The acute toxicity tests were initiated during the weeks of August 23, 2011 and August 30, 2011 with both the *C. dubia* and fathead minnow.

These tests were conducted following the procedures outlined by EPA-823-B-98-004, *Evaluation of Dredged Material Proposed For Discharge in Waters of the U.S.* –Inland Testing Manual (ITM; USEPA, 1998a), the Great Lakes Dredged Material Testing and Evaluation Manual (GLTEM; USEPA, 1998b), and Great Lakes Environmental Center's Standard Operating Procedures.

Elutriate Preparation

The DS-11-MU1, DS-11-MU2, DS-11-MU3, DS-11-MU4, DS-11-MU5, and DS-11-MU6 sediment elutriates were prepared following the procedure outlined in Section 11.1.4 of the Inland Testing Manual (USEPA, 1998a). All sediment samples were combined with the unfiltered, disposal site water, at a 1 to 4 sediment to water ratio. The table below lists each sediment sample and the corresponding site water used for sediment elutriates preparation.

Sediment Sample ID GLC Number	Disposal Site Water ID GLC Number
DS-11-MU1 GLC#9055	DS-11-MU1 GLC#9051
DS-11-MU2 GLC#9042	DS-11-MU2 GLC#9044
DS-11-MU3 GLC#9047	DS-11-MU3 GLC#9046
DS-11-MU4 GLC#9043	DS-11-MU4 GLC#9045
DS-11-MU5 GLC#9056	DS-11-MU5 GLC#9058
DS-11-MU6 GLC#9057	DS-11-MU6 GLC#9050

For each elutriate sample, the sediment and water were combined by using volumetric measurements and analytical glassware. The sediment/water combination was stirred vigorously for 30 minutes using a stir plate and manually at ten minute intervals, to ensure complete mixing. The mixture was allowed to settle for one hour and the supernatant, which is the 100 percent elutriate sample, was carefully siphoned from the settled sediment material. The supernatant was centrifuged at 4,000 rpm for 45 minutes to separate suspended solids and to ensure visibility of the test organisms during the test.

This process was repeated for all six sediment samples: DS-11-MU1, DS-11-MU2, DS-11-MU3, DS-11-MU4, DS-11-MU5, and DS-11-MU6, until enough elutriate was acquired for toxicity test initiation and renewal.

The test solutions were prepared by diluting the elutriate with dilution water using a dilution factor of 0.5 to achieve the following 5 test concentrations: 6.25, 12.5, 25.0, 50.0, and 100 percent elutriate sample. Dilute mineral water (DMW) was used as dilution water for the *C. dubia* test, and moderately hard (MH) reconstituted water was used as dilution water for the fathead minnow test.

Test Results

DS-11-MU1

The acute toxicity tests with the elutriate sample DS-11-MU1 were initiated on August 30, 2011. The elutriate sample DS-11-MU1 was not acutely toxic to *C. dubia* or fathead minnows. The 48-hour *C. dubia* and 96-hour fathead minnow LC_{50} (median lethal toxicant concentration) and *C. dubia* 48-hour EC_{50} (median effect concentration) estimates were all greater than 100 percent sample, or 0 TU_a (acute toxic units). A summary of the test conditions for the *C. dubia* and fathead minnow toxicity tests are included in Tables 1 and 3, respectively. The 48-hour *C. dubia* and 96-hour fathead minnow LC_{50} and EC_{50} estimates and toxicity test results are summarized in Tables 2 and 4, respectively.

DS-11-MU2

The elutriate sample DS-11-MU2 was used to initiate acute toxicity tests on August 24, 2011. The elutriate sample DS-11-MU2 was not acutely toxic to *C. dubia* or fathead minnows. The 48-hour *C. dubia* and 96-hour fathead minnow LC_{50} and *C. dubia* 48-hour EC_{50} estimates were all greater than 100 percent sample, or 0 TU_a. A summary of the test conditions for the *C. dubia* and fathead minnow toxicity tests are included in Tables 5 and 7, respectively. The 48-hour *C. dubia* and 96-hour fathead minnow LC_{50} and EC_{50} estimates and toxicity test results are summarized in Tables 6 and 8, respectively.

DS-11-MU3

The acute toxicity tests with the elutriate sample DS-11-MU3 were initiated on August 24, 2011. The elutriate sample DS-11-MU3 was not acutely toxic to *C. dubia* or fathead minnows. The 48-hour *C. dubia* and 96-hour fathead minnow LC_{50} and *C. dubia* 48-hour EC_{50} estimates were all greater than 100 percent sample, or 0 TU_a. A summary of the test conditions for the *C. dubia* and fathead minnow toxicity tests are included in Tables 9 and 11, respectively. The 48-hour *C. dubia* and 96-hour fathead minnow LC_{50} and EC_{50} estimates and toxicity test results are summarized in Tables 10 and 12, respectively.

DS-11-MU4

The elutriate sample DS-11-MU4 was used to initiate acute toxicity tests on August 23, 2011. The elutriate sample DS-11-MU4 was not acutely toxic to *C. dubia* or fathead minnows. The 48-hour *C. dubia* and 96-hour fathead minnow LC_{50} and *C. dubia* 48-hour EC_{50} estimates were all greater than 100 percent sample, or 0 TU_a. A summary of the test conditions for the *C. dubia* and fathead minnow toxicity tests are included in Tables 13 and 15, respectively. The 48-hour *C. dubia* and 96-hour

fathead minnow LC_{50} and EC_{50} estimates and toxicity test results are summarized in Tables 14 and 16, respectively.

DS-11-MU5

The acute toxicity tests with the elutriate sample DS-11-MU5 were initiated on August 30, 2011. The elutriate sample DS-11-MU5 was not acutely toxic to *C. dubia* or fathead minnows. The 48-hour *C. dubia* and 96-hour fathead minnow LC_{50} and *C. dubia* 48-hour EC_{50} estimates were all greater than 100 percent sample, or 0 TU_a. A summary of the test conditions for the *C. dubia* and fathead minnow toxicity tests are included in Tables 17 and 19, respectively. The 48-hour *C. dubia* and 96-hour fathead minnow LC_{50} and EC_{50} estimates and toxicity test results are summarized in Tables 18 and 20, respectively.

DS-11-MU6

The elutriate sample DS-11-MU6 was used to initiate the acute *C. dubia* toxicity tests on August 30, 2011 and the acute fathead minnow toxicity test on August 26, 2011. The elutriate sample DS-11-MU6 was not acutely toxic to *C. dubia* or fathead minnows. The 48-hour *C. dubia* and 96-hour fathead minnow LC_{50} and *C. dubia* 48-hour EC_{50} estimates were all greater than 100 percent sample, or 0 TU_a. A summary of the test conditions for the *C. dubia* and fathead minnow toxicity tests are included in Tables 21 and 23, respectively. The 48-hour *C. dubia* and 96-hour fathead minnow LC_{50} and EC_{50} estimates and toxicity test results are summarized in Tables 22 and 24, respectively.

Copies of the raw data sheets and standard reference toxicant data for the acute effluent toxicity tests are included with this report in Appendices A and B, respectively.

If you have any questions, or if you would like additional information, please contact either myself or Dennis McCauley at (231) 941-2230, or John Barkach at (248) 538-0900. Thank you for the opportunity to provide this service to FutureNet Group, Inc. We look forward to continuing to provide environmental services to you in the future.

Sincerely,

Mailee W. Garton

Mailee W. Garton
Laboratory Coordinator

MWG:mg

References

USEPA. 1998a. Inland Testing Manual, Evaluation of Dredged Material Proposed for Discharge in Waters of the U.S. – Testing Manual. Office of Water, U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers, Department of The Army. EPA-823-B-98-004. Document Date: February 1998.

USEPA. 1998b. Great Lakes Dredged Material Testing and Evaluation Manual. Great Lakes National Program Office, U.S. Environmental Protection Agency and the U.S. Army Corps of Engineers Great Lakes & Ohio River Division, Department of The Army. EPA-823-B-98-004. Document Date: September 30, 1998.

TABLE 1
Toxicity Test Conditions
USACOE Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU1 Sediment Elutriate
Ceriodaphnia dubia

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Ceriodaphnia dubia* (In house < 24 hours old)
2. Test Type and Duration:	Static, 48-hours
3. Test Dates:	August 30-September 1, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	30 mL beaker
9. Volume of Test Solutions:	15 mL
10. No. of Test Organisms per Test Vessel:	5
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	25
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	None
15. Dilution and Primary Control Water:	Moderately Hard-Dilute Mineral Water (DMW Number: 1864)
16. Test Material:	DS-11-MU1 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	Culture Water (Boardman BD# 619)
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 2
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU1 Sediment Elutriate
LC_{50} Determination
Ceriodaphnia dubia

Results of a *Ceriodaphnia dubia* (genus) (species) — 48-Hour Static Acute Toxicity Test

Conducted 08/30/11 (mm/dd/yy) - 09/01/11 (mm/dd/yy) — Using: DS-11-MU1 Sediment Elutriate

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr			24-Hr	48-Hr		
Primary Control/ Dilution Water	0 (0)	0 (0)			>100	>100		
6.25 %	0 (0)	0 (0)			96-Hour LC_{50} = >100 percent			
12.5 %	0 (0)	0 (0)			LC_{50} *95% Confidence Limits			
25.0 %	0 (0)	0 (0)			24-Hr	48-Hr	72-Hr	96-Hr
50.0 %	0 (0)	0 (0)			LL NA UL NA	NA NA		
100 %	0 (0)	0 (0)						
Secondary Control	0 (0)	0 (0)			LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

TABLE 3
Toxicity Test Conditions
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU1 Sediment Elutriate
***Pimephales promelas* (Fathead Minnow)**

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Pimephales promelas*, (in house 8/28/2011 14:00; 2 days old)
2. Test Type and Duration:	Static, 96 hours with 48-hour renewal
3. Test Dates:	August 30- September 3, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	250 mL beaker
9. Volume of Test Solutions:	200 mL
10. No. of Test Organisms per Test Vessel:	10
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	50
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	48 hours
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water (MH Number: 1913/1914
16. Test Material:	DS-11-MU1 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	DS-11-MU1 site water
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 4
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU1 Sediment Elutriate
LC_{50} Determination
***Pimephales promelas* (Fathead Minnow)**

Results of a *Pimephales promelas* (genus) (species) **96-Hour Static Acute with 48-Hour Renewal Toxicity Test**
Conducted 08/30/11 (mm/dd/yy) - 09/03/11 (mm/dd/yy) **Using: DS-11-MU1 Sediment Elutriate**

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr	72-Hr	96-Hr	24-Hr	48-Hr	72-Hr	96-Hr
Primary Control/ Dilution Water	2 (2)	2 (2)	2 (2)	2 (2)	>100	>100	>100	>100
6.25 %	0 (0)	0 (0)	0 (0)	0 (0)	**96-Hour LC_{50} = >100 percent**			
12.5 %	0 (0)	0 (0)	0 (0)	0 (0)	**LC_{50} *95% Confidence Limits**			
25.0 %	0 (0)	0 (0)	0 (0)	0 (0)	**24-Hr**	**48-Hr**	**72-Hr**	**96-Hr**
50.0 %	0 (0)	0 (0)	0 (0)	0 (0)	LL NA UL NA	NA NA	NA NA	NA NA
100 %	2 (2)	2 (2)	2 (2)	2 (2)				
Secondary Control	0 (0)	0 (0)	0 (0)	0 (0)	LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

TABLE 5
Toxicity
Test Conditions
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU2 Sediment Elutriate
Ceriodaphnia dubia

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Ceriodaphnia dubia* (In house < 24 hours old)
2. Test Type and Duration:	Static, 48-hours
3. Test Dates:	August 24-August 26, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	30 mL beaker
9. Volume of Test Solutions:	15 mL
10. No. of Test Organisms per Test Vessel:	5
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	25
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	None
15. Dilution and Primary Control Water:	Moderately Hard-Dilute Mineral Water (DMW Number: 1863)
16. Test Material:	DS-11-MU2 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	Culture Water (Boardman BD# 619)
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 6
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU2 Sediment Elutriate
LC_{50} Determination
Ceriodaphnia dubia

Results of a *Ceriodaphnia dubia* (genus) (species) **48-Hour Static Acute Toxicity Test**
Conducted 08/24/11 (mm/dd/yy) - 08/26/11 (mm/dd/yy) **Using: DS-11-MU2 Sediment Elutriate**

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr			24-Hr	48-Hr		
Primary Control/ Dilution Water	0 (0)	0 (0)			>100	>100		
6.25 %	0 (0)	0 (0)			96-Hour LC_{50} = >100 percent			
12.5 %	0 (0)	0 (0)			LC_{50} *95% Confidence Limits			
25.0 %	0 (0)	0 (0)			24-Hr	48-Hr	72-Hr	96-Hr
50.0 %	0 (0)	0 (0)			LL NA UL NA	NA NA		
100 %	0 (0)	0 (0)						
Secondary Control	0 (0)	0 (0)			LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

TABLE 7
Toxicity Test Conditions
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU2 Sediment Elutriate
***Pimephales promelas* (Fathead Minnow)**

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Pimephales promelas*, (in house 8/22/2011 16:00; 2 days old)
2. Test Type and Duration:	Static, 96 hours with 48-hour renewal
3. Test Dates:	August 24-August 28, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	250 mL beaker
9. Volume of Test Solutions:	200 mL
10. No. of Test Organisms per Test Vessel:	10
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	50
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	48 hours
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water (MH Number: 1911)
16. Test Material:	DS-11-MU2 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	None
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 8
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU2 Sediment Elutriate
LC_{50} Determination
***Pimephales promelas* (Fathead Minnow)**

Results of a *Pimephales promelas* (genus) (species) **Conducted** 08/24/11 (mm/dd/yy) - 08/28/11 (mm/dd/yy)

96-Hour Static Acute with 48-Hour Renewal Toxicity Test

Using: DS-11-MU2 Sediment Elutriate

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr	72-Hr	96-Hr	24-Hr	48-Hr	72-Hr	96-Hr
Primary Control/ Dilution Water	0 (0)	0 (0)	2 (2)	2 (2)	>100	>100	>100	>100
6.25 %	0 (0)	0 (0)	2 (2)	2 (2)	**96-Hour LC_{50} = >100 percent**			
12.5 %	0 (0)	0 (0)	0 (0)	2 (2)	**LC_{50} *95% Confidence Limits**			
25.0 %	0 (0)	0 (0)	0 (0)	0 (0)	**24-Hr**	**48-Hr**	**72-Hr**	**96-Hr**
50.0 %	0 (0)	0 (0)	0 (0)	0 (0)	LL NA UL NA	NA NA	NA NA	NA NA
100 %	0 (0)	0 (0)	0 (0)	0 (0)				
					LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

TABLE 9
Toxicity Test Conditions
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU3 Sediment Elutriate
Ceriodaphnia dubia

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Ceriodaphnia dubia* (In house < 24 hours old)
2. Test Type and Duration:	Static, 48-hours
3. Test Dates:	August 24- August 26, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	30 mL beaker
9. Volume of Test Solutions:	15 mL
10. No. of Test Organisms per Test Vessel:	5
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	25
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	None
15. Dilution and Primary Control Water:	Moderately Hard-Dilute Mineral Water (DMW Number: 1863)
16. Test Material:	DS-11-MU3 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	Culture Water (Boardman BD# 619)
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 10
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU3 Sediment Elutriate
LC_{50} Determination
Ceriodaphnia dubia

Results of a *Ceriodaphnia dubia* (genus) (species) **48-Hour Static Acute Toxicity Test**
Conducted 08/24/11 (mm/dd/yy) - 08/26/11 (mm/dd/yy) **Using: DS-11-MU3 Sediment Elutriate**

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr			24-Hr	48-Hr		
Primary Control/ Dilution Water	0 (0)	0 (0)			>100	>100		
6.25 %	0 (0)	0 (0)			96-Hour LC_{50} = >100 percent			
12.5 %	0 (0)	0 (0)			LC_{50} *95% Confidence Limits			
25.0 %	0 (0)	0 (0)			24-Hr	48-Hr	72-Hr	96-Hr
50.0 %	0 (0)	0 (0)			LL NA UL NA	NA NA		
100 %	0 (0)	0 (0)						
Secondary Control	0 (0)	0 (0)			LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

TABLE 11
Toxicity Test Conditions
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU3 Sediment Elutriate
***Pimephales promelas* (Fathead Minnow)**

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Pimephales promelas*, (in house 8/22/2011; 2 days old)
2. Test Type and Duration:	Static, 96 hours with 48-hour renewal
3. Test Dates:	August 24-August 28, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	250 mL beaker
9. Volume of Test Solutions:	200 mL
10. No. of Test Organisms per Test Vessel:	10
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	50
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	48 hours
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water (MH Number: 1911/1912)
16. Test Material:	DS-11-MU3 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	None
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 12
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU3 Sediment Elutriate
LC_{50} Determination
***Pimephales promelas* (Fathead Minnow)**

Results of a *Pimephales promelas* (genus) (species) **Conducted** 08/24/11 (mm/dd/yy) - 08/28/11 (mm/dd/yy)

96-Hour Static Acute with 48-Hour Renewal Toxicity Test

Using: DS-11-MU3 Sediment Elutriate

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr	72-Hr	96-Hr	24-Hr	48-Hr	72-Hr	96-Hr
Primary Control/ Dilution Water	2 (2)	4 (4)	4 (4)	4 (4)	>100	>100	>100	>100
6.25 %	0 (0)	0 (0)	0 (0)	0 (0)	**96-Hour LC_{50} = >100 percent**			
12.5 %	2 (2)	4 (4)	4 (4)	4 (4)	**LC_{50} *95% Confidence Limits**			
25.0 %	2 (2)	4 (4)	6 (6)	8 (8)	**24-Hr**	**48-Hr**	**72-Hr**	**96-Hr**
50.0 %	2 (2)	2 (2)	4 (4)	4 (4)	LL NA UL NA	NA NA	NA NA	NA NA
100 %	0* (0)	0 (0)	0 (0)	0 (0)				
* used only four replicates; lost replicate one due to a technician error.					LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

TABLE 13
Toxicity Test Conditions
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU4 Sediment Elutriate
Ceriodaphnia dubia

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Ceriodaphnia dubia* (In house < 24 hours old)
2. Test Type and Duration:	Static, 48-hours
3. Test Dates:	August 23-August 25, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	30 mL beaker
9. Volume of Test Solutions:	15 mL
10. No. of Test Organisms per Test Vessel:	5
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	25
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	None
15. Dilution and Primary Control Water:	Moderately Hard-Dilute Mineral Water (DMW Number: 1863)
16. Test Material:	DS-11-MU4 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	Culture Water (Boardman BD# 619)
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 14
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU4 Sediment Elutriate
LC_{50} Determination
Ceriodaphnia dubia

Results of a *Ceriodaphnia dubia* (genus) (species) — 48-Hour Static Acute Toxicity Test

Conducted 08/23/11 (mm/dd/yy) - 08/25/11 (mm/dd/yy) — Using: DS-11-MU4 Sediment Elutriate

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr			24-Hr	48-Hr		
Primary Control/ Dilution Water	0 (0)	0 (0)			>100	>100		
6.25 %	0 (0)	0 (0)			96-Hour LC_{50} = >100 percent			
12.5 %	0 (0)	0 (0)			LC_{50} *95% Confidence Limits			
25.0 %	0 (0)	0 (0)			24-Hr	48-Hr	72-Hr	96-Hr
50.0 %	0 (0)	0 (0)			LL NA UL NA	NA NA		
100 %	0 (0)	0 (0)						
Secondary Control	0 (0)	0 (0)			LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

TABLE 15
Toxicity Test Conditions
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU4 Sediment Elutriate
***Pimephales promelas* (Fathead Minnow)**

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Pimephales promelas*, (in house 8/21/2011 1750; 2 days old)
2. Test Type and Duration:	Static, 96 hours with 48-hour renewal
3. Test Dates:	August 23-August 27, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	250 mL beaker
9. Volume of Test Solutions:	200 mL
10. No. of Test Organisms per Test Vessel:	10
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	50
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	48 hours
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water (MH Number: 1909/1911)
16. Test Material:	DS-11-MU4 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	None
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 16
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU4 Sediment Elutriate
LC_{50} Determination
***Pimephales promelas* (Fathead Minnow)**

Results of a *Pimephales promelas* (genus) (species) — 96-Hour Static Acute with 48-Hour Renewal Toxicity Test

Conducted 08/23/11 (mm/dd/yy) - 08/27/11 (mm/dd/yy) — Using: DS-11-MU4 Sediment Elutriate

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr	72-Hr	96-Hr	24-Hr	48-Hr	72-Hr	96-Hr
Primary Control/ Dilution Water	0 (0)	0 (0)	0 (0)	2 (2)	>100	>100	>100	>100
6.25 %	2 (2)	2 (2)	2 (2)	2 (2)	**96-Hour LC_{50} = >100 percent**			
12.5 %	0 (0)	0 (0)	0 (0)	0 (0)	**LC_{50} *95% Confidence Limits**			
25.0 %	2 (2)	2 (2)	2 (2)	2 (2)	**24-Hr**	**48-Hr**	**72-Hr**	**96-Hr**
50.0 %	4 (4)	4 (4)	4 (4)	4 (4)	LL NA UL NA	NA NA	NA NA	NA NA
100 %	4 (4)	4 (4)	4 (4)	4 (4)				
					LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

TABLE 17
Toxicity Test Conditions
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU5 Sediment Elutriate
Ceriodaphnia dubia

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Ceriodaphnia dubia* (In house < 24 hours old)
2. Test Type and Duration:	Static, 48-hours
3. Test Dates:	August 30-Septmber 1, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	30 mL beaker
9. Volume of Test Solutions:	15 mL
10. No. of Test Organisms per Test Vessel:	5
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	25
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	None
15. Dilution and Primary Control Water:	Moderately Hard-Dilute Mineral Water (DMW Number: 1864)
16. Test Material:	DS-11-MU5 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	Culture Water (Boardman BD# 619)
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 18
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU5 Sediment Elutriate
LC_{50} Determination
Ceriodaphnia dubia

Results of a *Ceriodaphnia dubia* (genus) (species) — 48-Hour Static Acute Toxicity Test

Conducted 08/30/11 (mm/dd/yy) - 09/01/11 (mm/dd/yy) — Using: DS-11-MU5 Sediment Elutriate

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr			24-Hr	48-Hr		
Primary Control/ Dilution Water	0 (0)	0 (0)			>100	>100		
6.25 %	0 (0)	0 (0)			96-Hour LC_{50} = >100 percent			
12.5 %	0 (0)	0 (0)			LC_{50} *95% Confidence Limits			
25.0 %	0 (0)	0 (0)			24-Hr	48-Hr	72-Hr	96-Hr
50.0 %	0 (0)	0 (0)			LL NA UL NA	NA NA		
100 %	0 (0)	0 (0)						
Secondary Control	0 (0)	0 (0)			LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

TABLE 19
Toxicity Test Conditions
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU5 Sediment Elutriate
***Pimephales promelas* (Fathead Minnow)**

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Pimephales promelas*, (in house 8/28/2011 1400; 2 days old)
2. Test Type and Duration:	Static, 96 hours with 48-hour renewal
3. Test Dates:	August 30-September 3, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	250 mL beaker
9. Volume of Test Solutions:	200 mL
10. No. of Test Organisms per Test Vessel:	10
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	50
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	48 hours
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water (MH Number: 1913/1914)
16. Test Material:	DS-11-MU5 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	DS-11-MU5 site water
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 20
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU5 Sediment Elutriate
LC_{50} Determination
***Pimephales promelas* (Fathead Minnow)**

Results of a *Pimephales promelas* (genus) (species) **Conducted** 08/30/11 (mm/dd/yy) - 09/03/11 (mm/dd/yy)

96-Hour Static Acute with 48-Hour Renewal Toxicity Test

Using: DS-11-MU5 Sediment Elutriate

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr	72-Hr	96-Hr	24-Hr	48-Hr	72-Hr	96-Hr
Primary Control/ Dilution Water	2 (2)	2 (2)	2 (2)	2 (2)	>100	>100	>100	>100
6.25 %	0 (0)	2 (2)	2 (2)	2 (2)	**96-Hour LC_{50} = >100 percent**			
12.5 %	0 (0)	0 (0)	0 (0)	0 (0)	**LC_{50} *95% Confidence Limits**			
25.0 %	2 (2)	2 (2)	2 (2)	2 (2)	**24-Hr**	**48-Hr**	**72-Hr**	**96-Hr**
50.0 %	0 (0)	0 (0)	0 (0)	0 (0)	LL NA UL NA	NA NA	NA NA	NA NA
100 %	4 (4)	4 (4)	4 (4)	4 (4)				
Secondary Control	2 (2)	2 (2)	4 (4)	4 (4)	LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

TABLE 21
Toxicity Test Conditions
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU6 Sediment Elutriate
Ceriodaphnia dubia

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Ceriodaphnia dubia* (In house < 24 hours old)
2. Test Type and Duration:	Static, 48-hours
3. Test Dates:	August 30-September 1, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	30 mL beaker
9. Volume of Test Solutions:	15 mL
10. No. of Test Organisms per Test Vessel:	5
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	25
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	None
15. Dilution and Primary Control Water:	Moderately Hard-Dilute Mineral Water (DMW Number: 1864)
16. Test Material:	DS-11-MU6 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	Culture Water (Boardman BD# 619)
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 22
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU6 Sediment Elutriate
LC_{50} Determination
Ceriodaphnia dubia

Results of a *Ceriodaphnia dubia* (genus) (species) — 48-Hour Static Acute Toxicity Test

Conducted 08/30/11 (mm/dd/yy) - 09/01/11 (mm/dd/yy) — Using: DS-11-MU6 Sediment Elutriate

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr			24-Hr	48-Hr		
Primary Control/ Dilution Water	0 (0)	0 (0)			>100	>100		
6.25 %	0 (0)	0 (0)			96-Hour LC_{50} = >100 percent			
12.5 %	0 (0)	0 (0)			LC_{50} *95% Confidence Limits			
25.0 %	0 (0)	0 (0)			24-Hr	48-Hr	72-Hr	96-Hr
50.0 %	0 (0)	0 (0)			LL NA UL NA	NA NA		
100 %	0 (0)	0 (0)						
Secondary Control	0 (0)	0 (0)			LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

TABLE 23
Toxicity Test Conditions
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU6 Sediment Elutriate
***Pimephales promelas* (Fathead Minnow)**

Summary of Toxicity Test Conditions	
1. Test Species and Age:	*Pimephales promelas*, (in house 8/24/2011 1600; 2 days old)
2. Test Type and Duration:	Static, 96 hours with 48-hour renewal
3. Test Dates:	August 26-August 30, 2011
4. Test Temperature (°C):	25 ± 1
5. Light Quality:	Ambient Laboratory, 50-100 ft-c
6. Photoperiod:	16 h light, 8 h darkness
7. Feeding Regime:	None
8. Size of Test Vessel:	250 mL beaker
9. Volume of Test Solutions:	200 mL
10. No. of Test Organisms per Test Vessel:	10
11. No. of Test Vessels per Test Solution:	5
12. Total No. of Test Organisms per Test Solution:	50
13. Nominal Test Concentrations (percent):	100, 50.0, 25.0, 12.5, and 6.25
14. Renewal of Test Solutions:	48 hours
15. Dilution and Primary Control Water:	Moderately Hard Reconstituted Water (MH Number: 1911/1913)
16. Test Material:	DS-11-MU6 Sediment Elutriate (Sediment Elutriate)
17. Secondary Control Water:	DS-11-MU6 site water
18. Aeration:	None
19. Endpoints Measured:	Mortality (LC_{50})

TABLE 24
Acute Toxicity Test Results
U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation,
DS-11-MU6 Sediment Elutriate
LC_{50} Determination
***Pimephales promelas* (Fathead Minnow)**

Results of a *Pimephales promelas* (genus) (species) **Conducted** 08/26/11 (mm/dd/yy) - 08/30/11 (mm/dd/yy)

96-Hour Static Acute with 48-Hour Renewal Toxicity Test

Using: DS-11-MU6 Sediment Elutriate

Test Solution Concentrations	Cumulative Percent Mortality (Cumulative Percent Affected)[a]				LC_{50}* Values (percent)			
	24-Hr	48-Hr	72-Hr	96-Hr	24-Hr	48-Hr	72-Hr	96-Hr
Primary Control/ Dilution Water	2 (2)	4 (4)	6 (6)	6 (6)	>100	>100	>100	>100
6.25 %	4 (4)	4 (4)	6 (6)	6 (6)	**96-Hour LC_{50} = >100 percent**			
12.5 %	0 (0)	0 (0)	0 (0)	0 (0)	**LC_{50} *95% Confidence Limits**			
25.0 %	2 (2)	2 (2)	2 (2)	4 (4)	**24-Hr**	**48-Hr**	**72-Hr**	**96-Hr**
50.0 %	2 (2)	2 (2)	2 (2)	2 (2)	LL NA UL NA	NA NA	NA NA	NA NA
100 %	4 (4)	4 (4)	4 (4)	4 (4)				
Secondary Control	4 (4)	4 (4)	4 (4)	6 (6)	LL = Lower Limit UL = Upper Limit NR = Confidence Intervals are not reliable			
					Method(s) Used to Determine LC_{50} Confidence Limit Values: NA			

[a] Cumulative percent affected is the total percentage of test organisms observed dead, immobile, exhibiting loss of equilibrium or other defined endpoints.

Appendix A

Raw Data Sheets

GLEC

Great Lakes Environmental Center

CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

Page 1 of 1

739 Hastings St.
Traverse City, MI 49686
Phone: 231-941-2230
Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-16-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Elutriate Phosphorus	Cerio-daphnia 2 dose	2 dose	Fat head minnow	4 dose									
9043	DS-11 MU 4	8-15-11 8-16-11	1-2 gal	bucket	Sediment Elutrate	ice	X		X		X	Labeled		MU-11-04						
9042	DS-11 MU 2	8-15-11 8-16-11	1-2 gal	bucket	Sediment Elutrate	ice	X		X		X									

Shipper:
1. [signature]
2.

Date/Time:
8/16-11 1300

Receiver: [signature]

Date/Time: 8/17/11 10:00

Temperature: 1.6/2.8

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

Page 1 of 1

739 Hastings St.
Traverse City, MI 49686
Phone: 231-941-2230
Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-16-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Chironomus Tentans 10-Day Toxicity	Hyalella Azteca 10 Day Toxicity	Lumbriculus Variegatus Bio-accumulation 28 Day Test										
9043	DS-11 MU-4	8-15-11 → 8-16-11	2.5 gal	bucket	Sediment	1 a		X		X		X		Labeled MU-11-04					
9042	DS-11 MU2	8-15-11 8-16-11	2.5 gal	bucket	Sediment	1 a		X		X		X							

	Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1.			[signature]	8/17/11 10:00	0.4/1.1
2.					

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

GLEC
739 Hastings St.
Traverse City, MI 49686
Phone: 231-941-2230
Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-16-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Elutriation test	Fathead minnow	4-day	Ceriodaphnia	Dubia 2-day									
9045		8-15-11 1200	DS-11-MU-4	2.5 gal	Cube	Elutriate Water	ice	X		X		X								
9044		8-15-11 1400	DS-11-MU2	2.5 gal	Cube	Elutriate water	ice	X		X		X								

Shipper: [illegible]

1. Mariah Hope — Date/Time: 8-16-11 1350
2. _____

Receiver: [illegible] — Date/Time: 8/17/11 10:00 — Temperature: 0.2/0.4

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

CHAIN OF CUSTODY RECORD
(To be completed and submitted with samples)

Page 1 of 1

739 Hastings St.
Traverse City, MI 49686
Phone: 231-941-2230
Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group
Location: Duluth MN / Superior WI

Date: 8-16-11
Contact Person: Mariah Hope
Email Address: mariahh@futurenetgroup.com
Phone Number: 313-544-7117
Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Chlorinated test	Fat Food Minnow	48hr Toxicity	Cadmium Cyanide	2-day									
9045	8-15-11 1200	DS-11-M04	1.0 gal	cube	effluent water	ice	X		X		X									
9044	8-15-11 1800	DS-11 M02	1.0 gal	cube	effluent water	ice	X		X		X									

	Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1.	[signature]	8-16-11 1300	[signature]	8/17/11 10:00	1.1 / 0.6
2.					

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

Page 1 of 1

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Traverse City, MI 49686
Phone: 231-941-2230
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www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-16-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Elutriate	Prep	After Filtration	Carcinogenic	Dubing
9046	DS-11 MW3	8-16	3.5 gal	Cub	Elutriate water	Ice		X	X		X

	Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1.	[signature]	8-16-11 1700	[signature]	8/17/11 10:00	2.6/2.3
2.					

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

Sample
CHECK-IN FORM

CLIENT: Future Net USACOE PROJECT NUMBER: 5077-00

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/17/11	8/17/11	8/17/11	DS	INITIALS
SAMPLE ID	DS-11-MU3	DS-11-MU4	DS-11-MU2		
TYPE (W=water, SED=sediment, M=material)	Sed	Sed	WATER		
COLLECTION (G=grab, C=composite)	G	G	G		
GLC NUMBER	9042	9043	9044		
COLLECTION DATE (Time Interval)	8/15-16/11	8/15-16/11	8/15/11 18:00		
TEMPERATURE (≤6 degrees Celsius[1])	1.6/1.1	0.6 2.8	0.4/0.6 DS 8/17/11 +2		
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	Mud No odor	Sandy No odor	Brown No odor		

[1] If out of range see project manager

SAMPLE CHEMISTRY AT TEST TEMPERATURES KN 8/26/11

Elutriate

GLC NUMBER	9042/9044	9043/9045	9044	DS	INITIALS
TEMPERATURE (°C)	25.2	25.3	25.0		
pH (s.u.)	6.97	7.18	7.22		
DISSOLVED OXYGEN (mg/L)	5.8	8.5	10.2		
CONDUCTIVITY (μmhos/cm)	205.5	171.5	160.3		
HARDNESS (mg/L)	68	76	40		
ALKALINITY (mg/L)	72	58	60		
TOTAL CHLORINE (mg/L)*	NM	NM			
TOTAL AMMONIA (mg/L)* as N	6 quick ✓	2 quick ✓			

*Check with project manager to see if necessary.
NM: Not Measured, ND: Non-detect

9044 8/26/11 KN

9044 8/26/11 KN

Hardness: GLC#	Hardness: GLC#	Hardness: GLC#	Alkalinity: GLC#	Alkalinity: GLC#	Alkalinity: GLC#	
End mL: 43.2	End mL: 3.6	End mL: 1.9	End mL: 2.9	End mL: 6.5	End mL: 50.1	16.1
Start mL: 41.2	Start mL: 1.9	Start mL: 0.0	Start mL: 0.0	Start mL: 2.9	Start mL: 47.7	15.5
mL used: 2.0	mL used: 1.7	mL used: 1.9	mL used: 2.9	mL used: 3.6	mL used: 2.4 + .6 =	
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume: 3.0	

Sample
CHECK-IN FORM

CLIENT: USACOE Futurenet PROJECT NUMBER: 5077-00

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/17/11	8/17/11		DS	INITIALS
SAMPLE ID	DS-11-MU4	DS-11-MU3			
TYPE (W=water, SED=sediment, M=material)	W	W			
COLLECTION (G=grab, C=composite)	G	G			
GLC NUMBER	9045	9046			
COLLECTION DATE (Time Interval)	8/15/11 12:00	8/16/11			
TEMPERATURE (≤6 degrees Celsius[1])	0.6/0.4	2.6/2.3			
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	Brown No odor	Brown No odor			

[1] If out of range see project manager

8/26/11 KN Check-In Ellutriate

Check-In 8/26/11 KN

SAMPLE CHEMISTRY AT TEST TEMPERATURES

GLC NUMBER		9046/9047		DS	INITIALS
TEMPERATURE (°C)	25.0	24.5	25.0		
pH (s.u.)	7.58	7.13	7.58		
DISSOLVED OXYGEN (mg/L)	10.3	7.5	9.9		
CONDUCTIVITY (μmhos/cm)	172.3	170.0	174.6		
HARDNESS (mg/L)	84	72	76		
ALKALINITY (mg/L)	62	58	60		
TOTAL CHLORINE (mg/L)*		NM			
TOTAL AMMONIA (mg/L)* as N					

*Check with project manager to see if necessary.

NM: Not Measured, ND: Non-detect

9045 Hardness: GLC#	9046 Hardness: GLC#	Hardness: GLC#	Alkalinity: GLC#	9045 Alkalinity: GLC#	9046 Alkalinity: GLC#
End mL: 45.5	End mL: 47.4	End mL: 5.5	End mL: 2.9	End mL: 19.2	End mL: 22.2
Start mL: 43.4	Start mL: 45.5	Start mL: 3.7	Start mL: 0.0	Start mL: 16.1	Start mL: 19.2
mL used: 2.1	mL used: 1.9	mL used: 1.8	mL used:	mL used: 3.1	mL used: 3.0
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume: 60

8/26/11 KN

8/26/11 KN

CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

Page 1 of 1

739 Hastings St.
Traverse City, MI 49686
Phone: 231-941-2230
Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-17-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Lumbriculus	28-day	Chironomus Tentans	Yodanytes	Hyalella Azteca	10 day TKN	Elutriate Prep	Ceriodaphnia Orbicor.	7 day Elutriate	Fathead Minnow	4 day Elutriate			
9047	DS-11 M03	8-16-8-17 1030	3.5gl	bucket	Sediment	Ice		X		X		X		X		X		X		
9046	DS-11-M03	shipped yesterday			water	Ice								X		X		X		

Check the requested analysis (see definitions below)

	Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1.	Mariah	8-17-11 1800	A. Delaurie	8/18/11 1030	1.1
2.					

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

Sample
CHECK-IN FORM

CLIENT: Future Net Group PROJECT NUMBER: 5077-01

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/18/11	8/18/11		AD	INITIALS
SAMPLE ID	DS-11-MU3	DS-11-HIPU			
TYPE (W=water, SED=sediment, M=material)	S	S			
COLLECTION (G=grab, C=composite)	G	G			
GLC NUMBER	9047	9048			
COLLECTION DATE (Time Interval)	8/16-8/17/11 1030	8/17/11 1300			
TEMPERATURE (≤6 degrees Celsius[1])	1.1	0.2			
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	Mud, no-odor	Mud, no odor			

[1] If out of range see project manager

SAMPLE CHEMISTRY AT TEST TEMPERATURES

GLC NUMBER	~~9047~~				INITIALS
TEMPERATURE (°C)	NM 9/21/11				
pH (s.u.)					
DISSOLVED OXYGEN (mg/L)					
CONDUCTIVITY (μmhos/cm)					
HARDNESS (mg/L)					
ALKALINITY (mg/L)					
TOTAL CHLORINE (mg/L)*					
TOTAL AMMONIA (mg/L)* as N					

*Check with project manager to see if necessary.
NM: Not Measured, ND: Non-detect

Hardness: GLC#	Hardness: GLC#	Hardness: GLC#	Alkalinity: GLC#	Alkalinity: GLC#	Alkalinity: GLC#
End mL:	End mL:	End mL:	End mL:	End mL:	End mL:
Start mL:	Start mL:	Start mL:	Start mL:	Start mL:	Start mL:
mL used:	mL used:	mL used:	mL used:	mL used:	mL used:
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:

CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

Page 1 of 1

739 Hastings St.
Traverse City, MI 49686
Phone: 231-941-2230
Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-19-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

GLC#	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Elutriate	Prop Cutting Minnow	Water Flea	Ceriodaphnia dubia 2 day toxicity									
9050	DS-11-MU6	8-18-11 1700	3.5 gal	Cube ~~Bag~~	Elutriate water	Ice	X		X		X								
9051	DS-11-MU1	8-19-11 800	3.5 gal	cube	Elutriate water	Ice	X		X		X								

Check the requested analysis (see definitions below)

Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1. [signature]	8-19-11 1100	N. Bru	8/20/11 1000	1.2°C (9050)
2.				0.8°C (9051)

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen.
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

Sample
CHECK-IN FORM

CLIENT: USACOE futurenet / Duluth PROJECT NUMBER: 5077-00

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/20/11	8/20/11		TB	INITIALS
SAMPLE ID	DS-11-MU6	DS-11-MU1		↓	
TYPE (W=water, SED=sediment, M=material)	W	W			
COLLECTION (G=grab, C=composite)	G	G			
GLC NUMBER	9050	9051			
COLLECTION DATE (Time Interval)	8/18/11 1700	8/19/11 0800			
TEMPERATURE (≤6 degrees Celsius[1])	1.2	0.8			
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	brown cloudy odorless	brown cloudy odorless			

[1] If out of range see project manager

SAMPLE CHEMISTRY AT TEST TEMPERATURES 8/26/11 KN

GLC NUMBER	9050	9051			INITIALS
TEMPERATURE (°C)	25.0	25.0			
pH (s.u.)	7.43	7.38			
DISSOLVED OXYGEN (mg/L)	9.5	9.5			
CONDUCTIVITY (μmhos/cm)	171.6	158.1 KN 8/26/11			
HARDNESS (mg/L)	Start: 30.5 End: 32.4 76	~~Start: 32.4~~ End: 1.8 72			
ALKALINITY (mg/L)	Start: 37.9 End: 41.4 70	Start: ~~7.3~~ 41.4 End: 44.6 ~~3.2~~ 64 KN 8/26/11			
TOTAL CHLORINE (mg/L)*					
TOTAL AMMONIA (mg/L)* as N					

*Check with project manager to see if necessary.
NM: Not Measured, ND: Non-detect

9050 Hardness: GLC#	Hardness: GLC#	9051 Hardness: GLC#	9051 Alkalinity: GLC#	Alkalinity: GLC#	Alkalinity: GLC#
End mL: 32.4	End mL:	End mL: 39.3	End mL: 44.6	End mL:	End mL:
Start mL: 30.5	Start mL:	Start mL: 37.4	Start mL: 41.4	Start mL:	Start mL:
mL used: 1.9	mL used:	mL used: 1.8	mL used: 3.2	mL used:	mL used:
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:

CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

Page _____ of _____

GLEC
Great Lakes Environmental Center
739 Hastings St.
Traverse City, MI 49686
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Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date:

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Lumbriculus Variegatus 28 day bio	Chironomus Tentans 10 day TBrady	Hyalella Azteca 10 day	Elutriate Prep	Fathead minnow	4 day Elutriate test	Ceriodaphnia Dubia	Elutriate 2 day test				
9056	DS-11-MU5 8-20-11 800		3.5 gal	bucket	Sediment Duluth harbor	ice		X		X		X	X		X		X	
9057	DS-11-MU6 8-20 900		3.5 gal	bucket	Sediment composite	ice		X		X		X	X		X		X	
9055	DS-11-MU1 8-20-1200		3.5 gal	bucket	Sediment composite	ice		X		X		X	X		X		X	
9058	DS-11-MU5 8-20-11 735		3.5 gal	cube	Water Elutriate	ice							X		X		X	

Check the requested analysis (see definitions below)

Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1. [signature]	8-20 1302	[signature]	8/20 15:00	
2.		[signature]	8/23/11 10:00	0.1 – 1.3

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

Sample
CHECK-IN FORM

CLIENT: USACE

PROJECT NUMBER: SC[illegible] 01

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/23/11	8/23/11	8/23/11	8/23/11	DS
SAMPLE ID	DS-11-MU1	DS-11-MU5	DS-11-MU6	DS-11-MU5	
TYPE (W=water, SED=sediment, M=material)	Sed	Sed	Sed	Water	
COLLECTION (G=grab, C=composite)	G	G	G	G	
GLC NUMBER	9055	9056	9057	9058	INITIALS
COLLECTION DATE (Time Interval)	8/20/11 12:00	8/20/11 8:00	8/20/11 9:00	8/20/11 7:30	
TEMPERATURE (≤6 degrees Celsius[1])	0.5-1.3	.5-1.3	0.1-1.1	1.1-1.3	
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	Muddy odorless	Muddy Odorless	Sandy/Muddy Odorless	Brown Odorless	

[1] If out of range see project manager

SAMPLE CHEMISTRY AT TEST TEMPERATURES

8/26/11 KN

	Elutriate	Elutriate			
GLC NUMBER	9055/9051	9056/9058 DS		9058	I
TEMPERATURE (°C)	24.7	24.8		25.0	
pH (s.u.)	7.16	6.87		7.63	
DISSOLVED OXYGEN (mg/L)	5.6	6.5		9.5	INITIALS
CONDUCTIVITY (μmhos/cm)	172.9	183.4		171.4	
HARDNESS (mg/L)	68	56		76	
ALKALINITY (mg/L)	70	66		62	
TOTAL CHLORINE (mg/L)*	NM	NM			
TOTAL AMMONIA (mg/L)* as N					

*Check with project manager to see if necessary.

NM: Not Measured, ND: Non-detect

9051/9055	9056/9058	9058	9056/9058	9051/9055	9058
Hardness: GLC#	Hardness: GLC# 56	Hardness: GLC#	Alkalinity: GLC#	Alkalinity: GLC#	Alkalinity: GLC#
End mL: 13.2	End mL: 11.2	End mL: 41.2	End mL: 41.8	End mL: 45.3	End mL: 47.7
Start mL: 11.5	Start mL: 9.6	Start mL: 39.3	Start mL: 38.5	Start mL: 41.8	Start mL: 44.6
mL used: DS 8/30/11 ~~1.8~~ 1.7	mL used: 1.4	mL used: 1.9	mL used: 3.3	mL used: 3.5	mL used: 3.1
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:

From: (313) 544-7117
Mariah Hope
FutureNet Group, Inc.
12801 Auburn Street

Detroit, MI 48223

Origin ID: DETA

FedEx Express

J11201104290225

Ship Date: 15AUG11
ActWgt: 1.0 LB
CAD: 5304009/INET3180

Delivery Address Bar Code

Ref # 11652-0040
Invoice #
PO #
Dept #

SHIP TO: (231) 941-2230 BILL SENDER

Great Lakes Environmental Center

739 HASTINGS ST

TRAVERSE CITY, MI 49686

TUE - 16 AUG A4
PRIORITY OVERNIGHT

TRK# 7950 7638 3476
0201

68 TVCA

49686
MI-US
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50FG1/EEE7/F5F4

...el:
...button o... ...nt your label to your laser or inkjet printer.
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CUSTODY SEAL
DATE 8/12/11
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900

From: (313) 544-7117
Mariah Hope
FutureNet Group, Inc.
12801 Auburn Street

Detroit, MI 48223

Origin ID: DETA

FedEx Express

J11201104290225

Ship Date: 15AUG11
ActWgt: 1.0 LB
CAD: 5304009/INET3180

Delivery Address Bar Code

Ref # 11652-0040
Invoice #
PO #
Dept #

SHIP TO: (231) 941-2230 BILL SENDER

Great Lakes Environmental Center

739 HASTINGS ST

TRAVERSE CITY, MI 49686

TUE - 16 AUG A4
PRIORITY OVERNIGHT

TRK# 7950 7649 4237
0201

68 TVCA

49686
MI-US
GRR

CUSTODY SEAL
DATE 8-17-11
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900

50FG1/EEE7/F5F4

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From: (313) 544-7117
Mariah Hope
FutureNet Group, Inc.
12801 Auburn Street

Detroit, MI 48223

Origin ID: DETA

FedEx Express

J11201104290225

Ship Date: 23AUG11
ActWgt: 60.0 LB
CAD: 5304009/INET3180

Delivery Address Bar Code

Ref # 11652-0040
Invoice #
PO #
Dept #

SHIP TO: (231) 941-2230 BILL SENDER

Great Lakes Environmental Center

739 HASTINGS ST

TRAVERSE CITY, MI 49686

WED - 24 AUG A4
PRIORITY OVERNIGHT

TRK# 0201 7951 0857 7740

68 TVCA

49686
MI-US
GRR

50FG1/EEE7/F5F4

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Sample Check-In Discrepancy/Comment Form

Project Name: 5077-00
Project Number: USACOE / FUTURENET GLC Number: 9051 / 9050
Date: 8/24/11 Date Sampled: 8/19/11 8/18/11
Technician Initials AD
Project Manager: MG

Discrepancy: Please mark one or more of the following in the box below. Anomalies other than what is listed below can be described in the Comment Section.

Any questions associated with the samples (i.e., damaged containers, improper preservation, unlabeled/illegible sample labels, document discrepancies, insufficient sample volume) must be corrected prior to analysis by contacting the project manager, client and/or state authority. All correspondence shall be documented and discrepancies will be solved as quickly as possible.

Cooler Condition:

- ☐ Samples were not received on wet ice
- ☐ No temperature blank submitted
- ☐ Temperature of samples outside of acceptable range, or samples show evidence of freezing.

Container Label Condition:

- ☐ Not the same ID/info. as on COC
- ☒ Incomplete or missing information: sample ID, collection date/time
- ☐ Other: label smeared, torn, or otherwise illegible

Chain of Custody Discrepancies:

- ☒ No custody seal
- ☐ Custody seal not intact
- ☐ No relinquish signature or name
- ☐ No date/time relinquished
- ☐ No signature
- ☐ Incomplete information

Container Condition:

- ☐ Leaking
- ☐ Broken
- ☐ Loose caps, or without labels

Sample Documentation Discrepancies:

- ☐ Samples not received, but listed on COC
- ☐ Samples received, but not listed on COC
- ☐ Mislabeled toxicology tests, preservatives, etc.
- ☐ Holding time expired
- ☐ Insufficient quantity for analysis

Comments:
- COOLER SENT TO WRONG LAB, REC 8/24/11.
- NO CUSTODY SEAL
- SAMPLES W/ SAME I.D. ~~SENT~~ REC. ON 8/20/11

Corrective Actions: *(please use include dates and names when documenting)*

Laboratory Technician Signature: [signature] Date: 8/24/11

Project Manager/Laboratory Supervisor Signature: Date:

Sample
CHECK-IN FORM

CLIENT: USACOE Fountainnet PROJECT NUMBER: 5077-00

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/24/11	8/24/11		AD	INITIALS
SAMPLE ID	DS-11-MU1	DS-11-~~B~~ MU6 AD 8/24/11			
TYPE (W=water, SED=sediment, M=material)	W	W			
COLLECTION (G=grab, C=composite)	G	G			
GLC NUMBER	9051	9050			
COLLECTION DATE (Time Interval)	8-19-11	8-18-11			
TEMPERATURE (≤6 degrees Celsius[1])	6.1	4.2			
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	Brown Odorless SAMPLES FROM PRIOR SHIPMENT Rec: 8/20/11	Brown, odorless SAMPLES FROM PRIOR SHIPMENT Rec: 8/20/11			

[1] If out of range see project manager

SEE DESCREPANCY FORM

SAMPLE CHEMISTRY AT TEST TEMPERATURES

GLC NUMBER					INITIALS
TEMPERATURE (°C)					
pH (s.u.)					
DISSOLVED OXYGEN (mg/L)					
CONDUCTIVITY (μmhos/cm)					
HARDNESS (mg/L)					
ALKALINITY (mg/L)					
TOTAL CHLORINE (mg/L)*					
TOTAL AMMONIA (mg/L)* as N					

*Check with project manager to see if necessary.

NM: Not Measured, ND: Non-detect

Hardness: GLC#	Hardness: GLC#	Hardness: GLC#	Alkalinity: GLC#	Alkalinity: GLC#	Alkalinity: GLC#
End mL:	End mL:	End mL:	End mL:	End mL:	End mL:
Start mL:	Start mL:	Start mL:	Start mL:	Start mL:	Start mL:
mL used:	mL used:	mL used:	mL used:	mL used:	mL used:
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:

GLEC

DAPHNID 48-HOUR STATIC ACUTE TOXICITY TEST

[redacted]

TEST MATERIAL: USACOE Duluth DS-11-mul GLC# 9051 / 9055
INCUBATOR NUMBER: 9
DILUTION WATER: 1864
PROJECT NUMBER: 5077-01
NUMBER OF DAPHNIDS/CHAMBER: 5
GLC AND/OR BATCH NUMBER: 9051 / 9055
TEST SPECIES: C. dubia
NUMBER OF CHAMBERS: 5
TEST TEMPERATURE: 25 ± 1°
TYPE OF TEST: Reg.
AGE OF DAPHNIDS: <24 hours in house DMW 8/24/11
LIGHT INTENSITY (50-100 FC): 50.0 PHOTOPERIOD: 16:8

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	CONTROL					A 6.25					B 12.5					C 25.0					D 50.0					E 100					BD #619				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
8/30/11 1330	0	AD	TEMPERATURE (°C)	25.4					25.5					25.4					25.4					25.5					25.5					25.0				
			pH	7.98					8.00					8.00					7.91					7.78					7.46					7.84				
			DO (mg/L)	7.1					7.4					7.3					7.4					7.0					6.5					8.1				
			SP. CONDUCTANCE (µmhos/cm)	194					189					191					188					182					171					316				
8/31/11 1230	1	AD	NUMBER LIVE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
			OBSERVATIONS																																			
			TEMPERATURE (°C)	24.5					24.6					24.6					24.6					24.4					24.4					24.4				
			pH	8.28					8.31					8.25					8.23					8.17					8.02					8.44				
			DO (mg/L)	7.8					7.9					8.4					8.2					8.2					8.0					7.8				
			SP. CONDUCTANCE (µmhos/cm)	—					—					—					—					—					—					—				
9/1/11 1350	2	MWK	NUMBER LIVE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
			OBSERVATIONS																																			
			TEMPERATURE (°C)	24.9					24.7					24.7					24.7					24.6					24.6					24.7				
			pH	8.11					8.14					8.19					8.10					8.01					7.90					8.38				
			DO (mg/L)	7.7					8.0					8.1					8.1					7.8					7.6					8.1				
			SP. CONDUCTANCE (µmhos/cm)	203.6					196.6					195.5					191.5					185.4					172.0					321				

Observation Key:
DOB - Dried Out on Beaker
ERR - Erratic Swimming
IMM - Immobile
PM - Particulate Matter
FS - Film on Surface
F - Floater

REVIEWED BY: Marilyn W Horton
DATE: 9/1/11

FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

GLEC Great Lakes Environmental Center

TEST MATERIAL: DS-11-MU1
PROJECT NUMBER: 5077-01 GLC# 9051/9055
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House: 8/28/2011 14:00

INCUBATOR NUMBER: #9 SHELF NUMBER: 3+4
DILUTION WATER: Mod Hard # 1913
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ 47.0 / Day 4/
TEST TEMPERATURE (°C): 25±1°C

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	MH CON					A. 6.25 %				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/30/11 Time 6:30	0	AD DS	Temperature (°C)	23.8					25.9				
			pH	7.95					7.73				
			DO (mg/L)	7.9					7.8				
			Sp. Cond. (µmhos/cm)	320					310				
Date 8/31/11 Time 1115	1	AD	Number Live	10	10	10	10	9	10	10	10	10	10
			Observations										1 err
			Temperature (°C)	25.4					25.2				
			pH AD 8/31/11	~~6.24~~	7.86				7.76				
			DO (mg/L)	6.9					6.6				
48-Hour Renewal New Chemistries GLC# 9051 9055 MH# 1914		AD	Temperature (°C)	25.7					25.7				
			pH	8.18					8.09				
			DO (mg/L)	8.1					8.1				
			Sp. Cond. (µmhos/cm)	9/1/11 322					312				
Date 9/1/11 Time 9:15 ~~10:15~~ DS 9/1/11	2	DS AD	Number Live	AD ~~9~~ 10	10	10	10	9	10	10	10	10	10
			Observations	1 err									1 err
			Temperature (°C)	25.0					25.0				
			pH	7.89					7.94				
			DO (mg/L)	7.9					7.8				
Date 9/2/11 Time 12:45	3	DS	Number Live	10	10	10	10	9	10	10	10	10	10
			Observations										
			Temperature (°C)	24.9					24.9				
			pH	7.80					7.80				
			DO (mg/L)	7.6					7.8				
Date 8/30 Time 9/3/11	4	[illegible]	Number Live	10	10	10	10	9	10	10	10	10	10
			Observations										
			Temperature (°C)	24.9					25.1				
			pH	7.96					7.93				
			DO (mg/L)	7.7					7.7				

Observation Key:
N - Normal
ERR - Erratic Swimming

PM - Particulate Matter
FS - Film on Surface

I - Immobilized
P - Pale

TE – Technician Error

Reviewed By: [illegible] Date: 9/3/11
Revised: 1/2/2011

FISH 96-HOUR STATIC ACUTE TOXICITY TEST
WITH 48-HOUR RENEWAL

TEST MATERIAL: DS-11-MU1
PROJECT NUMBER: 5077-01 GLC# 9051/9055
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House: 8/28/2011 14:00

INCUBATOR NUMBER: #9 SHELF NUMBER: 3+4
DILUTION WATER: Mod Hard # 1913
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (°C): 25±1°C

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	B. 12.5 %					C. 25.0 %				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/30/11 Time 1030	0	AD	Temperature (°C)	25.9					25.9				
			pH	7.75					7.65				
			DO (mg/L)	7.5					7.4				
			Sp. Cond. (µmhos/cm)	301					282				
Date 8/31/11 Time 1115	1	AD	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations		Err		Err						
			Temperature (°C)	25.0					25.4				
			pH	7.82					7.76				
			DO (mg/L)	6.6					6.6				
48-Hour Renewal New Chemistries GLC# 9051/9055 MH# 1914		AD	Temperature (°C)	25.6					25.6				
			pH	8.00					7.80				
			DO (mg/L)	7.9					8.1				
			Sp. Cond. (µmhos/cm)	303					285				
Date 9/1/11 Time 9:15 ~~10:15~~ DS 9:15	2	AD DS	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations										
			Temperature (°C)	24.9					24.9				
			pH	7.88					7.91				
			DO (mg/L)	6.9					7.8				
Date 9/2/11 Time 12:45	3	DS	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations										
			Temperature (°C)	24.9					25.0				
			pH	7.78					7.79				
			DO (mg/L)	7.7					7.9				
Date ~~8/3/11~~ 9/3/11 Time 830	4	DS	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations										
			Temperature (°C)	24.9					25.1				
			pH	7.87					7.87				
			DO (mg/L)	7.9					7.9				

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale
TE – Technician Error

Reviewed By: Marla W Harper Date: 9/3/11
Revised: 1/2/2011

GLEC

FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: DS-11-MU1
PROJECT NUMBER: 5077-01 GLC# 9051/9055
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House: 8/28/2011 14:00

INCUBATOR NUMBER: #9 SHELF NUMBER: 3-4
DILUTION WATER: Mod Hard # 1913
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (°C): 25±1°C

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	D. 50.0%					E. 100%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/30/11 Time 1015	0	AD	Temperature (°C)	25.8					25.6				
			pH	7.47					7.16				
			DO (mg/L)	7.0					5.4				
			Sp. Cond. (µmhos/cm)	246					171				
Date 8/31/11 Time 1115	1	AD	Number Live	10	10	10	10	10	10	9	10 ~~9~~	10	10
			Observations				1err				10 9/2/11		2err
			Temperature (°C)	25.6					25.5				
			pH	7.76					7.70				
			DO (mg/L)	6.6					6.6				
48-Hour Renewal New Chemistries GLC# 9051/9055 MH# 1914		AD	Temperature (°C)	25.4					25.0				
			pH	7.57					7.27				
			DO (mg/L)	8.2					8.4				
			Sp. Cond. (µmhos/cm)	248					172				
Date 9/1/11 Time DS 9/1/11 ~~10:15~~ 9:15	2	AA DS	Number Live	10	10	10	10	10	10	9	10	10	10
			Observations										
			Temperature (°C)	25.3					25.4				
			pH	7.90					7.87				
			DO (mg/L)	7.2					7.0				
Date 9/2/11 Time 12:45	3	DS	Number Live	10	10	10	10	10	10	9	10	10	10
			Observations										
			Temperature (°C)	25.2					25.2				
			pH	7.76					7.71				
			DO (mg/L)	8.0					7.9				
Date 9/3/11 Time 830	4	MW	Number Live	10	10	10	10	10	10	9	10	10	10
			Observations										
			Temperature (°C)	24.9					25.1				
			pH	7.83					7.77				
			DO (mg/L)	7.9					8.0				

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale
TE – Technician Error

Reviewed By: Marilee Wilson Date: 9/3/11
Revised: 1/2/2011

GLFC

FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: DS-11-MU1
PROJECT NUMBER: 5077-01 GLC# 9051/9055
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House: 8/28/2011 14:00

INCUBATOR NUMBER: #9 SHELF NUMBER: 3+4
DILUTION WATER: Mod Hard # 1913
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (°C): 25±1°C

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	DS-11-MU1 site water					Rice H2O CON				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/30/11	0	AD	Temperature (°C)	24.9									
			pH	7.27									
Time 1030			DO (mg/L)	9.4									
			Sp. Cond. (µmhos/cm)	157									
Date 8/31/11	1	AD	Number Live	10	10	10	10	10					
			Observations										
			Temperature (°C)	25.1									
Time 1115			pH	7.96									
			DO (mg/L)	7.0									
48-Hour Renewal New Chemistries GLC# 9051 MH# —		AD	Temperature (°C)	24.2									
			pH	7.31									
			DO (mg/L)	9.9									
			Sp. Cond. (µmhos/cm)	159									
Date 9/1/11	2	AD	Number Live	10	10	10	10	10					
			Observations										
			Temperature (°C)	24.8									
Time 9:15 ~~10:15~~ DS 9/1/11		DS	pH	7.90									
			DO (mg/L)	7.5									
Date 9/2/11	3	DS	Number Live	10	10	10	10	10					
			Observations										
			Temperature (°C)	25.3									
Time 12:45			pH	7.79									
			DO (mg/L)	8.2									
Date 9/3/11	4	MW	Number Live	10	10	10	10	10					
			Observations		MW 9/3/11								
			Temperature (°C)	24.8									
Time 830			pH	7.83									
			DO (mg/L)	7.9									

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale
TE – Technician Error

Reviewed By: Marlen W Hare Date: 9/3/11
Revised: 1/2/2011

DAPHNID 48-HOUR STATIC ACUTE TOXICITY TEST

TEST MATERIAL: USACOE/Duluth DS-11-MU-2 GLC# 9042/9044
INCUBATOR NUMBER: 9
DILUTION WATER: DMW # 1863
PROJECT NUMBER: 5077-01 DS-11-MU2
NUMBER OF DAPHNIDS/CHAMBER: 5
GLC AND/OR BATCH NUMBER: 9042/9044
TEST SPECIES: C dubia
NUMBER OF CHAMBERS: 5
TEST TEMPERATURE: 25 ± 1°C
TYPE OF TEST: regulatory
AGE OF DAPHNIDS: <24 hours in house 8/17/11 BD
LIGHT INTENSITY (50-100 FC): 53.7
PHOTOPERIOD: 16:8
9/20/11 619 ~~169~~

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	DMW CONTROL					A 6.25%					B 12.5%					C 25%					D 50%					E 100%					2° Con Bd				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
8/24/11 1430	0	AD	TEMPERATURE (°C)	24.0					24.0					24.0					24.0					24.0					24.0					24.0				
			pH	8.08					7.95					7.85					7.69					7.43					7.15					7.92				
			DO (mg/L)	7.5					7.3					7.5					7.0					7.0					6.6					7.9				
			SP. CONDUCTANCE (Φmhos/cm)	201.2					200					199					201					202					203					314				
8/25/11 1330	1	AD	NUMBER LIVE	5	5	5	5	5	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
			OBSERVATIONS																																			
			TEMPERATURE (°C)	24.9					25.1					25.1					25.1					25.1					24.9					24.7				
			pH	8.16					8.11					8.09					8.05					8.01					8.00					8.30				
			DO (mg/L)	7.4					7.6					7.8					7.8					7.8					7.9					8.4				
			SP. CONDUCTANCE (Φmhos/cm)	—					—					—					—					—					—					—				
8/26/11 1430	2	AD	NUMBER LIVE	5	5	5	5	5	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
			OBSERVATIONS																																			
			TEMPERATURE (°C)	24.6					24.8					24.9					24.9					24.9					24.8					24.9				
			pH	8.11					8.14					8.11					8.09					8.06					8.00					8.29				
			DO (mg/L)	7.9					7.6					7.6					7.8					7.6					7.7					7.7				
			SP. CONDUCTANCE (Φmhos/cm)	207					207					207					205					204					204					323				

Observation Key:
DOB - Dried Out on Beaker
ERR - Erratic Swimming
IMM - Immobile
PM - Particulate Matter
FS - Film on Surface
F - Floater

REVIEWED BY: Marilu Wilson
DATE: 9/20/11

FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE
PROJECT NUMBER: 5077-01
GLC# DS-11-MU2 9042/9044
INCUBATOR NUMBER: 9
SHELF NUMBER: —
DILUTION WATER: Mod Hard # 1911
PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ 660 Day 4/
TEST SPECIES: FHM
AGE/SOURCE OF FRY: In House: 8/22/11 1600
NO. FRY/CHAMBER: 10
TEST TEMPERATURE (EC): 25±1EC

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	MH Con					A 6.25%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/24/11 Time 1340	0	TB	Temperature (EC)	24.6					24.8				
			pH	7.98					7.78				
			DO (mg/L)	8.1					8.0				
			Sp. Cond. (Φmhos/cm)	320					313				
Date 8/25/11 Time 1240	1	AD	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations			Iverr							
			Temperature (EC)	25.2					25.1				
			pH	7.68					7.68				
			DO (mg/L)	7.4					6.7				
48-Hour Renewal New Chemistries GLC# 9042/9044 MH# 1911		DS	Temperature (EC)	24.6					24.6				
			pH	7.88					7.82				
			DO (mg/L)	8.3					8.3				
			Sp. Cond. (Φmhos/cm)	312					304				
Date 8/26/11 Time 1500	2	DS	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations			Iverr							
			Temperature (EC)	25.0					25.1				
			pH	7.66					7.68				
			DO (mg/L)	7.6					7.2				
Date 8/27/11 Time 1048	3	DS	Number Live	9	10	10	10	10	10	9	10	10	10
			Observations										
			Temperature (EC)	25.5					25.2				
			pH	7.54					7.59				
			DO (mg/L)	7.6					7.6				
Date 8/28/11 Time 1240	4	DS	Number Live	9	10	10	10	10	10	9	10	10	10
			Observations										
			Temperature (EC)	25.1					25.0				
			pH 8/28/11 DS	~~7.85~~	7.48				7.61				
			DO (mg/L)	7.8					7.9				

Observation Key:
N - Normal
ERR - Erratic Swimming

PM - Particulate Matter
FS - Film on Surface

I - Immobilized
P - Pale

TE – Technician Error

Reviewed By: [signature] Date: 9/2011
Revised: 1/2/2011

FISH 96-HOUR STATIC ACUTE TOXICITY TEST
WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE DSII-MW 2
PROJECT NUMBER: 5077-01 GLC# 9042/9044
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House:

INCUBATOR NUMBER: 9 SHELF NUMBER: —
DILUTION WATER: Mod Hard # 1911
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (EC): 25±1EC

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	B 12.5%					C 25%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/24/11 Time 1340	0	TB	Temperature (EC)	24.8					24.8				
			pH	7.64					7.42				
			DO (mg/L)	8.0					7.8				
			Sp. Cond. (Ωmhos/cm)	305					290.9				
Date 8/25/11 Time 1240	1	AD	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations					lerv					
			Temperature (EC)	25.0					25.3				
			pH	7.67					7.70				
			DO (mg/L)	6.5					7.1				
48-Hour Renewal New Chemistries GLC# 9042/9044 MH# 1911		DS	Temperature (EC)	24.7					24.7				
			pH	7.72					7.52				
			DO (mg/L)	8.1					8.1				
			Sp. Cond. (Ωmhos/cm)	296.8					284.0				
Date 8/26/11 Time 1500	2	DS	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations										
			Temperature (EC)	24.9					24.9				
			pH	7.73					7.64				
			DO (mg/L)	7.5					7.6				
Date 8/27/11 Time 1085	3	DS	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations										
			Temperature (EC)	25.1					25.0				
			pH	7.64					7.69				
			DO (mg/L)	7.2					7.4				
Date 8/28/11 Time 1240	4	DS	Number Live	10	10	9	10	10	10	10	10	10	10
			Observations										
			Temperature (EC)	24.9					25.0				
			pH	7.60					7.72				
			DO (mg/L)	7.6					7.7				

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale
TE – Technician Error

Reviewed By: [signature] Date: 9/20/11

FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE DS-11-mu2
PROJECT NUMBER: 5077-01 GLC# 9042/9044
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House:

INCUBATOR NUMBER: 9 SHELF NUMBER: /
DILUTION WATER: Mod Hard # 1911
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (EC): 25±1EC

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	D 50%					E 100%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/24/11 Time 1340	0	TB	Temperature (EC)	24.9					24.7				
			pH	7.17					6.84				
			DO (mg/L)	7.1					5.5				
			Sp. Cond. (Ωmhos/cm)	262.9					204.3				
Date 8/25/11 Time 1240	1	AN	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations									2err	3err
			Temperature (EC)	25.4					25.2				
			pH	7.66					7.73				
			DO (mg/L)	7.0					8.1				
48-Hour Renewal New Chemistries GLC# 9042/9044 MH# 1911		DS	Temperature (EC)	24.8					25.0				
			pH	7.27					6.98				
			DO (mg/L)	7.9					7.8				
			Sp. Cond. (Ωmhos/cm)	258.0					204.6				
Date 8/26/11 Time 1500	2	DS	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations										
			Temperature (EC)	24.9					24.9				
			pH	7.83					7.72				
			DO (mg/L)	7.8					7.2				
Date 8/27/11 Time 1045	3	DS	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations										
			Temperature (EC)	24.8					24.8				
			pH	7.59					7.52				
			DO (mg/L)	7.3					6.7				
Date 8/28/11 Time 1240	4	DS	Number Live	10	10	10	10	10	10	10	10	10	10
			Observations										
			Temperature (EC)	25.0					25.0				
			pH	7.76					7.62				
			DO (mg/L)	7.8					7.5				

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale
TE – Technician Error

Reviewed By: Trailer a Hart Date: 9/20/11

GLEC

DAPHNID 48-HOUR STATIC ACUTE TOXICITY TEST

TEST MATERIAL: DS-11-MU3 USACOE/Duluth GLC# 9046/9047
INCUBATOR NUMBER: 9
DILUTION WATER: DMW # 1863
PROJECT NUMBER: 5077-01 DS-11-MU3
NUMBER OF DAPHNIDS/CHAMBER: 5
GLC AND/OR BATCH NUMBER: 9046/9047
TEST SPECIES: C dubia
NUMBER OF CHAMBERS: 5
TEST TEMPERATURE: 25 ± 1°C
TYPE OF TEST: regulatory
AGE OF DAPHNIDS: <24 hours in house 8/17/11 BD
LIGHT INTENSITY (50-100 FC): ____ PHOTOPERIOD: 16:8
#619 9/22/11 NLV

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	DMW CONTROL					A 6.25%					B 12.5%					C 25%					D 50%					E 100%					2° Con					Bd
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	
8/24/11 1430	0	AD	TEMPERATURE (°C)	24.0					24.0					24.0					24.0					24.0					24.0					24.0					
			pH	7.88					7.92					7.91					7.83					7.70					7.32					7.92					
			DO (mg/L)	7.6					7.8					7.5					7.7					7.5					7.3					7.9					
			SP. CONDUCTANCE (Φmhos/cm)	206.5					198.2					196.3					192.1					184.9					169.5					314					
8/25/11 1330	1	AD	NUMBER LIVE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
			OBSERVATIONS																																				
			TEMPERATURE (°C)	24.8					24.7					24.6					24.6					24.7					24.6					24.7					
			pH	7.43					7.83					7.97					8.02					7.91					7.83					8.30					
			DO (mg/L)	7.6					8.1					8.5					8.3					8.3					8.5					8.4					
			SP. CONDUCTANCE (Φmhos/cm)	—					—					—					—					—					—					—					
8/26/11 1430	2	AD	NUMBER LIVE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	4	5	5	5	5	5	5	5	5	5	5	
			OBSERVATIONS																																				
			TEMPERATURE (°C)	25.2					25.6					25.4					25.6					25.6					25.6					24.9					
			pH	8.07					8.09					8.07					8.04					7.96					7.76					8.29					
			DO (mg/L)	7.7					7.8					7.7					7.5					7.5					7.5					7.7					
			SP. CONDUCTANCE (Φmhos/cm)	218					207					203					198					185					164					323					

Observation Key:
DOB - Dried Out on Beaker
ERR - Erratic Swimming
IMM - Immobile
PM - Particulate Matter
FS - Film on Surface
F - Floater

REVIEWED BY: Marlee W Clark
DATE: 9/20/11

GLC

FISH 96-HOUR STATIC ACUTE TOXICITY TEST
WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE 9046/9047 DS-11- INCUBATOR NUMBER: 9 SHELF NUMBER: PHOTOPERIOD (L:D): 16:8 55.2 x 0.91 = 50.2

PROJECT NUMBER: 5077-01 GLC# 9046 MU3 DILUTION WATER: Mod Hard # 1911 LIGHT INTENSITY (ft-c): Ambient Day 0/ 15.0 Day 4/

TEST SPECIES: FHM AGE/SOURCE OF FRY: In House: 8/22/11 1600 NO. FRY/CHAMBER: 10 TEST TEMPERATURE (EC): 25±1EC AD 8/24/11

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	MH Con					A 6.25%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/24/11 Time 12:30	0	DS	Temperature (EC)	25.2					25.3				
			pH	7.98					7.89				
			DO (mg/L)	8.0					8.0				
			Sp. Cond. (Ωmhos/cm)										
Date 8/25/11 Time 1040	1	AD	Number Live	10	10	9	10	10	10	10	10	10	10
			Observations				Herr						
			Temperature (EC)	24.9					25.0				
			pH	7.62					7.65				
			DO (mg/L)	6.6					7.0				
48-Hour Renewal New Chemistries GLC# 9046/9047 MH# 1912		AD	Temperature (EC)	24.6					24.6				
			pH	7.94					7.82				
			DO (mg/L)	8.1					7.9				
			Sp. Cond. (Ωmhos/cm)	311					298				
Date 8/26/11 Time 1400	2	AD	Number Live	10	9	9	10	10	10	10	10	10	10
			Observations										
			Temperature (EC)	25.6					25.6				
			pH	7.63					7.68				
			DO (mg/L)	7.1					7.2				
Date 8/27/11 Time 10:15	3	DS	Number Live	10	9	9	10	10	10	10	10	10	10
			Observations										
			Temperature (EC)	25.1					24.9				
			pH	7.53					7.54				
			DO (mg/L)	7.4					7.4				
Date 8/28/11 Time 12:00	4	DS	Number Live	10	9	9	10	10	10	10	10	10	10
			Observations										
			Temperature (EC)	25.1					25.1				
			pH	7.41					7.66				
			DO (mg/L)	8.0					7.9				

Observation Key:
N - Normal
ERR - Erratic Swimming

PM - Particulate Matter
FS - Film on Surface

I - Immobilized
P - Pale

TE – Technician Error

Reviewed By: Marilee C Stone Date: 9/20/11
Revised: 1/2/2011

FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE DS-11-mu3
PROJECT NUMBER: 5077-01 GLC# 9046/9047
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House:

INCUBATOR NUMBER: 9 SHELF NUMBER: —
DILUTION WATER: Mod Hard # 1911
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (EC): 25±1EC

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	B 12.5%					C 25%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/24/11 Time	0	DS	Temperature (EC)	25.3					25.3				
			pH	7.86					7.70				
			DO (mg/L)	7.9					7.9				
			Sp. Cond. (Ωmhos/cm)										
Date 8/25/11 Time 1040	1	AD	Number Live	10	9	10	10	10	10	9	10	10	10
			Observations			herr	herr						
			Temperature (EC)	24.8					25.2				
			pH	7.72					7.69				
			DO (mg/L)	7.0					6.9				
48-Hour Renewal New Chemistries GLC# 9046/9047 MH# 1912		AD	Temperature (EC)	AD 8/26/11 25.2	24.6				~~25.1~~ AD 8/26/11 24.6				
			pH	7.77					7.70				
			DO (mg/L)	AD 8/26/11 6.9	8.0				8.1				
			Sp. Cond. (Ωmhos/cm)	289.					273				
Date 8/26/11 Time 1400	2	AD	Number Live	10	9	9	10	10	10	9	10	9	10
			Observations				herr						
			Temperature (EC)	25.2					25.1				
			pH	7.64					7.68				
			DO (mg/L)	6.9					6.7				
Date 8/27/11 Time 1015	3	DS	Number Live	10	9	9	10	10	10	8 TE	10	8	10
			Observations				herr						
			Temperature (EC)	24.9					25.2				
			pH	7.49					7.44				
			DO (mg/L)	6.9					6.3				
Date 8/28/11 Time 1200	4	DS	Number Live	10	9	9	10	10	10	8	10	7	10
			Observations				herr						
			Temperature (EC)	25.0					25.2				
			pH	7.76					7.68				
			DO (mg/L)	8.0					7.2				

Observation Key: N - Normal PM - Particulate Matter I - Immobilized TE – Technician Error

Reviewed by: Noraile W. [illegible] Date: 9/20/11

FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE DS-11-Mu3
PROJECT NUMBER: 5077-01 GLC# 9046/9047
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House:

INCUBATOR NUMBER: 9 SHELF NUMBER:
DILUTION WATER: Mod Hard # 1911
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (EC): 25±1EC

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	D 50%					E 100%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/24/11 Time	0	DS	Temperature (EC)	25.2					25.0				
			pH	7.44					7.12				
			DO (mg/L)	7.8					7.6				
			Sp. Cond. (Ωmhos/cm)										
Date 8/25/11 Time 1040	1	AD	Number Live	10	10	10	10	9	9	10	10	10	10
			Observations	Imm									
			Temperature (EC)	25.2					25.2				
			pH	7.67					7.64				
			DO (mg/L)	6.8					6.9				
48-Hour Renewal New Chemistries GLC# 9046/9047 MH# 1912		AD	Temperature (EC)	24.7					25.1				
			pH	7.49					7.16				
			DO (mg/L)	8.0					8.2				
			Sp. Cond. (Ωmhos/cm)	239					170				
Date 8/26/11 Time 1400	2	AD	Number Live	10	10	10	10	9	+E AD	10	10	10	10
			Observations										
			Temperature (EC)	25.0					25.1				
			pH	7.62					7.42				
			DO (mg/L)	6.9					5.3				
Date 8/27/11 Time 1055	3	DS	Number Live	10	10	10	10	8	TE AD	10	10	10	10
			Observations										
			Temperature (EC)	25.2					2	25.0			
			pH	7.37						7.05			
			DO (mg/L)	6.4						4.5			
Date 8/27/11 Time 1200	4	DS	Number Live	10	10	10	10	8	TE AD	10	10	10	10
			Observations										
			Temperature (EC)	25.2						25.2			
			pH	7.63						7.54			
			DO (mg/L)	7.3						7.0			

Observation Key:
N - Normal
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
D - Dead
TE – Technician Error

Reviewed By: Marilee O'Hare Date: 9/20/11

DAPHNID 48-HOUR STATIC ACUTE TOXICITY TEST

TEST MATERIAL: USACOE / Duluth GLC# 9043/9045 (DS-11-MU4) INCUBATOR NUMBER: 9 DILUTION WATER: DMW # 1863 MW 9/17/11

PROJECT NUMBER: 5077-01 NUMBER OF DAPHNIDS/CHAMBER: 5 GLC AND/OR BATCH NUMBER: 9043/~~1863~~ 9045

TEST SPECIES: C dubia NUMBER OF CHAMBERS: 5 TEST TEMPERATURE: 25 ± 1°C

TYPE OF TEST: regulatory AGE OF DAPHNIDS: <24 hours in house Bd 8/17/11 LIGHT INTENSITY (50-100 FC): 76.17 PHOTOPERIOD: 16:8

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	DMW CONTROL					A 6.25%					B 12.5%					C 25%					D 50%					E 100%					2°Con #619 Bd				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
8/23/11 1400	0	TB	TEMPERATURE (°C)	24.8					24.8					24.7					24.7					24.7					24.7					25.0				
			pH	8.09					8.06					8.00					7.91					7.74					7.33					8.05				
			DO (mg/L)	8.5					8.5					8.5					8.5					8.5					8.5					8.3				
			SP. CONDUCTANCE (Φmhos/cm)	197.7					194.5					192.6					189.8					183.5					171.2					313				
8/24/11 1240	1	TB	NUMBER LIVE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
			OBSERVATIONS																																			
			TEMPERATURE (°C)	25.1					25.2					25.2					25.2					25.2					25.2					25.2				
			pH	8.04					8.12					8.05					8.02					7.94					7.89					8.33				
			DO (mg/L) rep 5	8.4					8.4					8.5					8.5					8.5					8.4					8.3				
			SP. CONDUCTANCE (Φmhos/cm) rep 5	204.9					186.5					186.6					175.4					150.3					163.7					317				
8/25/11 1145	2	AD	NUMBER LIVE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
			OBSERVATIONS																																			
			TEMPERATURE (°C)	24.6					24.6					24.6					24.6					24.7					24.8					24.8				
			pH	8.05					8.06					8.05					8.02					8.00					7.81					8.22				
			DO (mg/L)	7.6					7.7					7.9					7.8					7.9					7.9					7.1				
			SP. CONDUCTANCE (Φmhos/cm)	205.3					198.8					197.3					192.5					185.3					169.1					320				

Observation Key:
DOB - Dried Out on Beaker
ERR - Erratic Swimming
IMM - Immobile
PM - Particulate Matter
FS - Film on Surface
F - Floater

REVIEWED BY: Marla W Olson
DATE: 9/20/11

FISH 96-HOUR STATIC ACUTE TOXICITY TEST
WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE DS-11-MU4 INCUBATOR NUMBER: 9 SHELF NUMBER: _____ PHOTOPERIOD (L:D): 16:8

PROJECT NUMBER: 5077-01 GLC# 9043/9045 DILUTION WATER: Mod Hard # 1909 LIGHT INTENSITY (ft-c): Ambient Day 0/ 51.4 Day 4/

TEST SPECIES: FHM AGE/SOURCE OF FRY: In House: 8/21/11 1750 NO. FRY/CHAMBER: 10 TEST TEMPERATURE (EC): 25±1EC

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	MH Con					A 6.25%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/23/11 Time 13:30	0	TB/DS	Temperature (EC)	24.9					24.8				
			pH	7.93					7.95				
			DO (mg/L)	8.5					8.5				
			Sp. Cond. (Ωmhos/cm)	317					307				
Date 8/24/11 Time 1230	1	TB	Number Live	10	10	10	10	10	10	~~10~~ 9 TB 8/24/11	10	~~9~~ 10 TB 8/24/11	10
			Observations								1 P		
			Temperature (EC)	25.3					25.3				
			pH	7.75					7.76				
			DO (mg/L)	7.8					7.7				
48-Hour Renewal New Chemistries GLC# 9043/9045 MH# 1911		TB	Temperature (EC)	25.0		~~25.0~~ TB 8/25/11		~~25.0~~ TB 8/25/11	25.0				
			pH	7.87					7.87				
			DO (mg/L)	8.0					8.0				
			Sp. Cond. (Ωmhos/cm)	309					298.6				
Date 8/25/11 Time 1340	2	TB	Number Live	10	10	10	10	10	10	~~10~~ 9 TB 8/26/11	10	~~9~~ 10 TB 8/26/11	10
			Observations										
			Temperature (EC)	24.7					24.7				
			pH	7.63					7.71				
			DO (mg/L)	7.3					7.3				
Date 8/26/11 Time 1230	3	AD	Number Live	10	10	10	10	10	10	9	10	10	10
			Observations										
			Temperature (EC)	25.5					25.6				
			pH	7.55					7.63				
			DO (mg/L)	7.4					7.6				
Date 8/27/11 Time 12:50	4	DS	Number Live	10	10	10	9	10	10	9	10	10	10
			Observations										
			Temperature (EC)	25.2					25.0				
			pH	7.27					7.39				
			DO (mg/L)	7.6					7.7				

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale
TE – Technician Error

Reviewed By: Marilee W Clarren Date: 9/20/11

Revised: 1/2/2011

FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE DS-11-menu 4 INCUBATOR NUMBER: 9 SHELF NUMBER: —
PROJECT NUMBER: 5077-01 GLC# 9043/9045 DILUTION WATER: Mod Hard # 1909
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House: NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (EC): 25±1EC

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	B 12.5%					C 25%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/23/11 Time 13:50	0	DS	Temperature (EC)	24.8					24.8				
			pH	7.88					7.75				
			DO (mg/L)	8.5					8.5				
			Sp. Cond. (Ωmhos/cm)	299.2					281.1				
Date 8/24/11 Time 1230	1	TB	Number Live	10	10	10	10	10	10	10	10	9	10
			Observations										
			Temperature (EC)	25.2					25.2				
			pH	7.77					7.75				
			DO (mg/L)	7.7					7.7				
48-Hour Renewal New Chemistries GLC# 9043 MH# 1911		TB	Temperature (EC)	25.0					24.9				
			pH	7.97					7.71				
			DO (mg/L)	8.0					8.1				
			Sp. Cond. (Ωmhos/cm)	291.2					275.6				
Date 8/25/11 Time 1340	2	TB	Number Live	10	10	10	10	10	10	10	10	9	10
			Observations										
			Temperature (EC)	24.7					24.8				
			pH	7.73					7.69				
			DO (mg/L)	7.3					7.4				
Date 8/26/11 Time 1230	3	AD	Number Live	10	10	10	10	10	10	10	10	9	10
			Observations				ver						
			Temperature (EC)	25.4					25.6				
			pH	7.70					7.43				
			DO (mg/L)	7.4					7.4				
Date 8/27/11 Time 12:30	4	DS	Number Live	10	10	10	10	10	10	10	10	9	10
			Observations										
			Temperature (EC)	25.0					25.0				
			pH	7.62					7.61				
			DO (mg/L)	7.5					7.1				

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale
TE – Technician Error

Reviewed By: [signature] Date: 9/20/11
Revised 1/22/11

FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE DS-11-mu4
PROJECT NUMBER: 5077-01 GLC# 9043/9045
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House:
INCUBATOR NUMBER: 9 SHELF NUMBER: —
DILUTION WATER: Mod Hard # 1909
NO. FRY/CHAMBER: 10
PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (EC): 25±1EC

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	D 50%					E 100%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/23/11 Time	0	DS	Temperature (EC)	24.8					24.8				
			pH	7.55					7.35				
			DO (mg/L)	8.5					8.5				
			Sp. Cond. (Φmhos/cm)	247.3					171.0				
Date 8/24/11 Time 1230	1	TB	Number Live	10	10	9	10	9	10	9	10	9	10
			Observations							IP	IP		
			Temperature (EC)	25.2					25.2				
			pH	7.72					7.67				
			DO (mg/L)	7.5					7.5				
48-Hour Renewal New Chemistries GLC# 9043/9045 MH# 1911		TB	Temperature (EC)	24.9					24.8				
			pH	7.46					7.20				
			DO (mg/L)	8.4					9.2				
			Sp. Cond. (Φmhos/cm)	241.8					171.3				
Date 8/25/11 Time 1340	2	TB	Number Live	10	10	9	10	9	10	9	10	9	10
			Observations			IP				IP			
			Temperature (EC)	24.8					24.8				
			pH	7.68					7.65				
			DO (mg/L)	7.4					7.4				
Date 8/26/11 Time 1230	3	AD	Number Live	10	10	9	10	9	10	9	10	9	10
			Observations					Iverr		IP			
			Temperature (EC)	25.8					25.2				
			pH	7.52					7.51				
			DO (mg/L)	7.3					6.8				
Date 8/27/11 Time 1230	4	DS	Number Live	10	10	9	10	9	10	9	10	9	10
			Observations										
			Temperature (EC)	24.9					24.8				
			pH	7.66					7.52				
			DO (mg/L)	7.2					7.2				

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale
TE – Technician Error

Reviewed by: [signature] Date: 9/20/11
Revised 1/2/2011

GLEC

DAPHNID 48-HOUR STATIC ACUTE TOXICITY TEST

TEST MATERIAL: USACOE Duluth DS-11-MUS GLC# 9056/9058
INCUBATOR NUMBER: #9
DILUTION WATER: DMW 1864
PROJECT NUMBER: 5077-01
NUMBER OF DAPHNIDS/CHAMBER: 5
GLC AND/OR BATCH NUMBER: 9056 / 9058
TEST SPECIES: C. dubia
NUMBER OF CHAMBERS: 5
TEST TEMPERATURE: 25 ± 1°
TYPE OF TEST: Reg.
AGE OF DAPHNIDS: <24 hours in house 8/22/11 DMW
LIGHT INTENSITY (50-100 FC): 50.0 PHOTOPERIOD: 16:8

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	CONTROL					A 6.25					B 12.5					C 25.0					D 50.0					E 100					BD #619				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
8/30/11 1880	0	AD	TEMPERATURE (°C)	24.7					24.7					24.7					24.8					24.9					24.9					25.0				
			pH	7.98					7.96					7.92					7.80					7.59					7.31					7.84				
			DO (mg/L)	7.4					7.2					7.3					7.4					7.4					6.9					8.1				
			SP. CONDUCTANCE (µmhos/cm)	195					194					193					190					187					182					316				
8/31/11 1230	1	AD	NUMBER LIVE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
			OBSERVATIONS																																			
			TEMPERATURE (°C)	24.4					24.7					24.8					24.7					24.7					24.6					24.4				
			pH	8.22					8.23					8.19					8.17					8.15					8.12					8.44				
			DO (mg/L)	8.1					8.1					7.9					8.2					8.0					8.0					7.8				
			SP. CONDUCTANCE (µmhos/cm)	—					—					—					—					—					—					—				
9/6/11 1355	2	MWS	NUMBER LIVE	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
			OBSERVATIONS																																			
			TEMPERATURE (°C)	24.5					24.6					24.5					24.5					24.6					24.6					24.5				
			pH	7.96					8.10					8.09					8.05					7.99					7.90					8.38				
			DO (mg/L)	7.6					8.0					8.1					8.0					8.0					8.0					8.1				
			SP. CONDUCTANCE (µmhos/cm)	205.3					198.1					195.1					190.8					185.1					173.4					321				

Observation Key:
DOB - Dried Out on Beaker
ERR - Erratic Swimming
IMM - Immobile
PM - Particulate Matter
FS - Film on Surface
F - Floater

REVIEWED BY: Marilyn Stowe
DATE: 9/20/11

GLEC
Great Lakes Environmental Center

FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: DS-11-MU5
PROJECT NUMBER: 5077-01 GLC# 9056/9058
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House: 8/28/2011 14:00

INCUBATOR NUMBER: #9 SHELF NUMBER: #1, #2
DILUTION WATER: Mod Hard # 1913
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ 59.2 Day 4/
TEST TEMPERATURE (°C): 25±1°C

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	Con					A 6.25%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/30/11 Time 1030	0	DS AD	Temperature (°C)	25.3					25.1				
			pH	7.95					7.85				
			DO (mg/L)	7.9					7.8				
			Sp. Cond. (µmhos/cm)	322					312				
Date 8/31/11 Time 1130	1	AD	Number Live	10	10	9	10	10	10	10	10	10	10
			Observations				Lerv						
			Temperature (°C)	24.8					24.9				
			pH	7.94					7.97				
			DO (mg/L)	7.6					7.1				
48-Hour Renewal New Chemistries GLC# 9056/9058 MH# 1914		DS	Temperature (°C)	25.9					25.9				
			pH	7.95					8.01				
			DO (mg/L)	8.2					8.2				
			Sp. Cond. (µmhos/cm)	323					314				
Date 9/1/11 Time 10:15	2	AD DS	Number Live	10	9 1te	9	10	10	10	10	9	10	10
			Observations										Lerr
			Temperature (°C)	24.4					24.7				
			pH	7.92					7.87				
			DO (mg/L)	7.3					6.2				
Date 9/2/11 Time 12:20	3	DS	Number Live	10	9	9	10	10	10	10	9	10	10
			Observations										
			Temperature (°C)	24.7					24.7				
			pH	7.72					7.76				
			DO (mg/L)	7.8					8.5				
Date 9/3/11 Time	4	DS	Number Live	10	9	9	10	10	10	10	9	10	10
			Observations										
			Temperature (°C)	24.5					24.8				
			pH	7.86					7.87				
			DO (mg/L)	7.4					7.7				

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale
TE – Technician Error

Reviewed By: [signature] Date: 9/20/11
Revised: 1/2/2011

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FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: DS-11-MU5
PROJECT NUMBER: 5077-01 GLC# 9056/9058
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House: 8/28/2011 14:00

INCUBATOR NUMBER: #9 SHELF NUMBER: #1/2
DILUTION WATER: Mod Hard # 1913
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (°C): 25±1°C

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	B ~~25%~~ DS 8/30/11 12.5%					C 25%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/30/11 Time 1030	0	AD	Temperature (°C)	24.9					24.8				
			pH	7.75					~~7.7~~ DS 8/30/11 7.54				
			DO (mg/L)	7.9					7.7				
			Sp. Cond. (µmhos/cm)	302					285.7				
Date 8/31/11 Time 1130	1	AD	Number Live	10	10	10	10	10	10	10	10	10	~~10~~ AD 8/31/11 9
			Observations										
			Temperature (°C)	25.0					25.0				
			pH	7.92					7.85				
			DO (mg/L)	6.5					6.8				
48-Hour Renewal New Chemistries GLC# 9056/9058 MH# 1914		DS	Temperature (°C)	25.8					25.6				
			pH	7.90					7.71				
			DO (mg/L)	8.2					8.5				
			Sp. Cond. (µmhos/cm)	305					287.5				
Date 9/1/11 Time 1015	2	AD	Number Live	10	10	10	10	10	10	10	10	10	9
			Observations	1err						1err			
			Temperature (°C)	24.8					24.9				
			pH	AD 9/1/11 ~~6.5~~	7.86				7.90				
			DO (mg/L)	7.0					7.0				
Date 9/2/11 Time 12:20	3	DS	Number Live	10	10	10	10	10	10	10	10	10	9
			Observations	1err									
			Temperature (°C)	24.7					24.7				
			pH	7.78					7.75				
			DO (mg/L)	8.2					8.3				
Date 9/3/11 Time	4	DS	Number Live	10	10	10	10	10	10	10	10	10	9
			Observations										
			Temperature (°C)	24.8					24.8				
			pH	7.82					7.83				
			DO (mg/L)	7.9					8.4				

Observation Key:
N - Normal
ERR - Erratic Swimming

PM - Particulate Matter
FS - Film on Surface

I - Immobilized
P - Pale

TE – Technician Error

Reviewed By: Matthew Stone Date: 9/20/11
Revised: 1/2/2011

FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: DS-11-MU5
PROJECT NUMBER: 5077-01 GLC# 9056/9058
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House: 8/28/2011 14:00

INCUBATOR NUMBER: #9 SHELF NUMBER: #1/2
DILUTION WATER: Mod Hard # 1913
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (°C): 25±1°C

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	D 50%					E 100%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/30/11 Time 1030	0	AD	Temperature (°C)	24.9					24.8				
			pH	7.34					6.94				
			DO (mg/L)	7.4					6.3				
			Sp. Cond. (µmhos/cm)	251.9					182.3				
Date 8/31/11 Time 1130	1	AD	Number Live	10	10	10	10	10	10	10	10	10	8
			Observations									Herr	
			Temperature (°C)	25.2					25.2				
			pH	7.74					7.75				
			DO (mg/L)	7.6					6.7				
48-Hour Renewal New Chemistries GLC# 9056/9058 MH# 1914		DS	Temperature (°C)	25.4					25.2				
			pH	7.44					6.99				
			DO (mg/L)	8.6					8.9				
			Sp. Cond. (µmhos/cm)	253.1					182.5				
Date 9/1/11 Time 10:15	2	AD DS	Number Live	10	10	10	10	10	10	10	10	10	8
			Observations										
			Temperature (°C)	25.0					25.0				
			pH	7.85					7.89				
			DO (mg/L)	7.1					7.1				
Date 9/2/11 Time 1253	3	DS	Number Live	10	10	10	10	10	10	10	10	10	8
			Observations									Herr	
			Temperature (°C)	24.7					24.7				
			pH	7.72					7.64				
			DO (mg/L)	8.0					8.3				
Date 9/3/11 Time	4	DS	Number Live	10	10	10	10	10	10	10	10	10	8
			Observations										
			Temperature (°C)	24.9					24.8				
			pH	7.79					7.74				
			DO (mg/L)	8.1					8.3				

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale
TE – Technician Error

Reviewed By: Marlon W Gore Date: 9/20/11
Revised: 1/2/2011

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FISH 96-HOUR STATIC ACUTE TOXICITY TEST WITH 48-HOUR RENEWAL

TEST MATERIAL: DS-11-MU5
PROJECT NUMBER: 5077-01 GLC# 9056/9058
TEST SPECIES: FHM AGE/SOURCE OF FRY: In House: 8/28/2011 14:00

INCUBATOR NUMBER: #9 SHELF NUMBER: #1/2
DILUTION WATER: Mod Hard #
NO. FRY/CHAMBER: 10

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (ft-c): Ambient Day 0/ Day 4/
TEST TEMPERATURE (°C): 25±1°C

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	Rec Con / DS-11-MU5 site water									
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
Date 8/30/11 Time 1030	0	AD	Temperature (°C)	24.8									
			pH	7.51									
			DO (mg/L)	9.5									
			Sp. Cond. (µmhos/cm)	169.9									
Date 8/31 Time	1	AD	Number Live	10	10	10	10	9					
			Observations										
			Temperature (°C)	25.1									
			pH AD 8/31/11	~~8~~ 7.91									
			DO (mg/L)	7.4									
48-Hour Renewal New Chemistries GLC#____ MH# 1914		DS	Temperature (°C)	25.2									
			pH	7.54									
			DO (mg/L)	9.6									
			Sp. Cond. (µmhos/cm)	173.4									
Date 9/1/11 Time 10:15	2	DS AD	Number Live	10	10	10	10	9					
			Observations										
			Temperature (°C)	24.8									
			pH	7.83									
			DO (mg/L)	7.0									
Date 9/2/11 Time 12:20	3	DS	Number Live	10	9	10	10	9					
			Observations										
			Temperature (°C)	24.7									
			pH	7.75									
			DO (mg/L)	8.3									
Date 9/3/11 Time	4	[illegible]	Number Live	10	9	10	10	9					
			Observations										
			Temperature (°C)	24.9									
			pH	7.86									
			DO (mg/L)	8.1									

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale
TE – Technician Error

Reviewed By: [illegible] Date: 9/20/11
Revised: 1/2/2011

GLEC

DAPHNID 48-HOUR STATIC ACUTE TOXICITY TEST

TEST MATERIAL: US ACOE/Duluth DS-11-MUG GLC# 9050/9057
INCUBATOR NUMBER: AD 8/30/11 9 #1
DILUTION WATER: 1864
PROJECT NUMBER: 5077-01
NUMBER OF DAPHNIDS/CHAMBER: 5
GLC AND/OR BATCH NUMBER: 9057/9050
TEST SPECIES: C. dubia
NUMBER OF CHAMBERS: 5
TEST TEMPERATURE: 25± 1°
TYPE OF TEST: Reg.
AGE OF DAPHNIDS: <24 hours in house BD 8/26/11
LIGHT INTENSITY (50-100 FC): 90.7 PHOTOPERIOD: 16:8

DATE / TIME	TEST DAY	TECH. INITIALS	TREATMENT LEVEL	CONTROL	A 6.25	B 12.5	C 25.0	D 50.0	E 100	BD 6.19
			REPLICATE NUMBER	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5	1 2 3 4 5
8/30/11 1430	0	AD	TEMPERATURE (°C)	24.7	24.6	24.5	24.5	24.5	24.5	25.0
			pH	7.98	7.86	7.87	7.88	7.77	7.60	7.84
			DO (mg/L)	7.4	7.1	7.5	7.8	8.0	8.5	8.1
			SP. CONDUCTANCE (µmhos/cm)	195	201	204	213	231	266	316
8/31/11 1300	1	AD	NUMBER LIVE	5 5 5 5 5	5 5 5 5 5	5 5 5 5 5	5 5 5 5 5	5 5 5 5 5	5 5 5 5 5	5 5 5 5 5
			OBSERVATIONS							
			TEMPERATURE (°C)	24.9	24.7	24.6	24.6	24.6	24.6	24.9
			pH	AD 8/31/11 8.~~49~~32	8.23	8.27	8.28	8.33	8.35	8.49
			DO (mg/L)	8.1	8.0	8.0	8.1	8.3	8.0	7.9
			SP. CONDUCTANCE (µmhos/cm)	—	—	—	—	—	—	—
9/1/11 1405	2	AW	NUMBER LIVE	5 5 5 5 5	5 5 5 5 5	5 5 5 5 5	5 5 5 5 5	5 5 5 5 5	5 5 5 5 5	5 5 5 5 5
			OBSERVATIONS							
			TEMPERATURE (°C)	25.2	25.1	25.1	25.1	25.1	25.2	25.2
			pH	8.10	8.17	8.21	8.24	8.27	8.30	8.48
			DO (mg/L)	7.7	7.9	8.1	8.1	8.0	8.0	8.1
			SP. CONDUCTANCE (µmhos/cm)	AB 9/1/11 ~~216.4~~ 215.8	212.0	210.0	216.6	234.0	266.7	333

Observation Key:
DOB - Dried Out on Beaker
ERR - Erratic Swimming
IMM - Immobile
PM - Particulate Matter
FS - Film on Surface
F - Floater

REVIEWED BY: [signature]
DATE: 9/20/11

FISH 96-HOUR STATIC ACUTE TOXICITY TEST
WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE
PROJECT NUMBER: 5077-01 GLC# 9050/9051
TEST SPECIES: FHM DS-11-MU6

NO. FRY/CHAMBER: 10
AGE/SOURCE OF FRY: 8/24/11 16:00
DILUTION WATER: MOD HARD 1911

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (µE/m²/s): Ambient Day 0/~~0.91~~ 22.4* Day 4/
TEST TEMPERATURE (EC): 25 ± 1°C 47.6 AD 8/26/11

TIME			TREATMENT LEVEL	MOD HARD					A 6.25%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
8/26/11 1340	0	AD	Temperature (EC)	24.7 ~~25.0~~		~~25.0~~			24.6 ~~25.0~~		~~25.0~~		
			pH	7.94					7.91				
			DO (mg/L)	8.1					8.0				
			Sp. Cond. (Ωmhos/cm)	313					306				
8/27/11 1115	1	DS	Number Live	10	9	10	10	10	10	8 1+e	9 ~~8~~ DS	10	10
			Observations			1err							
			Temperature (EC)	24.4					24.4				
			pH	7.67					7.79				
			DO (mg/L)	7.8					7.6				
8/28/11 1130	2	MH 1913 DS	Number Live	10	9	9	10	10	10	8	9	10	10
			Observations			1err				1P			2err
			Temperature (EC)	25.0			New 25.3 ~~25~~	Spc 324	25.0	2		New 25.2	Spc 319
			pH	7.71			7.82 DS 8/28/11		7.75			7.92	
			DO (mg/L)	7.6			8.2		7.7			8.2	
8/29/11 1330	3	AD	Number Live	9	9	9	10	10	10	8	9	10	9
			Observations			1err	1err			1P			1err
			Temperature (EC)	25.2					25.1				
			pH	7.54					7.78				
			DO (mg/L)	6.4					6.8				
8/30/11 1345	4	AD	Number Live	9	9	9	10	10	10	8	9	10	9
			Observations			1err			1err				2err
			Temperature (EC)	25.2					24.8				
			pH	7.53					7.59				
			DO (mg/L)	6.8					6.4				
			Sp. Cond. (Ωmhos/cm)	328					326				

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale

Reviewed By: Marilee W Horn Date: 9/20/11

FISH 96-HOUR STATIC ACUTE TOXICITY TEST
WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE
PROJECT NUMBER: 5077-01
GLC# 9050/9511
TEST SPECIES: FHM
DS-11-MU6
NO. FRY/CHAMBER: 10
AGE/SOURCE OF FRY: 8/24/11 1600
DILUTION WATER: MH 1911
PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (µE/m²/s): Ambient Day 0/ 52.4 x 0.91 Day 4/ 47.6
TEST TEMPERATURE (EC): 25±1°

TIME			TREATMENT LEVEL	B 12.5 %					C 25 %				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
8/26/11 1340	0	AD	Temperature (EC)	24.7 ~~25.0~~		~~25.0~~			24.7 ~~25.0~~		~~25.0~~		
			pH	7.80					7.65				
			DO (mg/L)	8.0					7.8				
			Sp. Cond. (Φmhos/cm)	302					296				
8/27/11 11:15	1	DS	Number Live	10	10	10	10	10	10	10	10	9	10
			Observations										
			Temperature (EC)	24.4					24.4				
			pH	7.81					7.83				
			DO (mg/L)	7.6					7.6				
8/28/11 11:30	2	DS	Number Live	10	10	10	10	10	10	10	10	9	10
			Observations										
			Temperature (EC)	25.0			New 25.3	Spc 319	25.0			New 25.3	Spc 307
			pH	7.82			7.80		7.87			7.66	
			DO (mg/L)	7.8			8.1		7.7			8.1	
8/29/11 1330	3	AD	Number Live	10	10	10	10	10	10	10	10	9	10
			Observations				1err						
			Temperature (EC)	25.0					25.3				
			pH	7.81					7.91				
			DO (mg/L)	6.7					6.9				
8/30/11	4	AD	Number Live	10	10	10	10	10	10	10	9	9	10
			Observations			2err							
			Temperature (EC)	24.7					24.9				
			pH	7.67					7.71				
			DO (mg/L)	6.4					6.3				
			Sp. Cond. (Φmhos/cm)	315									

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale

Reviewed By: Mark W. Lower Date: 9/20/11

FISH 96-HOUR STATIC ACUTE TOXICITY TEST
WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE
PROJECT NUMBER: 5077-01
GLC# 9050/9051 DS-11-MUG
TEST SPECIES: FHM

NO. FRY/CHAMBER: 10
AGE/SOURCE OF FRY: 8/24/11 1600
DILUTION WATER: MH 1911

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (µE/m²/s): Ambient Day 0/ 52.4* 64.2 Day 4/ 47.6
TEST TEMPERATURE (EC): 25 ± 1°C

TIME			TREATMENT LEVEL	D 50%					E 100%				
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
8/26/11 1340	0	AD	Temperature (EC)	24.6 ~~25.0~~		~~25.0~~			24.7 ~~25.0~~		~~25.0~~		
			pH	7.45					7.28				
			DO (mg/L)	7.2					6.0				
			Sp. Cond. (Φmhos/cm)	286					267				
8/27/11 1515	1	DS	Number Live	10	10	10	10	9	10	9	10	9	10
			Observations									Verr	
			Temperature (EC)	24.4					24.4				
			pH	7.91					8.00				
			DO (mg/L)	7.6					7.5				
8/28/11	2	DS	Number Live	10	10	10	10	9	10	9	10	9	10
			Observations				Verr						
			Temperature (EC)	24.9			New 25.1	Spc. 292.4	24.9			New 25.0	Spc 266.7
			pH	7.93			7.43		8.08			7.22	
			DO (mg/L)	7.7			8.0		7.8			7.9	
8/29/11 1330	3	AD	Number Live	10	10	10	10	9	10	9	10	9	10
			Observations										
			Temperature (EC)	25.2					25.2				
			pH	7.96					7.96				
			DO (mg/L)	7.0					6.9				
8/30/11	4	AD	Number Live	10	10	10	10	9	10	9	10	9	10
			Observations									* FOV	
			Temperature (EC)	24.6					24.7				
			pH	7.86					7.96				
			DO (mg/L)	6.5					6.6				
			Sp. Cond. (Φmhos/cm)	310					294				

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale

Reviewed by: [signature] Date: 9/20/11
* FORDEN CRES. VIS.

FISH 96-HOUR STATIC ACUTE TOXICITY TEST
WITH 48-HOUR RENEWAL

TEST MATERIAL: USACOE
PROJECT NUMBER: 5077-01
GLC# 9050/9051
DS-11-MU6
TEST SPECIES: FHM

NO. FRY/CHAMBER: 10
AGE/SOURCE OF FRY: 8/24/11 1600
DILUTION WATER: MH 1911

PHOTOPERIOD (L:D): 16:8
LIGHT INTENSITY (µE/m²/s): Ambient Day 0/ 42.6 Day 4/
TEST TEMPERATURE (EC): 25± 1°C

TIME			TREATMENT LEVEL	DS-11-MU6 Site Water / Rec H2O CON									
			REPLICATE NUMBER	1	2	3	4	5	1	2	3	4	5
8/26/11 1340	0	AD	Temperature (EC)	25.0		~~25.0~~			25.0		25.0		
			pH	7.33									
			DO (mg/L)	9.0									
			Sp. Cond. (Ωmhos/cm)	172									
8/27/11 11:15	1	DS	Number Live	10	9	10	10	9					
			Observations										
			Temperature (EC)	24.4									
			pH	7.88									
			DO (mg/L)	7.6									
8/28/11	2	DS	Number Live	10	9	10	10	9					
			Observations										
			Temperature (EC)	25.0			NCW 25.1	spc 172.4					
			pH	7.95			7.08						
			DO (mg/L)	7.9			9.5						
8/29/11 1330	3	AD	Number Live	10	9	10	10	9					
			Observations										
			Temperature (EC)	25.2									
			pH	7.77									
			DO (mg/L)	6.6									
8/30/11 1345	4	AD	Number Live	10	8	10	10	9					
			Observations										
			Temperature (EC)	24.9									
			pH	7.90									
			DO (mg/L)	6.9									
			Sp. Cond. (Ωmhos/cm)	173									

Observation Key:
N - Normal
ERR - Erratic Swimming
PM - Particulate Matter
FS - Film on Surface
I - Immobilized
P - Pale

Reviewed By: [signature] Date: 9/20/11

Appendix B

Reference Toxicant Data

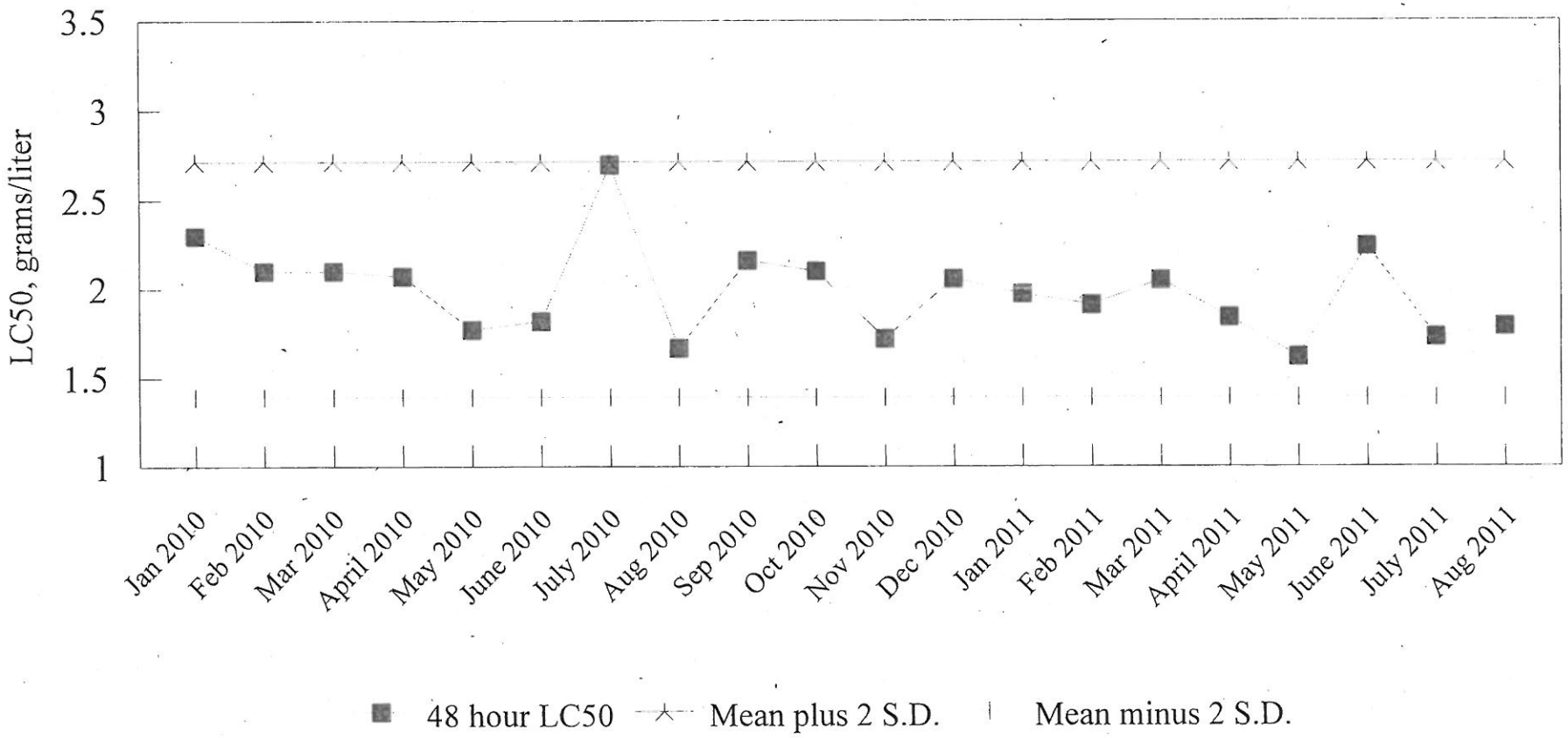
GLEC

Great Lakes Environmental Center

Ceriodaphnia dubia Survival

Sodium Chloride (NaCl) Toxicity Data

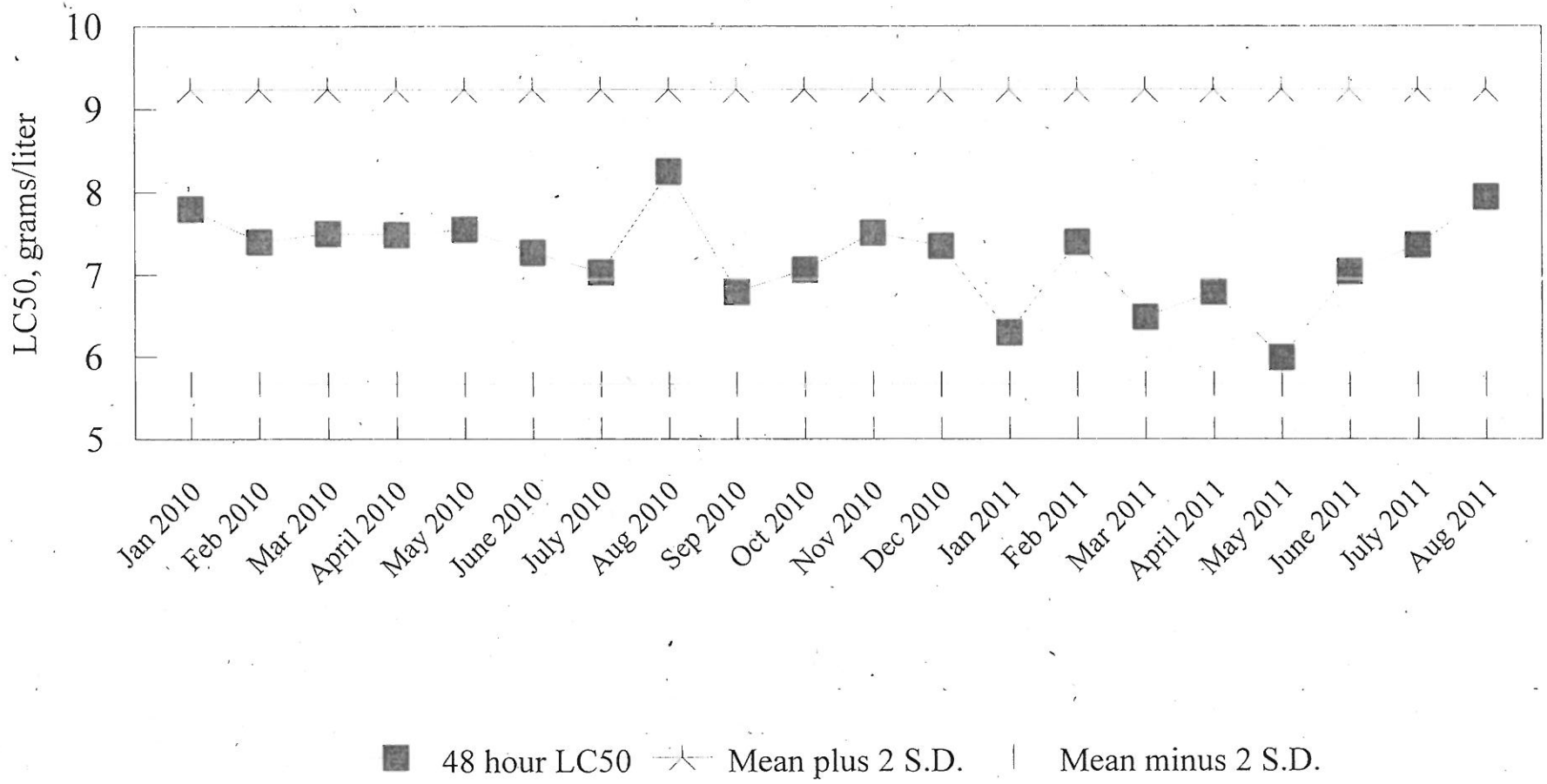
2010-2011



Fathead Minnow Survival

Sodium Chloride (NaCl) Toxicity Data

2010-2011



APPENDIX K

GLEC Laboratory Report
10-day Whole Sediment Toxicity Test Results

FINAL REPORT:

Chironomus dilutus and *Hyalella azteca* 10-Day Whole Sediment Toxicity Testing Results for U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation

Prepared for:

Mariah Hope
Future Net Group, Inc.
12801 Auburn Street
Detroit, MI 48223

Prepared by:

GLEC
Great Lakes Environmental Center

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Traverse City, MI 49686

Ph.: 231/941-2230
Fax: 231/941-2240

November 10, 2011

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November 10, 2011

Mariah Hope
FutureNet Group, Inc.
12801 Auburn Street
Detroit, MI 48223

RE: Final Report: *Hyalella azteca* and *Chironomus dilutus* Whole Sediment
Sample Collection Dates: August 15-August 20, 2011
USACOE Duluth-Superior, MN-WI Open Water Evaluation
GLEC Project Number: 5077

Dear Ms. Hope:

Great Lakes Environmental Center, Inc. (GLEC) has completed our analysis of the *Chironomus dilutus* 10-day survival and growth and the *Hyalella azteca* 10-day survival whole sediment toxicity tests. The whole sediment toxicity tests were performed with ten sediment samples collected by FutureNet Group, Inc. personnel from the U. S. Army Corps of Engineers (USACOE) Open Water Evaluation sampling site located in Duluth-Superior, MN-WI.

The sample identification numbers, whole sediment survival and growth toxicity test results for the ten sediment samples are summarized and provided in the following tables.

- Table 1: 10-Day *C. dilutus* Average Percent Survival
- Table 2: 10-Day *C. dilutus* Growth and Biomass Estimates (expressed as average ash-free-dry-weight (AFDW))
- Table 3: 10-Day *H. azteca* Average Percent Survival

Water quality data for the overlying water for each sediment sample tested are summarized in Table 4 for the *C. dilutus* tests and Table 5 for the *H. azteca* tests. A detailed summary of the overlying water quality measurements is provided in Appendix B. Statistical data summaries for the *C. dilutus* and *H. azteca* tests are shown in Appendices C and D, respectively. The daily laboratory bench data sheets are kept on file at GLEC and are also provided on the enclosed compact diskette. Chain of Custody forms and reference toxicant data are provided in Appendices A and E, respectively.

METHODS

The ten sediment samples were analyzed at our Traverse City, Michigan laboratory following the Great Lakes Dredged Material Testing and Evaluation Manual (GLTEM, 1998) and GLEC's written protocols which are based on the procedures outlined in the following USEPA and ASTM test methods: *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates*, Second Edition (EPA/600/R-99/064); *Standard Test Methods for Measuring the Toxicity of Sediment Associated Contaminants with Freshwater Invertebrates* (ASTM 1706-95B); and GLEC Standard Operating Procedures (SOPs).

The ten sediment samples were collected and shipped by FutureNet Group, Inc. personnel and were received at GLEC, where they were assigned a unique GLEC laboratory identification number and stored at 0-6°C until test initiation (see table below).

Sample I.D.	Sample Description	GLEC Lab. ID Number	Date Sampled	Date Received
DS-11-HIPU	Reference –Hearding Island Placement Unit	9048	August 17, 2011	August 18, 2011
DS-11-MOPU	Reference –Minnesota Open Water Placement Unit	9052	August 18, 2011	August 20, 2011
DS-11-WOPU	Reference –Wisconsin Open Water Placement Unit	9053	August 18, 2011	August 20, 2011
DS-11-IIPU	Reference –Interstate Island Placement Unit	9054	August 18, 2011	August 20, 2011
DS-11-MU-2	Harbor Sample	9042	August 15-16, 2011	August 17, 2011
DS-11-MU-4	Harbor Sample	9043	August 15-16, 2011	August 17, 2011
DS-11-MU-3	Harbor Sample	9047	August 16-17, 2011	August 18, 2011
DS-11-MU1	Harbor Sample	9055	August 20, 2011	August 23, 2011
DS-11-MU5	Harbor Sample	9056	August 20, 2011	August 23, 2011
DS-11-MU6	Harbor Sample	9057	August 20, 2011	August 23, 2011

The 10-day *C. dilutus* and *H. azteca* toxicity tests were initiated on September 13, 2011 with each of the ten investigative sediment samples and one laboratory control sediment per test organism. Due to a mechanical error, the growth endpoints for the 10-day *C. dilutus* were lost and in response the 10 day *C. dilutus* whole sediment toxicity tests were re-initiated with the ten investigative sediment samples and one

laboratory control on October 4, 2011. The *C. dilutus* survival and growth results from the October 4, 2011 toxicity tests were used for the statistical analysis and reporting results for the ten investigative sediment samples.

Summary of Test Procedures: 10-Day *Chironomus dilutus* and *Hyalella azteca* Acute Whole Sediment Toxicity Tests

Second to third instar *C. dilutus* (10 days old at test initiation, purchased from Aquatic BioSystems) and *H. azteca* (12 days old, cultured in-house) were used to initiate the 10-day whole sediment toxicity tests. *C. dilutus* and *H. azteca* were continuously exposed for 10 days to each of the sediment samples and to a laboratory control sediment.

Consistent with the GLTEM (1998), there were five replicate beakers for each organism type, sediment sample and laboratory control; each replicate contained 10 animals, each. The laboratory control sediment is a reference sediment collected locally from the Boardman River, a blue ribbon trout stream, located in the Pere Marquette State Forest.

The *C. dilutus* and *H. azteca* were exposed in 470 mL glass test chambers, each containing 100 mL of whole sediment and 175 mL of overlying water. Prior to adding the whole sediment to each test chamber, the control and each investigative sediment was thoroughly homogenized using a pre-cleaned stainless steel all purpose mixer and a power drill until a uniform color and texture was achieved.

Overlying water was intermittently supplied to each test chamber at least twice daily (once every 12-hours) via a static-renewal water delivery system. The overlying water consisted of de-chlorinated municipal (Lake Michigan) water. Temperature, dissolved oxygen, pH, and specific conductance of the overlying waters were measured daily prior to use.

The *C. dilutus* test chambers were fed 1.5 mL of Tetrafin® goldfish food slurry (4 mg/mL dry solids) once daily. The *H. azteca* test chambers were fed 1.5 mL mixture of yeast, trout food, and cerophyl (YTC; 1800 (1700-1900) mg/L solids) once daily.

Temperature and the dissolved oxygen (DO) concentration of the overlying water in the test chambers were measured daily in two alternating replicates for each test sediment, and the results were recorded on the laboratory bench data sheets. If the DO dropped below 3.4 mg/L, the number of daily overlying water renewals was increased (up to 4 times per day) for all treatments until the DO recovered to greater than 3.4 mg/L. Once the DO had increased to above 3.4 mg/L, additional water renewals were suspended, until the DO values dropped below 3.4 mg/L.

Alkalinity, hardness, and pH were measured on test days 0 and 10, and total ammonia was measured in the overlying water on days 0, 3, and 10 for the *C. dilutus* tests (Table 7 and Appendix B). For the *H. azteca* tests, alkalinity, hardness, pH, and total ammonia were measured in the overlying water on days 0 and 10 (Table 8 and Appendix B).

Observations on organism behavior and any anomalies observed within the sediment were made daily in each test chamber and recorded on the laboratory bench data sheets.

The number of *C. dilutus* surviving in each replicate test chamber was recorded at test termination (10 days). A summary of the percent survival is provided in Table 1. The average ash free dry weight [AFDW; in milligrams (mg)] of the surviving organisms for each *C. dilutus* replicate and biomass [AFDW (mg) of the surviving organisms divided by the initial number of organisms] was also determined at test termination and is summarized in Table 2.

The number of surviving *H. azteca* in each test replicate chamber was recorded at test termination (10 days) and is summarized in Table 3.

A statistical analysis, using the program TOXCALC (version 5.0.32) and following statistical guidelines provided in GLTEM, EPA Method 600/R-99/064 and ASTM (2000) Method 1706-95B, was used to compare the 10-day survival and growth with the control data. Prior to analysis, all percent survival data were transformed using an arc sine-square root transformation. All transformed data were then tested using either the homoscedastic or heteroscedastic t-tests, which are used for comparing a single treatment to a single control.

The homoscedastic t-test assumes the data are normally distributed (Shapiro-Wilk Test or Kolmogorov D Test) and the variances are equal (F-test). If the variances are not equal, the data are analyzed using the heteroscedastic t-test. If the data are not normally distributed, then the data are analyzed using the nonparametric t-test (e.g., Steel's Many-One Rank Test or Wilcoxon Rank Sum Test with Bonferroni's Adjustment).

Growth data were initially evaluated for normal distribution and homogeneity of variances. If the data were normally distributed and was homogenous, then the data was analyzed using the homoscedastic t-test. In those cases where the data were not normally distributed or homogenous, the data were analyzed using either the heteroscedastic t-test (nonparametric test). In addition to growth being evaluated as average dry weight of the surviving organisms, growth was also analyzed as biomass (average dry weight of surviving organisms divided by the number of initial organisms). The survival and growth for each investigative sample was

considered statistically different when significantly lower ($p < 0.05$) than observed in the pooled reference sediment samples.

C. dilutus (survival and growth endpoints) and *H. azteca* (survival endpoint) were compared statistically to the pooled USACOE reference area sites:

1. Reference Area sediment sample designated DS-11-HIPU (GLC Number: 9048).
2. Reference Area sediment sample designated DS-11-MOPU (GLC Number: 9052).
3. Reference Area sediment sample designated DS-11-WOPU (GLC Number: 9053).
4. Reference Area sediment sample designated DS-11-IIPU (GLC Number: 9054).

GLEC laboratory controls for each toxicity test met the minimum survival and growth requirements as specified in the GLTEM and those requirements are acknowledged in the following results section for each set of toxicity tests. In this instance, the laboratory control sediment was used as a measure of test acceptably and the health of the test organisms.

RESULTS

10-Day *Chironomus dilutus*

The organisms in the laboratory control sediment exceeded the minimum survival (70 percent) and growth (0.48 mg AFDW at test termination) criteria for an acceptable control for the *C. dilutus* tests (Tables 1 and 2). For reference, the acceptable requirements for survival and growth for the *C. dilutus* sediment toxicity tests can be found in the GLTEM, Table G-15.

The overlying water quality measurements (Table 4) were also within the acceptable limits following the GLTEM testing protocol (i.e., daily mean temperatures were 23 ± 1 °C; dissolved oxygen (DO) was maintained above 40 percent saturation (3.4 mg/L) in the overlying water). Consequently, the *C. dilutus* whole sediment toxicity tests were conducted following the standard protocols and are valid assessments of sediment toxicity, with the following exceptions.

On October 8, 2011 the DO in the laboratory control dropped to 2.6 and 3.2 mg/L below the acceptable limit of 3.4mg/L. In response to the drop in DO on October 8, 2011, a third overlying water renewal was added to all of the controls and investigative test sediment replicates. On October 9 and 10, 2011 the DO concentrations fell below 3.4 mg/L in the laboratory control sediment and all

investigative sediment samples with the exception on sediment sample DS-11-MU3. In response, a fourth overlying water renewal was added to all the controls and to all sediment test replicates on October 10, 2011.

The third and fourth water renewals were discontinued on October 11, 2011 when all DO measurements were still less than 3.4 mg/L and aeration was initiated at a rate of 100 bubbles per minute to all control and investigative test sediment replicates. The brief drop in DO was unlikely to have affected the test results (see EPA /600/R-99/064 manual, section 12.3.6.2.2).

All test chambers were observed daily to assess organism behavior and no unusual observations were noted with the test organisms in these sediment samples.

Statistical Analysis for 10-Day *Chironomus dilutus* Tests

Reference Area Sediment Samples; DS-11-HIPU, DS-11MOPU, DS-11-WOPU, and DS-11-IIPU Compared to Investigative Sediment Samples

Survival and growth results from the pooled Reference Area sediment samples DS-11-HIPU, DS-11-MOPU, DS-11-WOPU, and DS-11-IIPU (GLC Numbers: 9048, 9052, 9053, and 9054, respectively) from the 10-day whole sediment toxicity tests were compared statistically to the six investigative sediment samples: DS-11-MU-1, DS-11-MU-2, DS-11-MU-3, DS-11-MU-4, DS-11-MU-5, and DS-11-MU-6 (GLC Numbers: 9055, 9042, 9047, 9047, 9043, 9056, and 9057, respectively). There was no statistically significant reduction ($p \geq 0.05$) in *C. dilutus* survival in the sediment samples after 10 days of exposure when compared to the pooled reference area sediment samples (Table 1).

Growth measured as AFDW of surviving organisms (mg) and biomass [AFDW of surviving organisms divided by the initial number of organisms (mg)] were not significantly reduced in any of the six sediment samples, after 10 days of exposure when compared to the pooled reference sediment samples: DS-11-HIPU, DS-11-MOPU, DS-11-WOPU, and DS-11-IIPU (Table 2).

Outputs for the survival and growth statistical analyses for the *C. dilutus* whole sediment toxicity tests are provided in Appendix C.

10-Day *Hyalella azteca*

The *H. azteca* in the 10-day whole sediment toxicity test laboratory control sediment exceeded the minimum survival criterion (80 percent) and had measurable growth relative to the weight of organisms at test initiation (Table 6). The requirements for acceptable survival for the *H. azteca* tests can be found in GLTEM, Table G-16.

The overlying water quality measurements (Table 8) were also within the acceptable limits following the GLTEM testing protocol (i.e., daily mean temperatures were 23 ± 1 °C; DO was maintained above 40 percent saturation (3.4 mg/L) in the overlying water). All test chambers were checked daily to assess organism behavior and no unusual observations were noted. Consequently, the *H. azteca* whole sediment toxicity tests were conducted following the standard protocols and are valid assessments of sediment toxicity.

Statistical Analysis for 10-Day *Hyalella azteca* Tests

Reference Area Sediment Samples: DS-11-HIPU, DS-11-MOPU, DS-11-WOPU, and DS-11-IIPU Compared to Investigative Sediment Samples

H. azteca 10-day survival results from the four Reference Area sediment samples: DS-11-HIPU, DS-11-MOPU, DS-11-WOPU, and DS-11-IIPU (GLC Numbers: 9048, 9052, 9053, and 9054, respectively) were compared statistically to the six investigative sediment samples: DS-11-MU-1, DS-11-MU-2, DS-11-MU-3, DS-11-MU-4, DS-11-MU-5, and DS-11-MU-6. *H. azteca* survival was not statistically reduced ($p \geq 0.05$) in any of the six sediment samples after 10-days of exposure when compared to each of the four Reference Area sediments (Table 6).

Outputs for the survival statistical analyses for the *H. azteca* whole sediment toxicity tests are provided in Appendix D.

If you have any questions, or if you would like additional information, please contact either myself or Dennis McCauley at (231) 941-2230, or John Barkach at (248) 538-0900. Thank you for the opportunity to provide this service to FutureNet Group, Inc. We look forward to continuing to provide environmental services to you in the future.

Sincerely,

Mailee W. Garton
Laboratory Coordinator

John H. Barkach
Senior Program Manager

MWG:mg

TABLE 1. Comparison of the Number of Surviving Organisms per Replicate and Percent Survival Between the Pooled Reference Area Sediments (DS-11-HIPU, DS-11MOPU, DS-11-WOPU, and DS-11-IIPU) and the Investigative Sediments (DS-11-MU-2, DS-11-MU-4, DS-11-MU-3, DS-11-MU1, DS-11-MU5, and DS-11-MU6) for the U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation, *Chironomus dilutus* 10-Day Whole Sediment Toxicity Tests Conducted October 4-14, 2011.

	Number Test Organisms Surviving per Replicate[r]										
Replicate Number	**Laboratory Control**	**DS-11-HIPU GLC# 9048**	**DS-11-MOPU GLC# 9052**	**DS-11-WOPU GLC# 9053**	**DS-11-IIPU GLC# 9054**	**DS-11-MU-1 GLC# 9055**	**DS-11-MU-2 GLC# 9042**	**DS-11-MU-3 GLC# 9047**	**DS-11-MU-4 GLC# 9043**	**DS-11-MU-5 GLC# 9056**	**DS-11-MU-6 GLC# 9057**
1	10	10	10	9	10	10	9	10	10	10	10
2	9	9	10	10	10	8	9	10	10	9	7
3	10	10	9	10	7	10	10	9	10	10	9
4	10	10	10	10	10	10	10	10	9	10	10
5	10	10	10	10	10	10	10	9	10	10	10
10-Day Percent Survival	**98.0**	**98.0**	**98.0**	**98.0**	**94.0**	**96.0**	**96.0**	**96.0**	**98.0**	**98.0**	**92.0**

[r] Replicates initiated with 10 organisms each

TABLE 2.

Comparison of Average[1] Dry Weight (mg), Biomass[2] (mg) and Percent Survival Between the Pooled Reference Area Sediments (DS-11-HIPU, DS-11MOPU, DS-11-WOPU, and DS-11-IIPU) and the Investigative Sediments (DS-11-MU-2, DS-11-MU-4, DS-11-MU-3, DS-11-MU1, DS-11-MU5, and DS-11-MU6) for the U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation, *Chironomus dilutus* 10-Day Whole Sediment Toxicity Tests Conducted October 4-14, 2011.

REPLICATE #	Laboratory Control		DS-11-HIPU GLC# 9048		DS-11-MOPU GLC# 9052		DS-11-WOPU GLC# 9053		DS-11-IIPU GLC# 9054		DS-11-MU-1 GLC# 9055		DS-11-MU-2 GLC# 9042		DS-11-MU-3 GLC# 9047		DS-11-MU-4 GLC# 9043		DS-11-MU-5 GLC# 9056		DS-11-MU-6 GLC# 9057	
	Average[1] Weight (mg)	Biomass[2] Weight (mg)	Average[1] Weight (mg)	Biomass[2] Weight (mg)	Average[1] Weight (mg)	Biomass[2] Weight (mg)	Average[1] Weight (mg)	Biomass[2] Weight (mg)	Average[1] Weight (mg)	Biomass[2] Weight (mg)	Average[1] Weight (mg)	Biomass[2] Weight (mg)	Average[1] Weight (mg)	Biomass[2] Weight (mg)	Average[1] Weight (mg)	Biomass[2] Weight (mg)	Average[1] Weight (mg)	Biomass[2] Weight (mg)	Average[1] Weight (mg)	Biomass[2] Weight (mg)	Average[1] Weight (mg)	Biomass[2] Weight (mg)
1	1.71500	1.71500	1.98700	1.98700	0.98400	0.98400	1.28111	1.15300	0.96700	0.96700	1.28700	1.28700	1.29889	1.16900	0.50400	0.50400	1.27500	1.27500	1.24400	1.24400	1.05600	1.05600
2	1.43111	1.28800	1.08222	0.97400	0.88500	0.88500	1.17600	1.17600	1.08200	1.08200	1.25250	1.00200	1.33444	1.20100	1.24900	1.24900	1.15400	1.15400	1.04889	0.94400	1.27000	0.88900
3	1.45700	1.45700	1.36900	1.36900	1.04111	0.93700	TE	TE	1.44286	1.01000	1.29900	1.29900	1.19900	1.19900	TE	TE	1.26800	1.26800	1.18200	1.18200	1.29125	1.14778
4	1.32200	1.32200	1.16400	1.16400	1.09200	1.09200	1.12200	1.12200	1.11800	1.11800	1.19400	1.19400	1.13100	1.13100	1.24300	1.24300	1.20889	1.08800	1.41800	1.41800	1.07900	1.07900
5	1.33200	1.33200	1.28600	1.28600	1.08600	1.08600	1.19400	1.19400	1.10000	1.10000	1.17400	1.17400	1.11600	1.11600	1.24556	1.12100	1.29600	1.29600	1.11400	1.11400	1.04000	1.04000
Average[1] Ash-Free-Dry Weight (AFDW) (mg)	**1.45142**		**1.37764**		**1.01762**		**1.19328**		**1.14197**		**1.24130**		**1.21587**		**1.06039**		**1.24038**		**1.20138**		**1.14725**	
Average Biomass[2] Weight (AFDW) (mg)		**1.42280**		**1.35600**		**0.99680**		**1.16125**		**1.05540**		**1.19120**		**1.16320**		**1.02925**		**1.21620**		**1.18040**		**1.04236**
10-Day Percent Survival	**98.0**		**98.0**		**98.0**		**98.0**		**94.0**		**96.0**		**96.0**		**96.0**		**98.0**		**98.0**		**92.0**	

[1] Average Ash-Free-Dry-Weight (AFDW) is the total ash-free-dry weight of surviving organisms

[2] Biomass weight is the total ash-free-dry weight of surviving organisms divided by the initial number of organisms

TE = Technician Error

TABLE 3. Comparison of the Number of Surviving Organisms per Replicate and Percent Survival Between the Pooled Reference Area Sediments (DS-11-HIPU, DS-11MOPU, DS-11-WOPU, and DS-11-IIPU) and the Investigative Sediments (DS-11-MU-2, DS-11-MU-4, DS-11-MU-3, DS-11-MU1, DS-11-MU5, and DS-11-MU6) for the U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation *Hyalella azteca* 10-Day Whole Sediment Toxicity Tests Conducted September 13-23, 2011.

	Number Test Organisms Surviving per Replicate[r]										
Replicate Number	**Laboratory Control**	**DS-11-HIPU GLC# 9048**	**DS-11-MOPU GLC# 9052**	**DS-11-WOPU GLC# 9053**	**DS-11-IIPU GLC# 9054**	**DS-11-MU-1 GLC# 9055**	**DS-11-MU-2 GLC# 9042**	**DS-11-MU-3 GLC# 9047**	**DS-11-MU-4 GLC# 9043**	**DS-11-MU-5 GLC# 9056**	**DS-11-MU-6 GLC# 9057**
1	10	10	10	10	8	8	9	10	10	10	10
2	10	10	9	10	10	8	10	10	10	10	10
3	10	10	10	10	9	10	10	9	9	10	10
4	10	10	10	10	10	8	9	9	10	9	9
5	10	10	10	10	10	10	10	10	10	10	10
10-Day Percent Survival	**100.0**	**100.0**	**98.0**	**100.0**	**94.0**	**88.0**	**96.0**	**96.0**	**98.0**	**98.0**	**98.0**

[r] Replicates initiated with 10 organisms each

TABLE 4. **Summary of Mean Water Quality Parameters of Test Exposure Water Collected Prior to Renewal for U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation *Chironomus dilutus* 10-Day Survival and Growth Whole Sediment Toxicity Tests Conducted October 4-14, 2011.**

Sample ID GLC#	**Temperature (°C)** (range) n=22	**pH (s.u.)** (range) n=4	**Dissolved Oxygen (mg/L)** (range) n=24	**Specific Conductivity (µmhos/cm)** (range) n=4	**Hardness (CaCO3 mg/L)** (range) n=2, n=3 for 9053	**Alkalinity (CaCO3 mg/L)** (range) n=2, n=3 for 9057	**Ammonia (mg/L as N)** (range) n=4, n=5 for 9043, 9048, & 9052
Laboratory Control	**22.7** (22.3-23.4)	**7.90** (7.74-8.05)	**4.9** (1.5-8.5)	**338** (321-356)	**150** (128-172)	**125** (116-134)	**0.71** (0.36-1.11)
DS-11-HIPU GLC# 9048	**22.7** (22.3-23.4)	**7.76** (7.47-8.06)	**5.3** (2.5-9.2)	**291** (284-299)	**116** (112-120)	**96** (90-102)	**0.38** (0.00-1.04)
DS-11-MOPU GLC# 9052	**22.7** (22.3-23.3)	**7.88** (7.59-8.19)	**6.0** (3.2-9.1)	**290** (278-302)	**120** (120-120)	**99** (94-104)	**0.24** (0.02-0.38)
DS-11-WOPU GLC# 9053	**22.8** (22.2-23.4)	**7.96** (7.81-8.09)	**6.0** (3.3-8.6)	**306** (303-308)	**129** (124-132)	**105** (102-108)	**0.18** (0.03-0.33)
DS-11-IIPU GLC# 9054	**22.8** (22.3-23.4)	**7.71** (7.35-8.07)	**5.3** (3.2-8.6)	**295** (286-304)	**118** (112-124)	**94** (88-100)	**0.77** (0.04-2.02)
DS-11-MU1 GLC# 9055	**22.7** (22.5-23.3)	**7.77** (7.50-8.02)	**5.4** (2.6-8.7)	**291** (290-294)	**120** (116-124)	**94** (94-94)	**0.21** (0.00-0.69)
DS-11-MU2 GLC# 9042	**22.8** (22.4-23.3)	**7.77** (7.44-8.09)	**5.7** (2.9-9.2)	**313** (297-329)	**120** (112-128)	**101** (96-106)	**1.27** (0.21-3.17)
DS-11-MU3 GLC# 9047	**22.8** (22.3-23.4)	**7.86** (7.63-8.10)	**5.9** (3.7-8.6)	**297** (291-301)	**124** (120-128)	**97** (92-102)	**0.25** (0.03-0.53)
DS-11-MU4 GLC# 9043	**22.8** (22.5-23.3)	**7.87** (7.62-8.11)	**6.0** (3.1-8.9)	**305** (301-310)	**124** (124-124)	**97** (94-100)	**0.50** (0.08-1.45)
DS-11-MU5 GLC# 9056	**22.7** (22.3-23.5)	**7.74** (7.46-7.98)	**5.4** (2.7-8.5)	**290** (286-293)	**114** (112-116)	**94** (92-96)	**0.62** (0.01-1.58)
DS-11-MU6 GLC# 9057	**22.8** (22.3-23.4)	**7.90** (7.7-8.1)	**6.0** (3.2-9.1)	**315** (307-324)	**132** (132-132)	**105** (96-116)	**0.47** (0.00-1.18)

TABLE 5. **Summary of Mean Water Quality Parameters of Test Exposure Water Collected Prior to Renewal for U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation, *Hyalella azteca* 10-Day Survival and Growth Whole Sediment Toxicity Tests Conducted September 13-23, 2011.**

Sample ID GLC#	**Temperature (°C)** (range) n=22	**pH (s.u.)** (range) n=4	**Dissolved Oxygen (mg/L)** (range) n=22	**Specific Conductivity (µmhos/cm)** (range) n=4	**Hardness (CaCO3 mg/L)** (range) n=2, n=3 for 9047	**Alkalinity (CaCO3 mg/L)** (range) n=2, n=3 for 9043	**Ammonia (mg/L as N)** (range) n=2, n=3 for 9043
Laboratory Control	**22.7** (22.5-23.2)	**7.74** (7.71-7.77)	**4.9** (3.8-6.3)	**317** (308-320)	**140** (136-144)	**120** (116-124)	**0.60** (0.20-0.99)
DS-11-HIPU GLC# 9048	**22.7** (22.5-22.8)	**7.56** (7.52-7.60)	**5.7** (4.6-7.2)	**299** (293-305)	**130** (124-136)	**102** (92-112)	**0.26** (0.00-0.52)
DS-11-MOPU GLC# 9052	**22.7** (22.5-22.8)	**7.66** (7.49-7.82)	**6.4** (4.9-7.2)	**296** (286-306)	**138** (136-140)	**105** (100-110)	**0.08** (0.01-0.15)
DS-11-WOPU GLC# 9053	**22.7** (22.5-22.9)	**7.88** (7.80-7.93)	**6.5** (4.5-7.4)	**302** (297-306)	**134** (128-140)	**104** (102-106)	**0.08** (0.00-0.15)
DS-11-IIPU GLC# 9054	**22.7** (22.5-22.9)	**7.73** (7.71-7.76)	**5.6** (4.7-7.0)	**298** (296-299)	**124** (116-132)	**99** (94-104)	**0.51** (0.01-1.00)
DS-11-MU1 GLC# 9055	**22.7** (22.5-23.2)	**7.76** (7.63-7.88)	**5.8** (5.1-6.3)	**302** (298-308)	**134** (128-140)	**104** (102-106)	**0.29** (0.00-0.58)
DS-11-MU2 GLC# 9042	**22.7** (22.4-23.1)	**7.62** (7.51-7.71)	**5.8** (4.6-6.9)	**308** (298-322)	**136** (128-144)	**105** (96-114)	**0.74** (0.00-1.48)
DS-11-MU3 GLC# 9047	**22.7** (22.4-23.1)	**7.68** (7.48-7.85)	**6.6** (6.0-7.3)	**298** (294-302)	**140** (124-164)	**95** (94-96)	**0.17** (0.00-0.33)
DS-11-MU4 GLC# 9043	**22.7** (22.6-23.2)	**7.79** (7.73-7.86)	**6.6** (5.9-7.6)	**302** (301-303)	**144** (124-164)	**99** (98-100)	**0.16** (0.00-0.47)
DS-11-MU5 GLC# 9056	**22.7** (22.1-22.8)	**7.52** (7.40-7.61)	**5.6** (4.5-7.5)	**296** (292-300)	**130** (116-144)	**99** (92-106)	**0.49** (0.00-0.97)
DS-11-MU6 GLC# 9057	**22.7** (22.5-22.8)	**7.68** (7.59-7.76)	**6.1** (5.0-7.0)	**312** (309-316)	**140** (132-148)	**108** (104-112)	**0.42** (0.00-0.83)

Appendix A
Chain of Custodies

CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

739 Hastings St.
Traverse City, MI 49686
Phone: 231-941-2230
Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-16-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Elutriate Toxicity	Cerio-daphnia 7-day	2 day tox	Fat head minnow	4 day tox										
1043	DS-11 MU 4	8-15-11 8-16-11	1.2 gal	bucket	Sediment Elutriate	ice	X		X		X	Labeled			MU-11-04						
042	DS-11 MU 2	8-15-11 8-16-11	1.2 gal	bucket	Sediment Elutriate	ice	X		X		X										

Shipper:
1. [signature]
2.

Date/Time:
8/16-11 12:30

Receiver:
[signature]

Date/Time:
8/17/11 10:00

Temperature:
1.6/2.8

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

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Phone: 231-941-2230
Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-16-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Chironomus Tentans	10-Day Toxicity	Hyalella Azteca 10 Day Toxicity	Lumbriculus Variegatus Bio-accumulation 28 Day Test										
143	DS-11 MU-4	8-15-11 → 8-16-11	2.5 gal	bucket	Sediment	1 a		X		X		X	Labeled MU-11-04							
042	DS-11 MU2	8-15-11 8-16-11	2.5 gal	bucket	Sediment	1 a		X		X		X								

Shipper: 1. _____ 2. _____

Date/Time: _____ _____

Receiver: [signature] [signature]

Date/Time: 8/17/11 10:00

Temperature: 0.4/1.1

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
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Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-17-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Lumbriculus	28-day	Chironomus Tentans	Iodomytox	Hyalella Azteca	10 day Toxicity	Eutrichia prop	Ceriodaphnia Dubia	2 day Eutrichia	Pot Lead minnow	4 day Eutrichia			
							Check the requested analysis (see definitions below)													
47	DS-11 M03	8-16-8-17 1030	3.5 gal	bucket	Sediment	Ice		X		X		X		X		X		X		
46	DS-11-M03	shipped yesterday			water	Ice								X		X		X		

Shipper: 1. [signature] Date/Time: 8-17-11 1800

2.

Receiver: a. Delcourcie Date/Time: 8/18/11 1030 Temperature: 1.1

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
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Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-17-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

Cell: 313-333-0147

Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Lumbriculus Verrigatus 28 day	Chironomus Tentans 10 day	Hyalella Azteca 10 day										
DS-11 H2PU 148	8-17-11 1300	2.5 gal	bucket	Sediment	Ice		X		X		X							

Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1. Mariah H	8-17-11 1800	A. Bellaccello	8/18/11	0.2
2.				

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
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Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
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CHAIN OF CUSTODY RECORD

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Phone: 231-941-2230
Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-18-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

LC#	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Lumbriculus Variegatus	28 day biotest	Chironomus tentans	10 day tot	Hyalella Azteca	10 day Tot									
							Check the requested analysis (see definitions below)														
052	DS-11-MOPU	940 8-18-11	2.5gal	bucket	Sand - Lake Superior Sediment	Ice	X		X		X										
					Mix thoroughly in																
053	DS-11-WOPU	8-18-11 1400	2.5 gal	bucket	Lake Superior Sediment	Ice	X		X		X										
					Mix thoroughly	in lab															
054	DS-11-IIPU	8-18.11 1900	2.5 gal	bucket	St. Louis River Sediment	Ice	X		X		X										
					Mix thoroughly	in lab															

Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1. [signature]	8-19-11 1100	[signature]	8/20/11 1000	9052 1.0
2.				~~9053 0.8~~
				~~9054 0.8~~

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
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Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
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Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date:

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Lumbriculus Variegatus 28 day bio	Chironomus Tentans 10 day Toxicity	Hyalella Azteca 10 day	Elutriate Prep Filtered	Minnow 4 day Elutriate TOT	Ceriodaphnia Dubia Elutriate 2 day TOT	Elutriate 2 day TOT				
1056	DS-11-MU5 8-20-11 800	3.5 gal	bucket	Sediment Duluth harbor	ice		X	X	X	X	X	X	X				
1057	DS-11-MU6 8-20 900	3.5 gal	bucket	Sediment composite	ice		X	X	X	X	X	X	X				
1055	DS-11-MU1 8-20 1200	3.5 gal	bucket	Sediment composite	ice		X	X	X	X	X	X	X				
1058	DS-11-MU5 8-20-11 735	3.5 gal	tube	Water Elutriate	ice						X	X	X				

Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1. [signature]	8-20 1302	[signature]	8/20 15:00	
2.		[signature]	8/23/11 10:00	0.1 – 1.3

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

Sample
CHECK-IN FORM

CLIENT: Future Net USACOE PROJECT NUMBER: 5077-00

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/17/11	8/17/11	8/17/11	DS	INITIALS
SAMPLE ID	DS-11-MU3	DS-11-MU4	DS-11-MU2		
TYPE (W=water, SED=sediment, M=material)	Sed	Sed	WATER		
COLLECTION (G=grab, C=composite)	G	G	G		
GLC NUMBER	9042	9043	9044		
COLLECTION DATE (Time Interval)	8/15-16/11	8/15-16/11	8/15/11 18:00		
TEMPERATURE (≤6 degrees Celsius[1])	1.6/1.1	0.6 2.8	0.4/0.6 ~~12~~ DS 8/17		
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	mud No odor	Sandy No odor	Brown No odor		

[1] If out of range see project manager

SAMPLE CHEMISTRY AT TEST TEMPERATURES KN 8/26/11

Elutriate

GLC NUMBER	9042/9044	9043/9045	9044	DS	INITIALS
TEMPERATURE (°C)	25.2	25.3	25.0		
pH (s.u.)	6.97	7.18	7.22		
DISSOLVED OXYGEN (mg/L)	5.8	8.5	10.2		
CONDUCTIVITY (μmhos/cm)	205.5	171.5	160.3		
HARDNESS (mg/L)	68	76	40		
ALKALINITY (mg/L)	72	58	60		
TOTAL CHLORINE (mg/L)*	NM	NM			
TOTAL AMMONIA (mg/L)* as N	6 quick ✓	2 quick ✓			

*Check with project manager to see if necessary.
NM: Not Measured, ND: Non-detect

KN 8/26/11 KN

9044 8/26/11 K

Hardness: GLC#	Hardness: GLC#	Hardness: GLC#	Alkalinity: GLC#	Alkalinity: GLC#	Alkalinity: GLC#	
End mL: 43.2	End mL: 3.6	End mL: 1.9	End mL: 2.9	End mL: 6.5	End mL: 50.1	16.1
Start mL: 41.2	Start mL: 1.9	Start mL: 0.0	Start mL: 0.0	Start mL: 2.9	Start mL: 47.7	15.5
mL used: 2.0	mL used: 1.7	mL used: 1.9	mL used: 2.9	mL used: 3.6	mL used: 2.4 + .6 =	
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume: 3.0	

Sample
CHECK-IN FORM

CLIENT: Future Net Group PROJECT NUMBER: 5077-01

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/18/11	8/18/11		AD	INITIALS
SAMPLE ID	DS-11-MU3	DS-11-HIPU			
TYPE (W=water, SED=sediment, M=material)	S	S			
COLLECTION (G=grab, C=composite)	G	G			
GLC NUMBER	9047	9048			
COLLECTION DATE (Time Interval)	8/16-8/17/11 1030	8/17/11 1300			
TEMPERATURE (≤6 degrees Celsius[1])	1.1	0.2			
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	mud, no odor	mud, no odor			

[1] If out of range see project manager

SAMPLE CHEMISTRY AT TEST TEMPERATURES

GLC NUMBER	~~9047~~				INITIALS
TEMPERATURE (°C)	NM 9/8/11				
pH (s.u.)					
DISSOLVED OXYGEN (mg/L)					
CONDUCTIVITY (μmhos/cm)					
HARDNESS (mg/L)					
ALKALINITY (mg/L)					
TOTAL CHLORINE (mg/L)*					
TOTAL AMMONIA (mg/L)* as N					

*Check with project manager to see if necessary.
NM: Not Measured, ND: Non-detect

Hardness: GLC#	Hardness: GLC#	Hardness: GLC#	Alkalinity: GLC#	Alkalinity: GLC#	Alkalinity: GLC#
End mL:	End mL:	End mL:	End mL:	End mL:	End mL:
Start mL:	Start mL:	Start mL:	Start mL:	Start mL:	Start mL:
mL used:	mL used:	mL used:	mL used:	mL used:	mL used:
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:

Sample
CHECK-IN FORM

CLIENT: USAOC PROJECT NUMBER: 5C 01

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/23/11	8/23/11	8/23/11	8/23/11	DS
SAMPLE ID	DS-11-MU1	DS-11-MU5	-DS-11-MU6	DS-11-MU5	
TYPE (W=water, SED=sediment, M=material)	Sed	Sed	Sed	Water	
COLLECTION (G=grab, C=composite)	G	G	G	G	
GLC NUMBER	9055	9056	9057	9058	INITIALS
COLLECTION DATE (Time Interval)	8/20/11 12:00	8/20/11 8:00	8/20/11 9:00	8/20/11 7:35	
TEMPERATURE (≤6 degrees Celsius[1])	0.5-1.3	.5-1.3	0.1-1.1	1.1-1.3	
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	Muddy Odorless	Muddy Odorless	Sandy/Muddy Odorless	Brown Odorless	

[1] If out of range see project manager

SAMPLE CHEMISTRY AT TEST TEMPERATURES

	Elutriate	Elutriate		8/20/11 KN	
GLC NUMBER	9055/9051	9056/9058 DS		9058	I
TEMPERATURE (°C)	24.7	24.8		25.0	
pH (s.u.)	7.16	6.87		7.63	
DISSOLVED OXYGEN (mg/L)	5.6	6.5		9.5	INITIALS
CONDUCTIVITY (μmhos/cm)	172.9	183.4		171.4	
HARDNESS (mg/L)	68	56		76	
ALKALINITY (mg/L)	70	66		62	
TOTAL CHLORINE (mg/L)*	NM	NM			
TOTAL AMMONIA (mg/L)* as N					

*Check with project manager to see if necessary.

NM: Not Measured, ND: Non-detect

9051/9055	9056/9058	9058	9056/9058	9051/9055	9058
Hardness: GLC#	Hardness: GLC# 56	Hardness: GLC#	Alkalinity: GLC#	Alkalinity: GLC#	Alkalinity: GLC#
End mL: 13.2	End mL: 1.2	End mL: 41.2	End mL: 41.8	End mL: 45.3	End mL: 47.7
Start mL: 11.5	Start mL: 9.6	Start mL: 39.3	Start mL: 38.5	Start mL: 41.8	Start mL: 44.6
mL used: DS 8/30/11 ~~1.8~~ 1.7	mL used: 1.4	mL used: 1.9	mL used: 3.3	mL used: 3.5	mL used: 3.1
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:

From: (313) 544-7117
Mariah Hope
FutureNet Group, Inc.
12801 Auburn Street

Detroit, MI 48223

Origin ID: DETA

FedEx Express

J112011042902 25

Ship Date: 15AUG11
ActWgt: 1.0 LB
CAD: 5304009/INET3180

Delivery Address Bar Code

Ref # 11652-0040
Invoice #
PO #
Dept #

SHIP TO: (231) 941-2230 BILL SENDER

Great Lakes Environmental Center

739 HASTINGS ST

TRAVERSE CITY, MI 49686

TUE - 16 AUG A4
PRIORITY OVERNIGHT

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J11201104290225

Ship Date: 15AUG11
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CAD: 5304009/INET3180

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PRIORITY OVERNIGHT

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0201

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CUSTODY SEAL
DATE 8-17-11
SIGNATURE

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Quality Environmental Containers
800-255-3950 • 304-255-3900

From: (313) 544-7117
Mariah Hope
FutureNet Group, Inc.
12801 Auburn Street

Detroit, MI 48223

Origin ID: DETA

FedEx Express

J11201104290225

Ship Date: 23AUG11
ActWgt: 60.0 LB
CAD: 5304009/INET3180

Delivery Address Bar Code

Ref # 11652-0040
Invoice #
PO #
Dept #

SHIP TO: (231) 941-2230 BILL SENDER

Great Lakes Environmental Center

739 HASTINGS ST

TRAVERSE CITY, MI 49686

WED - 24 AUG A4
PRIORITY OVERNIGHT

TRK# 7951 0857 7740
0201

68 TVCA

49686
MI-US
GRR

50FG1/EEE7/F5F4

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Appendix B-1
Overlying Water Quality Summaries

- *Chironomus dilutus*

Project Name: USACOE Duluth ***Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011***

Data Entry

Date	Initials	Data Entered
10/4/2011	srw	all chems on test day 0 10/4/11
10/10/2011	srw	day 1-6
10/12/2011	NS	days 7-8
10/18/2011	srw	weight data
10/26/2011	srw	day 9
10/27/2011	MLV	day 10

Data QC 100%

Date	Initials	Data QC'd
10/11/2011	NS	days 0-6
10/26/2011	srw	days 7-8
10/27/2011	MLV	weight data
10/27/2011	MLV	day 9
10/27/2011	NS	day 10

Data QC 10%

10/31/2011	MLV	days 0-10

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth *Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011*
GLC: Laboratory Control **Sample ID:** Laboratory Control

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	0	23.0	7.74	5.5	356.0	172	134	0.36	
		23.0	7.80	5.5	350.0				
5-Oct-11	1	22.6		4.7					
		22.7		4.9					
6-Oct-11	2	23.3		3.6					
		23.4		3.4					
7-Oct-11	3	22.6		3.4				1.11	
		22.6		3.4					
8-Oct-11	4	23.0		2.6					
		23.1		3.2					
9-Oct-11	5	22.5		2.4					
		22.6		4.6					
10-Oct-11	6	22.7		2.0					
		22.7		2.0					
11-Oct-11	7	22.6		1.5					
		22.7		1.8					
				7.6					
				8.0					
12-Oct-11	8	22.6		7.3				0.70	
		22.6		7.8					
13-Oct-11	9	22.3	8.05	7.5	321.0	128	116	0.65	
		22.3	8.02	7.6	324.0				
14-Oct-11	10	22.7		8.4					
		22.6		8.5					
MEAN		**22.7**	**7.90**	**4.9**	**338**	**150**	**125**	**0.71**	
N=		**22**	**4**	**24**	**4**	**2**	**2**	**4**	
Max #		**23.4**	**8.05**	**8.5**	**356**	**172**	**134**	**1.11**	
Min #		**22.3**	**7.74**	**1.5**	**321**	**128**	**116**	**0.36**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	9	10	10	10
Weight (mg)	1.71500	1.43111	1.45700	1.32200	1.33200
Biomass (mg)	1.71500	1.28800	1.45700	1.32200	1.33200
		% Survival	98.0		
		Avg. Weight	1.45142		
		Avg. Biomass	1.42280		

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth *Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011*
GLC: 9042 **Sample ID:** DS-11-MU2

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	0	23.1	7.44	5.6	329.0	128	106	3.17	
		23.1	7.48	5.9	329.0				
5-Oct-11	1	22.7		5.4					
		22.7		5.2					
6-Oct-11	2	23.3		6.0					
		23.3		3.5					
7-Oct-11	3	22.6		3.6				1.49	
		22.7		3.4					
8-Oct-11	4	23.3		4.3					
		23.3		4.1					
9-Oct-11	5	22.7		3.1					
		22.8		2.9					
10-Oct-11	6	22.6		3.9					
		22.6		3.2					
11-Oct-11	7	22.6		4.3					
		22.7		4.4					
				9.0					
				9.2					
12-Oct-11	8	22.6		8.3				0.21	
		22.6		8.4					
13-Oct-11	9	22.4	8.07	8.4	296.6	112	96	0.21	
		22.5	8.09	8.0	297.5				
14-Oct-11	10	22.7		8.5					
		22.6		8.5					
MEAN		**22.8**	**7.77**	**5.7**	**313**	**120**	**101**	**1.27**	
N=		**22**	**4**	**24**	**4**	**2**	**2**	**4**	
Max #		**23.3**	**8.09**	**9.2**	**329**	**128**	**106**	**3.17**	
Min #		**22.4**	**7.44**	**2.9**	**297**	**112**	**96**	**0.21**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	9	9	10	10	10
Weight (mg)	1.29889	1.33444	1.19900	1.13100	1.11600
Biomass (mg)	1.16900	1.20100	1.19900	1.13100	1.11600
		% Survival	96.0		
		Avg. Weight	1.21587		
		Avg. Biomass	1.16320		

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth *Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011*
GLC: 9043 **Sample ID:** DS-11-MU4

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	0	23.1	7.62	6.9	310.0	124	94	1.45	
		23.0	7.64	7.0	308.0				
5-Oct-11	1	22.7		5.8					
		22.7		5.9					
6-Oct-11	2	23.2		3.9					
		23.3		4.0					
7-Oct-11	3	22.7		3.6				0.70	
		22.7		3.7					
8-Oct-11	4	23.2		5.5					
		23.2		4.3					
9-Oct-11	5	22.6		3.3					
		22.7		3.1					
10-Oct-11	6	22.6		4.2					
		22.6		6.0					
11-Oct-11	7	22.6		5.2					
		22.7		4.0					
				8.4					
				8.9					
12-Oct-11	8	22.6		7.9				0.10	
		22.6		8.3				0.08	J
13-Oct-11	9	22.6	8.11	8.4	301.0	124	100	0.16	
		22.5	8.11	8.4	302.0				
14-Oct-11	10	22.7		8.4					
		22.7		8.4					
MEAN		**22.8**	**7.87**	**6.0**	**305**	**124**	**97**	**0.50**	
N=		**22**	**4**	**24**	**4**	**2**	**2**	**5**	
Max #		**23.3**	**8.11**	**8.9**	**310**	**124**	**100**	**1.45**	
Min #		**22.5**	**7.62**	**3.1**	**301**	**124**	**94**	**0.08**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	10	10	9	10
Weight (mg)	1.27500	1.15400	1.26800	1.20889	1.29600
Biomass (mg)	1.27500	1.15400	1.26800	1.08800	1.29600

% Survival 98.0

Avg. Weight 1.24038
Avg. Biomass 1.21620

[ ] = QC data correction made

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth *Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011*
GLC: 9047 **Sample ID:** DS-11-MU3

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	0	23.0	7.63	7.0	294.8	128	92	0.29	
		23.0	7.65	7.1	291.0				
5-Oct-11	1	22.7		5.6					
		22.7		5.4					
6-Oct-11	2	23.4		3.8					
		23.4		3.9					
7-Oct-11	3	22.7		3.7				0.53	
		22.7		3.8					
8-Oct-11	4	23.2		4.0					
		23.2		4.4					
9-Oct-11	5	22.6		3.9					
		22.6		3.7					
10-Oct-11	6	22.6		4.1					
		22.6		5.2					
11-Oct-11	7	22.6		6.6					
		22.6		4.6					
				8.6					
				8.2					
12-Oct-11	8	22.6		7.2				0.03	U
		22.6		7.9					
13-Oct-11	9	22.3	8.10	8.4	299.9	120	102	0.13	
		22.4	8.07	8.3	301.0				
14-Oct-11	10	22.7		8.0					
		22.7		7.9					
MEAN		**22.8**	**7.86**	**5.9**	**297**	**124**	**97**	**0.25**	
N=		**22**	**4**	**24**	**4**	**2**	**2**	**4**	
Max #		**23.4**	**8.10**	**8.6**	**301**	**128**	**102**	**0.53**	
Min #		**22.3**	**7.63**	**3.7**	**291**	**120**	**92**	**0.03**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	10	9	10	9
Weight (mg)	0.50400	1.24900	TE	1.24300	1.24556
Biomass (mg)	0.50400	1.24900	TE	1.24300	1.12100

% Survival 96.0

Avg. Weight 1.06039
Avg. Biomass 1.02925

TE = Technician Error

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest stan
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

Great Lakes Environmental Center

Project Name: USACOE Duluth *Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011*

GLC: 9048 **Sample ID:** DS-11-HIPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	0	23.0	7.49	5.6	298.7	120	102	1.04	
		23.0	7.47	5.3	298.0				
5-Oct-11	1	22.6		4.7					
		22.7		4.7					
6-Oct-11	2	23.4		3.6					
		23.4		3.4					
7-Oct-11	3	22.7		3.6				0.61	
		22.6		3.4					
8-Oct-11	4	23.1		3.5					
		23.1		3.3					
9-Oct-11	5	22.5		2.6					
		22.6		2.5					
10-Oct-11	6	22.6		4.8					
		22.6		4.0					
11-Oct-11	7	22.6		4.1					
		22.7		4.2					
				8.2					
				9.2					
12-Oct-11	8	22.6		7.6				0.00	U
		22.5		6.9					
13-Oct-11	9	22.5	8.06	8.1	283.6	112	90	0.13	
		22.3	8.03	8.2	285.0			0.12	
14-Oct-11	10	22.6		8.2					
		22.7		8.2					
MEAN		**22.7**	**7.76**	**5.3**	**291**	**116**	**96**	**0.38**	
N=		**22**	**4**	**24**	**4**	**2**	**2**	**5**	
Max #		**23.4**	**8.06**	**9.2**	**299**	**120**	**102**	**1.04**	
Min #		**22.3**	**7.47**	**2.5**	**284**	**112**	**90**	**0.00**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	9	10	10	10
Weight (mg)	1.98700	1.08222	1.36900	1.16400	1.28600
Biomass (mg)	1.98700	0.97400	1.36900	1.16400	1.28600

% Survival 98.0

Avg. Weight 1.37764

Avg. Biomass 1.35600

[ ] = QC data correction made

Ammonia Key:

MDL = 0.04

RL = Reporting Limit (lowest standard, 0.1)

J = Between MDL and RL

U = Below MDL (non detect)

NA = Not Applicable

Great Lakes Environmental Center

Project Name: USACOE Duluth *Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011*
GLC: 9052 **Sample ID:** DS-11-MOPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	0	23.0	7.61	6.8	277.8	120	94	0.31	
		23.0	7.59	6.8	277.9				
5-Oct-11	1	22.6		6.0					
		22.7		6.1					
6-Oct-11	2	23.3		4.3					
		23.3		4.1					
7-Oct-11	3	22.6		4.2				0.38	
		22.6		4.1				0.37	
8-Oct-11	4	23.1		5.0					
		23.1		4.9					
9-Oct-11	5	22.6		3.5					
		22.6		3.2					
10-Oct-11	6	22.6		5.1					
		22.7		4.4					
11-Oct-11	7	22.6		3.7					
		22.6		4.3					
				8.1					
				9.1					
12-Oct-11	8	22.6		8.4				0.02	U
		22.6		8.4					
13-Oct-11	9	22.3	8.19	8.5	301.0	120	104	0.10	
		22.3	8.14	8.5	302.0				
14-Oct-11	10	22.8		8.2					
		22.7		8.0					
MEAN		**22.7**	**7.88**	**6.0**	**290**	**120**	**99**	**0.24**	
N=		**22**	**4**	**24**	**4**	**2**	**2**	**5**	
Max #		**23.3**	**8.19**	**9.1**	**302**	**120**	**104**	**0.38**	
Min #		**22.3**	**7.59**	**3.2**	**278**	**120**	**94**	**0.02**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	10	9	10	10
Weight (mg)	0.98400	0.88500	1.04111	1.09200	1.08600
Biomass (mg)	0.98400	0.88500	0.93700	1.09200	1.08600
		% Survival	98.0		
		Avg. Weight	1.01762		
		Avg. Biomass	0.99680		

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth *Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011*
GLC: 9053 **Sample ID**: DS-11-WOPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	0	23.0	7.81	7.2	306.0	132	108	0.24	
		23.0	7.86	7.2	308.0				
5-Oct-11	1	22.7		5.9					
		22.7		6.1					
6-Oct-11	2	23.3		3.7					
		23.4		3.6					
7-Oct-11	3	22.7		4.1				0.33	
		22.7		4.4					
8-Oct-11	4	23.1		4.9					
		23.1		4.7					
9-Oct-11	5	22.5		3.3					
		22.5		3.6					
10-Oct-11	6	22.7		5.1					
		22.7		4.1					
11-Oct-11	7	22.6		4.5					
		22.7		4.6					
				8.6					
				8.2					
12-Oct-11	8	22.6		7.8				0.03	U
		22.6		8.1					
13-Oct-11	9	22.2	8.06	8.4	306.0	132	102	0.10	
		22.4	8.09	8.6	303.0	124			
14-Oct-11	10	22.7		8.5					
		22.7		8.3					
MEAN		**22.8**	**7.96**	**6.0**	**306**	**129**	**105**	**0.18**	
N=		**22**	**4**	**24**	**4**	**3**	**2**	**4**	
Max #		**23.4**	**8.09**	**8.6**	**308**	**132**	**108**	**0.33**	
Min #		**22.2**	**7.81**	**3.3**	**303**	**124**	**102**	**0.03**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	9	10	10	10	10
Weight (mg)	1.28111	1.17600	TE	1.12200	1.19400
Biomass (mg)	1.15300	1.17600	TE	1.12200	1.19400

% Survival 98.0

Avg. Weight 1.19328
Avg. Biomass 1.16125

[ ] = QC data correction made
TE = Technician Error

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth ***Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011***
GLC: 9054 **Sample ID:** DS-11-IIPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	0	23.0	7.35	5.3	304.0	124	100	2.02	
		23.0	7.36	5.2	303.0				
5-Oct-11	1	22.6		5.0					
		22.7		4.5					
6-Oct-11	2	23.3		3.4					
		23.4		3.5					
7-Oct-11	3	22.7		4.0				0.97	
		22.7		4.1					
8-Oct-11	4	23.0		3.7					
		23.1		3.4					
9-Oct-11	5	22.5		3.2					
		22.6		3.3					
10-Oct-11	6	22.6		3.2					
		22.6		3.4					
11-Oct-11	7	22.7		3.4					
		22.7		3.8					
				8.6					
				7.2					
12-Oct-11	8	22.6		8.3				0.04	J
		22.6		8.1					
13-Oct-11	9	22.3	8.07	8.4	285.7	112	88	0.04	J
		22.4	8.06	8.5	286.0				
14-Oct-11	10	22.7		8.1					
		22.7		8.4					
MEAN		**22.8**	**7.71**	**5.3**	**295**	**118**	**94**	**0.77**	
N=		**22**	**4**	**24**	**4**	**2**	**2**	**4**	
Max #		**23.4**	**8.07**	**8.6**	**304**	**124**	**100**	**2.02**	
Min #		**22.3**	**7.35**	**3.2**	**286**	**112**	**88**	**0.04**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	10	7	10	10
Weight (mg)	0.96700	1.08200	1.44286	1.11800	1.10000
Biomass (mg)	0.96700	1.08200	1.01000	1.11800	1.10000

% Survival 94.0

Avg. Weight 1.14197
Avg. Biomass 1.05540

[ ] = QC data correction made

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth *Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011*
GLC: 9055 **Sample ID**: DS-11-MU1

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	0	23.0	7.50	5.7	294.0	124	94	0.69	
		23.0	7.54	5.1	290.5				
5-Oct-11	1	22.6		4.7					
		22.6		5.0					
6-Oct-11	2	23.3		3.6					
		23.3		3.9					
7-Oct-11	3	22.7		4.0				0.04	J
		22.7		3.7					
8-Oct-11	4	23.1		3.6					
		23.1		4.0					
9-Oct-11	5	22.5		2.8					
		22.5		2.6					
10-Oct-11	6	22.6		5.1					
		22.6		3.3					
11-Oct-11	7	22.6		3.7					
		22.6		3.5					
				8.7					
				8.5					
12-Oct-11	8	22.5		8.1				0.00	U
		22.6		8.0					
13-Oct-11	9	22.5	8.00	8.3	290.1	116	94	0.10	
		22.5	8.02	8.6	289.5				
14-Oct-11	10	22.7		7.9					
		22.7		7.8					
MEAN		**22.7**	**7.77**	**5.4**	**291**	**120**	**94**	**0.21**	
N=		**22**	**4**	**24**	**4**	**2**	**2**	**4**	
Max #		**23.3**	**8.02**	**8.7**	**294**	**124**	**94**	**0.69**	
Min #		**22.5**	**7.50**	**2.6**	**290**	**116**	**94**	**0.00**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	8	10	10	10
Weight (mg)	1.28700	1.25250	1.29900	1.19400	1.17400
Biomass (mg)	1.28700	1.00200	1.29900	1.19400	1.17400

% Survival 96.0

Avg. Weight 1.24130
Avg. Biomass 1.19120

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

Great Lakes Environmental Center

Project Name: USACOE Duluth *Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011*
GLC: 9056 **Sample ID:** DS-11-MU5

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	0	23.0	7.46	5.5	293.3	112	96	1.58	
		23.0	7.55	6.0	291.7				
5-Oct-11	1	22.6		4.8					
		22.7		4.8					
6-Oct-11	2	23.5		3.9					
		23.4		3.5					
7-Oct-11	3	22.7		3.4				0.79	
		22.7		3.4					
8-Oct-11	4	23.0		4.4					
		23.0		4.3					
9-Oct-11	5	22.5		3.8					
		22.5		2.7					
10-Oct-11	6	22.6		3.4					
		22.6		3.3					
11-Oct-11	7	22.6		4.0					
		22.6		4.2					
				8.4					
				8.2					
12-Oct-11	8	22.6		7.8				0.01	U
		22.6		7.1					
13-Oct-11	9	22.3	7.97	7.9	287.5	116	92	0.08	J
		22.5	7.98	8.5	286.2				
14-Oct-11	10	22.7		7.9					
		22.7		8.3					
MEAN		**22.7**	**7.74**	**5.4**	**290**	**114**	**94**	**0.62**	
N=		**22**	**4**	**24**	**4**	**2**	**2**	**4**	
Max #		**23.5**	**7.98**	**8.5**	**293**	**116**	**96**	**1.58**	
Min #		**22.3**	**7.46**	**2.7**	**286**	**112**	**92**	**0.01**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	9	10	10	10
Weight (mg)	1.24400	1.04889	1.18200	1.41800	1.11400
Biomass (mg)	1.24400	0.94400	1.18200	1.41800	1.11400

% Survival 98.0

Avg. Weight 1.20138
Avg. Biomass 1.18040

[ ] = QC data correction made

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth *Chironomus dilutus 10-Day survival and Growth 10/04/2011-10/14/2011*
GLC: 9057 **Sample ID:** DS-11-MU6

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	0	23.0	7.68	6.5	323.0	132	116	1.18	
		23.0	7.71	6.5	324.0				
5-Oct-11	1	22.6		5.2					
		22.7		5.5					
6-Oct-11	2	23.4		4.0					
		23.4		4.2					
7-Oct-11	3	23.1		5.0				0.62	
		22.9		4.2					
8-Oct-11	4	23.0		5.3					
		23.0		4.9					
9-Oct-11	5	22.6		3.2					
		22.6		3.3					
10-Oct-11	6	22.6		3.9					
		22.6		4.8					
11-Oct-11	7	22.7		5.2					
		22.7		4.7					
				8.5					
				9.1					
12-Oct-11	8	22.5		8.2				0.00	U
		22.5		8.1					
13-Oct-11	9	22.3	8.10	8.3	307.0	132	104	0.07	J
		22.3	8.10	8.7	307.0		96		
14-Oct-11	10	22.7		8.2					
		22.7		8.3					
MEAN		**22.8**	**7.9**	**6.0**	**315**	**132**	**105**	**0.47**	
N=		**22**	**4**	**24**	**4**	**2**	**3**	**4**	
Max #		**23.4**	**8.1**	**9.1**	**324**	**132**	**116**	**1.18**	
Min #		**22.3**	**7.7**	**3.2**	**307**	**132**	**96**	**0.00**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	7	9	10	10
Weight (mg)	1.05600	1.27000	1.29125	1.07900	1.04000
Biomass (mg)	1.05600	0.88900	1.14778	1.07900	1.04000

% Survival 92.0

Avg. Weight 1.14725
Avg. Biomass 1.04236

[ ] = QC data correction made

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

Appendix B-2
Overlying Water Quality Summaries

- *Hyalella azteca*

GLEC

Great Lakes Environmental Center

Project Name: USACOE Duluth ***Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11***

Data Entry

Date	Initials	Data Entered
9/20/2011	eb	days 0-6
9/21/2011	eb	days 7-8
9/27/2011	eb	days 9-10

Data QC

Date	Initials	Data QC'd
9/29/2011	DS	day 0-10 survival & weight

Data QC 10%

9/29/2011	AS	days 0-10 survival & weight

Project Name: USACOE Duluth *Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11*
GLC: Con **Sample ID:** Laboratory Control

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
13-Sep-11	0	23.2	7.77	5.9	320.0	144	116	0.99	
		23.2	7.72	6.3	308.0				
14-Sep-11	1	22.8		5.2					
		22.8		5.6					
15-Sep-11	2	22.7		5.5					
		22.7		5.6					
16-Sep-11	3	22.5		4.8					
		22.6		4.9					
17-Sep-11	4	22.8		4.4					
		22.8		4.5					
18-Sep-11	5	22.8		5.3					
		22.8		5.1					
19-Sep-11	6	22.6		4.0					
		22.6		4.4					
20-Sep-11	7	22.9		3.8					
		22.8		4.0					
21-Sep-11	8	22.6		5.4					
		22.6		4.9					
22-Sep-11	9	22.7	7.71	4.6	318.0	136	124	0.20	
		22.7	7.76	4.6	320.0				
23-Sep-11	10	22.6		4.7					
		22.6		4.9					
MEAN		**22.7**	**7.74**	**4.9**	**317**	**140**	**120**	**0.60**	
N=		**22**	**4**	**22**	**4**	**2**	**2**	**2**	
Max #		**23.2**	**7.77**	**6.3**	**320**	**144**	**124**	**0.99**	
Min #		**22.5**	**7.71**	**3.8**	**308**	**136**	**116**	**0.20**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	10	10	10	10
Weight (mg)	0.21600	0.22800	0.21500	0.18000	0.20200
Biomass (mg)	0.21600	0.22800	0.21500	0.18000	0.20200

% Survival 100.0

Avg. Weight 0.20820
Avg. biomass 0.20820

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC

Great Lakes Bay Analytical Center

Project Name: USACOE Duluth *Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11*

GLC: 9042 **Sample ID**: DS-11-MU2

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
13-Sep-11	0	23.0	7.55	6.4	315.0	144	114	1.48	
		23.1	7.51	6.2	322.0				
14-Sep-11	1	22.8		6.2					
		22.8		6.2					
15-Sep-11	2	22.7		5.9					
		22.7		6.0					
16-Sep-11	3	22.4		6.8					
		22.5		6.9					
17-Sep-11	4	22.8		5.4					
		22.8		5.1					
18-Sep-11	5	22.8		5.1					
		22.8		5.0					
19-Sep-11	6	22.6		5.1					
		22.6		4.9					
20-Sep-11	7	22.6		5.0					
		22.7		4.6					
21-Sep-11	8	22.6		6.0					
		22.6		6.0					
22-Sep-11	9	22.7	7.71	6.3	298.7	128	96	0.00	U
		22.8	7.69	6.0	298.2				
23-Sep-11	10	22.6		6.3					
		22.6		6.6					
MEAN		**22.7**	**7.62**	**5.8**	**308**	**136**	**105**	**0.74**	
N=		**22**	**4**	**22**	**4**	**2**	**2**	**2**	
Max #		**23.1**	**7.71**	**6.9**	**322**	**144**	**114**	**1.48**	
Min #		**22.4**	**7.51**	**4.6**	**298**	**128**	**96**	**0.00**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	9	10	10	9	10
Weight (mg)	0.18667	0.13500	0.16000	0.19444	0.18600
Biomass (mg)	0.16800	0.13500	0.16000	0.17500	0.18600

% Survival 96.0

Avg. Weight 0.17242

Avg. biomass 0.16480

Ammonia Key:

MDL = 0.04

RL = Reporting Limit (lowest standard, 0.1)

J = Between MDL and RL

U = Below MDL (non detect)

NA = Not Applicable

Project Name: USACOE Duluth *Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11*
GLC: 9043 **Sample ID**: DS-11-MU4

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
13-Sep-11	0	23.1	7.73	7.4	301.0	164	100	0.47	
		23.2	7.74	7.6	302.0				
14-Sep-11	1	22.8		7.1					
		22.8		7.1					
15-Sep-11	2	22.7		6.3					
		22.7		6.4					
16-Sep-11	3	22.6		5.9					
		22.7		6.5					
17-Sep-11	4	22.8		6.0					
		22.8		6.0					
18-Sep-11	5	22.8		6.4					
		22.8		6.2					
19-Sep-11	6	22.6		6.3					
		22.6		6.5					
20-Sep-11	7	22.6		6.5					
		22.7		6.3					
21-Sep-11	8	22.6		6.1					
		22.6		6.7					
22-Sep-11	9	22.7	7.86	7.0	302.0	124	98	0.00	U
		22.8	7.82	6.7	303.0		98	0.00	U
23-Sep-11	10	22.6		6.9					
		22.6		6.9					
MEAN		**22.7**	**7.79**	**6.6**	**302**	**144**	**99**	**0.16**	
N=		**22**	**4**	**22**	**4**	**2**	**3**	**3**	
Max #		**23.2**	**7.86**	**7.6**	**303**	**164**	**100**	**0.47**	
Min #		**22.6**	**7.73**	**5.9**	**301**	**124**	**98**	**0.00**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	10	9	10	10
Weight (mg)	0.15200	0.14400	0.18111	0.14500	0.15500
Biomass (mg)	0.15200	0.14400	0.16300	0.14500	0.15500

% Survival 98.0

Avg. Weight 0.15542
Avg. biomass 0.15180

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

Project Name: USACOE Duluth *Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11*
GLC: 9047 **Sample ID**:DS-11-MU3

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
13-Sep-11	0	23.0	7.67	7.3	294.8	164	94	0.33	
		23.1	7.70	7.3	294.3				
14-Sep-11	1	22.8		6.1					
		22.8		6.9					
15-Sep-11	2	22.7		6.6					
		22.7		6.6					
16-Sep-11	3	22.4		6.4					
		22.5		6.5					
17-Sep-11	4	22.7		6.2					
		22.7		6.1					
18-Sep-11	5	22.7		6.6					
		22.7		6.3					
19-Sep-11	6	22.6		6.7					
		22.6		6.4					
20-Sep-11	7	22.7		6.0					
		22.7		6.3					
21-Sep-11	8	22.6		7.3					
		22.6		7.1					
22-Sep-11	9	22.7	7.85	6.9	302.0	124	96	0.00	U
		22.8	7.48	6.8	301.0	132			
23-Sep-11	10	22.6		7.0					
		22.5		6.7					
MEAN		**22.7**	**7.68**	**6.6**	**298**	**140**	**95**	**0.17**	
N=		**22**	**4**	**22**	**4**	**3**	**2**	**2**	
Max #		**23.1**	**7.85**	**7.3**	**302**	**164**	**96**	**0.33**	
Min #		**22.4**	**7.48**	**6.0**	**294**	**124**	**94**	**0.00**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	10	9	9	10
Weight (mg)	0.16900	0.21600	0.21222	0.13889	0.15500
Biomass (mg)	0.16900	0.21600	0.19100	0.12500	0.15500

% Survival 96.0

Avg. Weight 0.17822
Avg. biomass 0.17120

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

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Project Name: USACOE Duluth *Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11*
GLC: 9048 **Sample ID**: DS-11-HIPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
13-Sep-11	0	22.6	7.56	6.1	305.0	136	112	0.52	
		22.6	7.52	6.1	305.0				
14-Sep-11	1	22.8		5.7					
		22.8		5.9					
15-Sep-11	2	22.7		5.5					
		22.7		5.5					
16-Sep-11	3	22.5		5.0					
		22.6		5.2					
17-Sep-11	4	22.8		4.9					
		22.8		5.0					
18-Sep-11	5	22.8		4.9					
		22.8		4.8					
19-Sep-11	6	22.6		4.9					
		22.6		4.6					
20-Sep-11	7	22.7		5.9					
		22.8		6.1					
21-Sep-11	8	22.6		7.0					
		22.6		7.2					
22-Sep-11	9	22.7	7.60	5.6	293.5	124	92	0.00	U
		22.8	7.55	5.6	293.0				
23-Sep-11	10	22.6		7.0					
		22.6		6.7					
MEAN		**22.7**	**7.56**	**5.7**	**299**	**130**	**102**	**0.26**	
N=		**22**	**4**	**22**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.60**	**7.2**	**305**	**136**	**112**	**0.52**	
Min #		**22.5**	**7.52**	**4.6**	**293**	**124**	**92**	**0.00**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	10	10	10	10
Weight (mg)	0.13400	0.16700	0.10500	0.18500	0.14600
Biomass (mg)	0.13400	0.16700	0.10500	0.18500	0.14600

% Survival 100.0

Avg. Weight 0.14740
Avg. biomass 0.14740

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

Project Name: USACOE Duluth *Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11*
GLC: 9052 **Sample ID**: DS-11-MOPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
13-Sep-11	0	22.7	7.52	7.2	286.8	140	110	0.15	
		22.6	7.49	7.2	286.4				
14-Sep-11	1	22.8		6.9					
		22.8		7.0					
15-Sep-11	2	22.7		7.0					
		22.7		6.8					
16-Sep-11	3	22.5		6.3					
		22.6		6.5					
17-Sep-11	4	22.8		6.2					
		22.8		6.1					
18-Sep-11	5	22.8		6.1					
		22.8		6.3					
19-Sep-11	6	22.6		5.9					
		22.6		6.2					
20-Sep-11	7	22.6		5.2					
		22.7		4.9					
21-Sep-11	8	22.6		6.5					
		22.6		6.2					
22-Sep-11	9	22.8	7.82	6.7	305.0	136	100	0.01	U
		22.8	7.79	6.6	306.0				
23-Sep-11	10	22.7		6.4					
		22.7		6.6					
MEAN		**22.7**	**7.66**	**6.4**	**296**	**138**	**105**	**0.08**	
N=		**22**	**4**	**22**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.82**	**7.2**	**306**	**140**	**110**	**0.15**	
Min #		**22.5**	**7.49**	**4.9**	**286**	**136**	**100**	**0.01**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	9	10	10	10
Weight (mg)	0.16300	0.14667	0.14900	0.17300	0.18600
Biomass (mg)	0.16300	0.13200	0.14900	0.17300	0.18600

% Survival 98.0

Avg. Weight 0.16353
Avg. biomass 0.16060

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

Project Name: USACOE Duluth *Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11*
GLC: 9053 **Sample ID**: DS-11-WOPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
13-Sep-11	0	22.5	7.80	7.4	298.3	140	106	0.15	
		22.5	7.85	7.4	296.7				
14-Sep-11	1	22.8		7.1					
		22.8		7.2					
15-Sep-11	2	22.7		6.9					
		22.7		6.7					
16-Sep-11	3	22.6		6.5					
		22.6		6.7					
17-Sep-11	4	22.8		6.5					
		22.8		6.5					
18-Sep-11	5	22.8		6.4					
		22.8		6.5					
19-Sep-11	6	22.6		6.0					
		22.6		6.1					
20-Sep-11	7	22.7		4.9					
		22.8		4.5					
21-Sep-11	8	22.6		5.7					
		22.6		6.3					
22-Sep-11	9	22.9	7.93	7.0	306.0	128	102	0.00	U
		22.9	7.93	7.1	305.0				
23-Sep-11	10	22.6		6.7					
		22.7		6.7					
MEAN		**22.7**	**7.88**	**6.5**	**302**	**134**	**104**	**0.08**	
N=		**22**	**4**	**22**	**4**	**2**	**2**	**2**	
Max #		**22.9**	**7.93**	**7.4**	**306**	**140**	**106**	**0.15**	
Min #		**22.5**	**7.80**	**4.5**	**297**	**128**	**102**	**0.00**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	10	10	10	10
Weight (mg)	0.18800	0.19700	0.17300	0.20300	0.16200
Biomass (mg)	0.18800	0.19700	0.17300	0.20300	0.16200

% Survival 100.0

Avg. Weight 0.18460
Avg. biomass 0.18460

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

Project Name: USACOE Duluth *Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11*
GLC: 9054 **Sample ID**: DS-11-IIPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
13-Sep-11	0	22.5	7.71	5.9	298.3	132	104	1.00	
		22.7	7.73	5.9	299.3				
14-Sep-11	1	22.8		5.9					
		22.8		5.9					
15-Sep-11	2	22.7		5.5					
		22.7		5.5					
16-Sep-11	3	22.5		5.0					
		22.5		5.1					
17-Sep-11	4	22.8		4.7					
		22.8		4.7					
18-Sep-11	5	22.8		4.8					
		22.8		4.8					
19-Sep-11	6	22.6		4.7					
		22.6		4.9					
20-Sep-11	7	22.7		4.8					
		22.8		6.0					
21-Sep-11	8	22.6		6.8					
		22.6		7.0					
22-Sep-11	9	22.9	7.73	5.6	297.6	116	94	0.01	U
		22.9	7.76	6.1	296.3				
23-Sep-11	10	22.7		6.8					
		22.6		6.5					
MEAN		**22.7**	**7.73**	**5.6**	**298**	**124**	**99**	**0.51**	
N=		**22**	**4**	**22**	**4**	**2**	**2**	**2**	
Max #		**22.9**	**7.76**	**7.0**	**299**	**132**	**104**	**1.00**	
Min #		**22.5**	**7.71**	**4.7**	**296**	**116**	**94**	**0.01**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	8	10	9	10	10
Weight (mg)	0.18125	0.15000	0.16778	0.17100	0.12500
Biomass (mg)	0.14500	0.15000	0.15100	0.17100	0.12500

% Survival 94.0

Avg. Weight 0.15901
Avg. biomass 0.14840

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

Project Name: USACOE Duluth *Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11*
GLC# 9055 **Sample ID**: DS-11-MUI

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
13-Sep-11	0	23.1	7.67	6.3	297.8	140	106	0.58	
		23.2	7.63	6.1	297.6				
14-Sep-11	1	22.8		6.2					
		22.8		6.3					
15-Sep-11	2	22.7		5.7					
		22.7		5.7					
16-Sep-11	3	22.5		5.5					
		22.5		5.9					
17-Sep-11	4	22.8		5.2					
		22.7		5.1					
18-Sep-11	5	22.7		5.3					
		22.8		5.9					
19-Sep-11	6	22.6		5.1					
		22.6		5.7					
20-Sep-11	7	22.7		5.9					
		22.7		5.7					
21-Sep-11	8	22.6		6.0					
		22.6		5.7					
22-Sep-11	9	22.7	7.88	6.1	305.0	128	102	0.00	U
		22.7	7.84	5.6	308.0				
23-Sep-11	10	22.6		6.0					
		22.6		6.1					
MEAN		**22.7**	**7.76**	**5.8**	**302**	**134**	**104**	**0.29**	
N=		**22**	**4**	**22**	**4**	**2**	**2**	**2**	
Max #		**23.2**	**7.88**	**6.3**	**308**	**140**	**106**	**0.58**	
Min #		**22.5**	**7.63**	**5.1**	**298**	**128**	**102**	**0.00**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	8	8	10	8	10
Weight (mg)	0.16875	0.17125	0.14300	0.13625	0.16100
Biomass (mg)	0.13500	0.13700	0.14300	0.10900	0.16100

% Survival 88.0

Avg. Weight 0.15605
Avg. biomass 0.13700

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

Project Name: USACOE Duluth *Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11*
GLC: 9056 **Sample ID**: DS-11-MU5

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
13-Sep-11	0	22.6	7.40	5.9	298.9	144	106	0.97	
		22.5	7.48	6.0	299.9				
14-Sep-11	1	22.8		6.2					
		22.8		6.2					
15-Sep-11	2	22.7		5.7					
		22.7		5.5					
16-Sep-11	3	22.1		5.3					
		22.4		5.4					
17-Sep-11	4	22.7		4.9					
		22.8		5.0					
18-Sep-11	5	22.8		4.9					
		22.8		4.5					
19-Sep-11	6	22.6		4.8					
		22.6		4.7					
20-Sep-11	7	22.7		5.2					
		22.7		4.5					
21-Sep-11	8	22.6		6.1					
		22.6		5.8					
22-Sep-11	9	22.8	7.61	6.1	293.2	116	92	0.00	U
		22.7	7.60	5.9	292.2				
23-Sep-11	10	22.7		7.2					
		22.7		7.5					
MEAN		**22.7**	**7.52**	**5.6**	**296**	**130**	**99**	**0.49**	
N=		**22**	**4**	**22**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.61**	**7.5**	**300**	**144**	**106**	**0.97**	
Min #		**22.1**	**7.40**	**4.5**	**292**	**116**	**92**	**0.00**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	10	10	9	10
Weight (mg)	0.15000	0.15700	0.16500	0.18444	0.17200
Biomass (mg)	0.15000	0.15700	0.16500	0.16600	0.17200

% Survival 98.0

Avg. Weight 0.16569
Avg. biomass 0.16200

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

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Project Name: USACOE Duluth *Hyalella azteca 10-Day survival and Growth 9/13/11-9/23/11*

GLC: 9057 **Sample ID**: DS-11-MU6

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
13-Sep-11	0	22.6	7.60	6.7	315.0	148	112	0.83	
		22.6	7.59	6.6	316.0				
14-Sep-11	1	22.8		6.5					
		22.8		6.6					
15-Sep-11	2	22.7		6.3					
		22.7		6.2					
16-Sep-11	3	22.5		6.0					
		22.6		6.2					
17-Sep-11	4	22.8		5.7					
		22.8		5.4					
18-Sep-11	5	22.8		5.4					
		22.8		5.0					
19-Sep-11	6	22.6		5.4					
		22.6		5.0					
20-Sep-11	7	22.7		5.8					
		22.7		5.0					
21-Sep-11	8	22.6		6.5					
		22.6		6.4					
22-Sep-11	9	22.7	7.76	6.3	309.0	132	104	0.00	U
		22.8	7.76	6.2	309.0				
23-Sep-11	10	22.7		7.0					
		22.6		7.0					
MEAN		**22.7**	**7.68**	**6.1**	**312**	**140**	**108**	**0.42**	
N=		**22**	**4**	**22**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.76**	**7.0**	**316**	**148**	**112**	**0.83**	
Min #		**22.5**	**7.59**	**5.0**	**309**	**132**	**104**	**0.00**	

10 Day Stats

Replicate	1	2	3	4	5
# Surviving	10	10	10	9	10
Weight (mg)	0.16400	0.13200	0.14800	0.14444	0.13600
Biomass (mg)	0.16400	0.13200	0.14800	0.13000	0.13600

% Survival 98.0

Avg. Weight 0.14489

Avg. biomass 0.14200

Ammonia Key:

MDL = 0.04

RL = Reporting Limit (lowest standard, 0.1)

J = Between MDL and RL

U = Below MDL (non detect)

NA = Not Applicable

Appendix C
Chironomus dilutus
10-Day Statistical Data

- Survival
- Weight

QC'd by: SLW

5077-01 USACOE Duluth

Chironomus dilutus 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: NA	Test Photoperiod: 16:8
Sample ID: Control	Test System: 175mL Manual Delivery
Test Species: *Chironomus dilutus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 10/3/2011	Test Organism Source/Age: 9/23/11 in house
Test Initiation Date: 10/4/2011	Test Termination Date: 10/14/2011

Test Day: 10

Date: 10/14/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals:

☒ 550 renewal time/Initials ☐ renewal time/Initials

☐ renewal time/Initials ☐ renewal time/Initials

Food: TFS# (4g/L) ☐ Feed 1.5

Screens Cleaned: ☐ yes ☑ no ☐ n/a

☒ 523 chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations # survivors 10 organisms per replicate
Meter ID	40	6	Int:
1			10/10
2			9/10
3			10/10
4	22.7	8.4	10/10
5	22.6	8.5	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: SRW

5077-01 USACOE Duluth

Chironomus dilutus 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01	Project Name: USACOE Duluth		
GLC#: 9042		Test Photoperiod: 16:8	
Sample ID: DS-11-MU2		Test System: 175mL Manual Delivery	
Test Species: *Chironomus dilutus*		Test Temperature: 23± 1°C	
Date Addition of Sediment:	10/3/2011	Test Organism Source/Age: 9/23/11 in house	
Test Initiation Date:	10/4/2011	Test Termination Date: 10/14/2011	

Test Day: 10

Date: 10/14/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals:

X 550 renewal time/Initials ☐ renewal time/Initials

☐ renewal time/Initials ☐ renewal time/Initials

Food: TFS# (4g/L) — ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☐ no ☐ n/a

X 520 chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations #Surviving 10 organisms per replicate
Meter ID	40	6	Int:
1			9/10
2			9/10
3			10/10
4	22.7	8.5	10/10
5	22.6	8.5	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: SLW

5077-01 USACOE Duluth

Chironomus dilutus 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9043	Test Photoperiod: 16:8
Sample ID: DS-11-MU4	Test System: 175mL Manual Delivery
Test Species: *Chironomus dilutus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 10/3/2011	Test Organism Source/Age: 9/23/11 in house
Test Initiation Date: 10/4/2011	Test Termination Date: 10/14/2011

Test Day: 10

Date: 10/14/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals:

~~1550~~ AWW renewal time/Initials ☐ / renewal time/Initials

☐ — renewal time/Initials ☐ / renewal time/Initials

Food: TFS# (4g/L) — / ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

~~1523~~ AWW chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations 10 organisms per replicate
Meter ID	40	6	Int: AWW
1			10/10
2	/	/	10/10
3	/	/	10/10
4	22.7	8.4	9/10
5	22.7	8.4	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: SHW

5077-01 USACOE Duluth

Chironomus dilutus 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9047	Test Photoperiod: 16:8
Sample ID: DS-11-MU3	Test System: 175mL Manual Delivery
Test Species: *Chironomus dilutus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 10/3/2011	Test Organism Source/Age: 9/23/11 in house
Test Initiation Date: 10/4/2011	Test Termination Date: 10/14/2011

Test Day: 10
Date: 10/14/2011
Overlying Water: Dechlor
Overlying Water Batch ID (GLC Number): NA
Number Daily Renewals:
~~0550 MW~~ renewal time/Initials ☐ renewal time/Initials
☐ — renewal time/Initials ☐ renewal time/Initials
Food: TFS# (4g/L) — ☐ Feed 1.5 ml/replicate/Int
Screens Cleaned: ☐ yes ☒ no ☐ n/a
~~0523 MW~~ chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations Number of organisms surviving
Meter ID	40	6	Int: MW
1	/	/	10/10
2	/	/	10/10
3	/	/	9/10
4	22.7	8.0	10/10
5	22.7	7.9	9/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:
AV: Animals Visible
NAV: No Animals Visible
FOV: Foreign Organism Visible
BHV: Bore Holes Visible

QC'd by: SLW

5077-01 USACOE Duluth

Chironomus dilutus 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01	Project Name: USACOE Duluth		
GLC#: 9048		Test Photoperiod: 16:8	
Sample ID: DS-11-HIPU		Test System: 175mL Manual Delivery	
Test Species: *Chironomus dilutus*		Test Temperature: 23± 1°C	
Date Addition of Sediment:	10/3/2011	Test Organism Source/Age: 9/23/11 in house	
Test Initiation Date:	10/4/2011	Test Termination Date: 10/14/2011	

Test Day: 10

Date: 10/14/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals:

1555 RW renewal time/Initials ☐ / renewal time/Initials

☐ ___ renewal time/Initials ☐ / renewal time/Initials

Food: TFS# (4g/L) ___ / ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

1523 RW chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations # of organisms surviving
Meter ID	40	6	Int: RW
1	/	/	10/10
2	/	/	9/10
3	/	/	10/10
4	22.6	8.2	10/10
5	22.7	8.2	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: SKW

5077-01 USACOE Duluth

Chironomus dilutus 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth

GLC#: 9052

Sample ID: DS-11-MOPU

Test Species: *Chironomus dilutus*

Date Addition of Sediment: 10/3/2011

Test Initiation Date: 10/4/2011

Test Photoperiod: 16:8

Test System: 175mL Manual Delivery

Test Temperature: 23± 1°C

Test Organism Source/Age: 9/23/11 in house

Test Termination Date: 10/14/2011

Test Day: 10

Date: 10/14/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals:

~~0550~~ NW renewal time/Initials ☐ / renewal time/Initials

☐ — renewal time/Initials ☐ / renewal time/Initials

Food: TFS# (4g/L) — / ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ~~☐~~ no ☐ n/a

~~0503~~ NW chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations #of organisms surviving
Meter ID	40	6	Int: NW
1	/	/	10/10
2	/	/	10/10
3	/	/	9/10
4	22.8	8.2	10/10
5	22.7	8.0	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: [illegible]

5077-01 USACOE Duluth

Chironomus dilutus 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9053	Test Photoperiod: 16:8
Sample ID: DS-11-WOPU	Test System: 175mL Manual Delivery
Test Species: *Chironomus dilutus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 10/3/2011	Test Organism Source/Age: 9/23/11 in house
Test Initiation Date: 10/4/2011	Test Termination Date: 10/14/2011

Test Day: 10

Date: 10/14/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals:

☒ 1550 renewal time/Initials ☐ renewal time/Initials

☐ renewal time/Initials ☐ renewal time/Initials

Food: TFS# (4g/L) ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 1523 chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations # of organisms surviving
Meter ID	40	6	Int: New
1	/	/	9/10
2	/	/	10/10
3	/	/	10/10
4	22.7	8.5	10/10
5	22.7	8.3	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: SPW

5077-01 USACOE Duluth

Chironomus dilutus 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9054	Test Photoperiod: 16:8
Sample ID: DS-11-IIPU	Test System: 175mL Manual Delivery
Test Species: *Chironomus dilutus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 10/3/2011	Test Organism Source/Age: 9/23/11 in house
Test Initiation Date: 10/4/2011	Test Termination Date: 10/14/2011

Test Day: 10

Date: 10/14/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals:

~~0550~~ renewal time/Initials ☐ renewal time/Initials

☐ renewal time/Initials ☐ renewal time/Initials

Food: TFS# (4g/L) ☐ Feed 1.5

Screens Cleaned: ☐ yes ☒ no ☐ n/a

~~0533~~ chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations # of Organisms Surviving
Meter ID	40	6	Int:
1			10/10
2			10/10
3			7/10
4	227	8.1	10/10
5	227	8.4	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: SMW

5077-01 USACOE Duluth

Chironomus dilutus 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9055	Test Photoperiod: 16:8
Sample ID: DS-11-MU1	Test System: 175mL Manual Delivery
Test Species: *Chironomus dilutus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 10/3/2011	Test Organism Source/Age: 9/23/11 in house
Test Initiation Date: 10/4/2011	Test Termination Date: 10/14/2011

Test Day: 10

Date: 10/14/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals:

~~1550~~ renewal time/Initials ☐ renewal time/Initials

☐ renewal time/Initials ☐ renewal time/Initials

Food: TFS# (4g/L) — ☐ Feed 1.5

Screens Cleaned: ☐ yes ☑ no ☐ n/a

~~1523~~ chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations # of organisms surviving
Meter ID	40	6	Int:
1			10/10
2			8/10
3			10/10
4	22.7	7.9	10/10
5	22.7	7.8	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: SHW

5077-01 USACOE Duluth

Chironomus dilutus 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9056	Test Photoperiod: 16:8
Sample ID: DS-11-MU5	Test System: 175mL Manual Delivery
Test Species: *Chironomus dilutus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 10/3/2011	Test Organism Source/Age: 9/23/11 in house
Test Initiation Date: 10/4/2011	Test Termination Date: 10/14/2011

Test Day: 10

Date: 10/14/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals:

~~5~~ 5 renewal time/Initials ☐ renewal time/Initials

☐ renewal time/Initials ☐ renewal time/Initials

Food: TFS# (4g/L) ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☑ no ☐ n/a

~~5~~ 23 chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations # of organisms surviving
Meter ID	40	6	Int:
1			10/10
2			9/10
3			10/10
4	22.7	7.9	10/10
5	22.7	8.3	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: SDW

5077-01 USACOE Duluth

Chironomus dilutus 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01	Project Name: USACOE Duluth		
GLC#: 9057		Test Photoperiod: 16:8	
Sample ID: DS-11-MU6		Test System: 175mL Manual Delivery	
Test Species: *Chironomus dilutus*		Test Temperature: 23± 1°C	
Date Addition of Sediment:	10/3/2011	Test Organism Source/Age: 9/23/11 in house	
Test Initiation Date:	10/4/2011	Test Termination Date: 10/14/2011	

Test Day: 10

Date: 10/14/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals:

~~1550~~ renewal time/Initials ☐ renewal time/Initials

☐ renewal time/Initials ☐ renewal time/Initials

Food: TFS# (4g/L) ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☑ no ☐ n/a

~~1523~~ chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations # of organisms surviving
Meter ID	40	6	Int:
1			10/10
2			7/10
3			1 pupa 8/10
4	22.7	8.2	10/10
5	22.7	8.3	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

Great Lakes Environmental Center

RTIL (USACOE) DULUTH

10-Day *Chironomous dilutus* WEIGHT DATA

Sample ID: Control

Test Species: *C. dilutus*

Type/Model of Drying Oven: Blue M

Project Number: 5077 - 01

Dry Weigh Date / Technician's Initials: 10/17/11 SLW

Type/Model of Muffle Furnace: F6020 Thermolyne MOD.

Test Date: 10/04/2011 - 10/14/2011

Ashed Weigh Date / Technician's Initials: 10/18/11 SLW

Calculations/Date Initial: 10/18/11 SLW

Oven Temperature: 60 °C
Drying Duration (Hours): ~24 hrs
Date/Time in: 10/14/11 0930
Date/Time out: 10/15/11 1230

Dessicator
Date/Time in: 10/15/11 1230
Date/Time out: 10/17/11 1241

Muffle Furnace Temperature: 550 °C
Drying Duration (Hours): 2 hrs
Date/Time in: 10/18/11 1000
Date/Time out: 10/18/11 1303

Dessicator
Date/Time in: 10/18/11 1316
Date/Time out: 10/18/11 1329

QC'd by: MLV

	Replicate Number	A Number of Organisms at Test Initiation	B Dry Weight of Pan and Organisms (g)	C Ashed Weight of Pan and Organisms (g)	B-C Total Ash-Free Dry Weight (g)	D Number of Organisms Weighed	B-C/D Average Ash-Free Dry Weight (mg)	E Number of Pupae and Midges at Day 20	(B-C) / (A-E) *Biomass weight (mg)
Sample ID:	1	10	0.83561	0.81846	0.01715	10	1.71500	0	1.71500
Control	2	10	0.82908	0.81620	0.01288	9	1.43111	0	1.28800
GLC Number:	3	10	0.84969	0.83512	0.01457	10	1.45700	0	1.45700
Laboratory Control	4	10	0.84102	0.82780	0.01322	10	1.32200	0	1.32200
	5	10	0.82873	0.81541	0.01332	10	1.33200	0	1.33200
						AVERAGE:	1.45142	—	1.42280

*Biomass weight (mg) : defined as the total ash-free dry weight of surviving organisms divided by the initial number of organisms minus pupae and midges

% Survival ~~61.5~~ 98% SLW 10/18/11

Great Lakes Environmental Center

RTIL (USACOE) DULUTH

10-Day *Chironomous dilutus* WEIGHT DATA

Sample ID: DS-11-MU2

Test Species: *C. dilutus*

Type/Model of Drying Oven: Blue M

Type/Model of Muffle Furnace: F6020 Thermolyne MOD.

Project Number: 5077 - 01

Dry Weigh Date / Technician's Initials: 10/17/11 SLW

Test Date: 10/04/2011 - 10/14/2011

Ashed Weigh Date / Technician's Initials: 10/18/11 SLW

Calculations: SLW 10/18/11

Oven Temperature: 60 °C

Drying Duration (Hours): ~ 24 hrs

Date/Time in: 10/14/11 0930

Date/Time out: 10/15/11 1230

Dessicator

Date/Time in: 10/15/11 1230

Date/Time out: 10/17/11 1241

Muffle Furnace Temperature: 550 °C

Drying Duration (Hours): 2 hrs

Date/Time in: 10/18/11 1028

Date/Time out: 10/18/11 1303

Dessicator

Date/Time in: 10/18/11 1316

Date/Time out: 10/18/11 13:31

QC'd by: MLV

	Replicate Number	A Number of Organisms at Test Initiation	B Dry Weight of Pan and Organisms (g)	C Ashed Weight of Pan and Organisms (g)	B-C Total Ash-Free Dry Weight (g)	D Number of Organisms Weighed	B-C/D Average Ash-Free Dry Weight (mg)	E Number of Pupae and Midges at Day 20	(B-C) / (A-E) *Biomass weight (mg)
Sample ID:	1	10	0.83909	0.82740	0.01169	9	1.29889	0	1.16900
DS-11-MU2	2	10	0.85433	0.84232	0.01201	9	1.33444	0	1.20100
GLC Number:	3	10	0.84328	0.83129	0.01199	10	1.1990	0	1.1990
9042	4	10	0.84779	0.83641	0.01131	10	1.1310	0	1.1310
	5	10	0.86090	0.84974	0.01116	10	1.11600	0	1.11600
						AVERAGE:	1.21587	—	1.16320

*Biomass weight (mg) : defined as the total ash-free dry weight of surviving organisms divided by the initial number of organisms minus pupae and midges

Calculation: ~~100%~~ Survival 96%

Great Lakes Environmental Center

RTIL (USACOE) DULUTH

10-Day *Chironomous dilutus* WEIGHT DATA

Sample ID: DS-11-MU4

Test Species: *C. dilutus*

Type/Model of Drying Oven: Blue M

Type/Model of Muffle Furnace: F6020 Thermolyne MOD.

Project Number: 5077 - 01

Dry Weigh Date / Technician's Initials: 10/17/11 SLW

Test Date: 10/04/2011 - 10/14/2011

Ashed Weigh Date / Technician's Initials: 10/18/11 SLW

Calculations: SLW 10/18/11

Oven Temperature: 60 °C
Drying Duration (Hours): ~ 24 hrs
Date/Time in: 10/14/11 09:30
Date/Time out: 10/15/11 12:30

Dessicator
Date/Time in: 10/15/11 1230
Date/Time out: 10/17/11 1241

Muffle Furnace Temperature: 550 °C
Drying Duration (Hours): 2 hrs
Date/Time in: 10/18/11 1000
Date/Time out: 10/18/11 1303

Dessicator
Date/Time in: 10/18/11 13:16
Date/Time out: 10/18/11 1330

QC'd by: MLV

	Replicate Number	A Number of Organisms at Test Initiation	B Dry Weight of Pan and Organisms (g)	C Ashed Weight of Pan and Organisms (g)	B-C Total Ash-Free Dry Weight (g)	D Number of Organisms Weighed	B-C/D Average Ash-Free Dry Weight (mg)	E Number of Pupae and Midges at Day 20	(B-C) / (A-E) *Biomass weight (mg)
Sample ID:	1	10	0.84173	0.82898	0.01275	10	1.27500	0	1.27500
DS-11-MU4	2	10	0.84461 (10/17/11 SLW)	0.83307	0.01154	10	1.15400	0	1.15400
GLC Number:	3	10	0.87497	0.86229	0.01268	10	1.26800	0	1.26800
9043	4	10	0.84087	0.82999	0.01088	9	1.20889	0	1.08800
	5	10	0.85322	0.84026	0.01296	10	1.29600	0	1.29600
						AVERAGE:	1.24038	—	1.21620

*Biomass weight (mg) : defined as the total ash-free dry weight of surviving organisms divided by the initial number of organisms minus pupae and midges

~~61.3%~~ Survival SLW 10/18/11
~~98%~~ SLW 10/18/11
98% Survival

Great Lakes Environmental Center

RTIL (USACOE) DULUTH

10-Day *Chironomous dilutus* WEIGHT DATA

Sample ID: DS-11-MU3

Test Species: *C. dilutus*

Type/Model of Drying Oven: Blue M

Type/Model of Muffle Furnace: F6020 Thermolyne MOD.

Project Number: 5077 - 01

Dry Weigh Date / Technician's Initials: 10/17/11 SLW

Test Date: 10/04/2011 - 10/14/2011

Ashed Weigh Date / Technician's Initials: 10/18/11 SLW

Calculations: SLW 10/18/11

Oven Temperature: 60 °C

Drying Duration (Hours): ~24 hrs

Date/Time in: 10/14/11 0930

Date/Time out: 10/15/11 1230

Dessicator

Date/Time in: 10/15/11 1230

Date/Time out: 10/17/11 1241

Muffle Furnace Temperature: 550 °C

Drying Duration (Hours): 2 hrs

Date/Time in: 10/18/11 1000

Date/Time out: 10/18/11 1303

Dessicator

Date/Time in: 10/18/11 1316

Date/Time out: 10/18/11 1345

QC'd by: MLV

	Replicate Number	A Number of Organisms at Test Initiation	B Dry Weight of Pan and Organisms (g)	C Ashed Weight of Pan and Organisms (g)	B-C Total Ash-Free Dry Weight (g)	D Number of Organisms Weighed	B-C/D Average Ash-Free Dry Weight (mg)	E Number of Pupae and Midges at Day 20	(B-C) / (A-E) *Biomass weight (mg)
Sample ID:	1	10	0.88864	0.83360	0.05504	10	0.55400	0	0.55400
DS-11-MU3	2	10	0.83896	0.82647	0.01249	10	1.24900	0	1.24900
GLC Number:	3	10	0.84961	TE *0.85332	TE	9	TE	0	TE
9047	4	10	0.85985	0.84742	0.01243	10	1.24300	0	1.24300
	5	10	81 ~~0.85185~~ SLW	~~0.84742~~ SLW 10/18/11 0.84060 SLW 10/17/11	0.01121	9	1.24556	0	1.12100
						AVERAGE:	1.06039	—	1.02925

*Biomass weight (mg) : defined as the total ash-free dry weight of surviving organisms divided by the initial number of organisms minus pupae and midges

* Rep 3,9053 May had spilt into Rep 3,9047 in furnace SLW 10/18/11

TE = Tech Error

~~60%~~ Survival = 96%

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RTIL (USACOE) DULUTH

10-Day *Chironomous dilutus* WEIGHT DATA

Sample ID: DS-11-HIPU
Test Species: *C. dilutus*
Type/Model of Drying Oven: Blue M
Type/Model of Muffle Furnace: F6020 Thermolyne MOD.
Project Number: 5077 - 01
Dry Weigh Date / Technician's Initials: 10/17/11 SRW
Test Date: 10/04/2011 - 10/14/2011
Ashed Weigh Date / Technician's Initials: 10/18/11 SRW
Calculations: SRW 10/18/11

Oven Temperature: 60 °C
Drying Duration (Hours): ~24 hrs
Date/Time in: 10/14/11 0930
Date/Time out: 10/15/11 1230

Dessicator
Date/Time in: 10/15/11 1232
Date/Time out: 10/17/11 1241

Muffle Furnace Temperature: 550 °C
Drying Duration (Hours): 2 hrs
Date/Time in: 10/18/11 1000
Date/Time out: 10/18/11 1303

Dessicator
Date/Time in: 10/18/11 1316
Date/Time out: 10/18/11 1346

QC'd by: MLV

	Replicate Number	A Number of Organisms at Test Initiation	B Dry Weight of Pan and Organisms (g)	C Ashed Weight of Pan and Organisms (g)	B-C Total Ash-Free Dry Weight (g)	D Number of Organisms Weighed	B-C/D Average Ash-Free Dry Weight (mg)	E Number of Pupae and Midges at Day 20	(B-C) / (A-E) *Biomass weight (mg)
Sample ID:	1	10	0.84537	0.82550	0.01987	10	1.98700	0	1.98700
DS-11-HIPU	2	10	0.82812	0.81838	0.00974	9	1.08222	0	0.97400
GLC Number:	3	10	0.83664	0.82295	0.01369	10	1.36900	0	1.36900
9048	4	10	0.83470	0.82306	0.01164	10	1.16400	0	1.16400
	5	10	0.84401	0.83115	0.01286	10	1.28600	0	1.28600
						AVERAGE:	1.37764	—	1.35600

*Biomass weight (mg) : defined as the total ash-free dry weight of surviving organisms divided by the initial number of organisms minus pupae and midges

98% Survival

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RTIL (USACOE) DULUTH

10-Day *Chironomous dilutus* WEIGHT DATA

Sample ID: DS-11-MOPU
Test Species: *C. dilutus*
Type/Model of Drying Oven: Blue M
Type/Model of Muffle Furnace: F6020 Thermolyne MOD.
Project Number: 5077 - 01
Dry Weigh Date / Technician's Initials: 10/17/11 SRW
Test Date: 10/04/2011 - 10/14/2011
Ashed Weigh Date / Technician's Initials: 10/18/11 SRW
Calculations: SRW 10/18/11

Oven Temperature: 60 °C
Drying Duration (Hours): ~ 24 hrs
Date/Time in: 10/14/11 0930
Date/Time out: 10/15/11 1230

Dessicator
Date/Time in: 10/15/11 1230
Date/Time out: 10/17/11 1241

Muffle Furnace Temperature: 550 °C
Drying Duration (Hours): 2 hrs
Date/Time in: 10/18/11 1200
Date/Time out: 10/18/11 1303

Dessicator
Date/Time in: 10/18/11 1316
Date/Time out: 10/18/11 1341

QC'd by: MLV

	Replicate Number	A Number of Organisms at Test Initiation	B Dry Weight of Pan and Organisms (g)	C Ashed Weight of Pan and Organisms (g)	B-C Total Ash-Free Dry Weight (g)	D Number of Organisms Weighed	B-C/D Average Ash-Free Dry Weight (mg)	E Number of Pupae and Midges at Day 20	(B-C) / (A-E) *Biomass weight (mg)
Sample ID:	1	10	0.84427 SRW 10/17/11	0.83443	0.00984	10	0.98400	0	0.98400
DS-11-MOPU	2	10	0.84161	0.83276	0.00885	10	0.88500	0	0.88500
GLC Number:	3	10	0.83648	0.82711	0.00937	9	1.04111	0	0.93700
9052	4	10	0.83442 SRW 10/17/11	0.82350	0.01092	10	1.09200	0	1.09200
	5	10	0.83570	0.82484	0.01086	10	1.08600	0	1.08600
						AVERAGE:	1.01762	—	0.99680

*Biomass weight (mg) : defined as the total ash-free dry weight of surviving organisms divided by the initial number of organisms minus pupae and midges

98% Survival

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Great Lakes Environmental Center

RTIL (USACOE) DULUTH

10-Day *Chironomous dilutus* WEIGHT DATA

Sample ID: DS-11-WOPU
Test Species: *C. dilutus*
Type/Model of Drying Oven: Blue M
Type/Model of Muffle Furnace: F6020 Thermolyne MOD.
Project Number: 5077 - 01
Dry Weigh Date / Technician's Initials: 10/17/11 SRW
Test Date: 10/04/2011 - 10/14/2011
Ashed Weigh Date / Technician's Initials: 10/18/11 SRW
Calculations: SRW 10/18/11

Oven Temperature: 60 °C
Drying Duration (Hours): ~ 24 hrs
Date/Time in: 10/14/11 0920
Date/Time out: 10/15/11 1230

Dessicator
Date/Time in: 10/15/11 1230
Date/Time out: 10/17/11 1241

Muffle Furnace Temperature: 550 °C
Drying Duration (Hours): 2 hrs
Date/Time in: 10/18/11 10:00
Date/Time out: 10/18/11 13:03

Dessicator
Date/Time in: 10/18/11 13:16
Date/Time out: 10/18/11 1408

QC'd by: MLW

	Replicate Number	A Number of Organisms at Test Initiation	B Dry Weight of Pan and Organisms (g)	C Ashed Weight of Pan and Organisms (g)	B-C Total Ash-Free Dry Weight (g)	D Number of Organisms Weighed	B-C/D Average Ash-Free Dry Weight (mg)	E Number of Pupae and Midges at Day 20	(B-C) / (A-E) *Biomass weight (mg)
Sample ID:	1	10	0.83421	0.82268	0.01153	9	1.28111	0	1.15300
DS-11-WOPU	2	10	0.84473	0.83297	0.01176	10	1.17600	0	1.17600
GLC Number:	3	10	0.84895	* 0.82356	TE	10	TE	0	TE
9053	4	10	0.85782	0.84660	0.01122	10	1.12200	0	1.12200
	5	10	0.85658	0.84464	0.01194	10	1.19400	0	1.19400
						AVERAGE:	1.19328	—	1.16125

*Biomass weight (mg) : defined as the total ash-free dry weight of surviving organisms divided by the initial number of organisms minus pupae and midges

* Rep 3 9053 may had spilt into Rep 3 9047 in furnace

98% Survival

TE = Tech Error

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RTIL (USACOE) DULUTH

10-Day *Chironomous dilutus* WEIGHT DATA

Sample ID: DS-11-IIPU

Test Species: *C. dilutus*

Type/Model of Drying Oven: Blue M

Type/Model of Muffle Furnace: F6020 Thermolyne MOD.

Project Number: 5077 - 01

Dry Weigh Date / Technician's Initials: 10/17/11 SLW

Test Date: 10/04/2011 - 10/14/2011

Ashed Weigh Date / Technician's Initials: 10/18/11 SLW

Calculations: SLW 10/18/11

Oven Temperature: 60 °C
Drying Duration (Hours): ~24 hrs
Date/Time in: 10/14/11 0930
Date/Time out: 10/15/11 1230

Dessicator
Date/Time in: 10/15/11 1230
Date/Time out: 10/17/11 1241

Muffle Furnace Temperature: 550 °C
Drying Duration (Hours): 2 hrs
Date/Time in: 10/18/11 10:08
Date/Time out: 10/18/11 13:03

Dessicator
Date/Time in: 10/18/11 1316
Date/Time out: 10/18/11 14:04

QC'd by: MLV

	Replicate Number	A Number of Organisms at Test Initiation	B Dry Weight of Pan and Organisms (g)	C Ashed Weight of Pan and Organisms (g)	B-C Total Ash-Free Dry Weight (g)	D Number of Organisms Weighed	B-C/D Average Ash-Free Dry Weight (mg)	E Number of Pupae and Midges at Day 20	(B-C) / (A-E) *Biomass weight (mg)
Sample ID:	1	10	0.84546	0.83579	0.00967	10	0.96700	0	0.96700
DS-11-IIPU	2	10	0.83830	0.82748	0.01082	10	~~1~~ 1.08200	0	1.08200
GLC Number:	3	10	0.82992	0.81982	0.01010	7	1.44286	0	1.01000
9054	4	10	0.82886	0.81768	0.01118	10	1.11800	0	1.11800
	5	10	0.83821	0.82721	0.01100	10	1.10000	0	1.10000
						AVERAGE:	1.14197	—	1.05540

*Biomass weight (mg) : defined as the total ash-free dry weight of surviving organisms divided by the initial number of organisms minus pupae and midges

94% Survival

Great Lakes Environmental Center

RTIL (USACOE) DULUTH

10-Day *Chironomous dilutus* WEIGHT DATA

Sample ID: DS-11-MU1

Test Species: *C. dilutus*

Type/Model of Drying Oven: Blue M

Type/Model of Muffle Furnace: F6020 Thermolyne MOD.

Project Number: 5077 - 01

Dry Weigh Date / Technician's Initials: 10/17/11 SLW

Test Date: 10/04/2011 - 10/14/2011

Ashed Weigh Date / Technician's Initials: 10/18/11 SLW

Calculations: 10/18/11 SLW

Oven Temperature: 60 °C
Drying Duration (Hours): ~ 24 hrs
Date/Time in: 10/14/11 0930
Date/Time out: 10/15/11 1230

Dessicator
Date/Time in: 10/15/11 1230
Date/Time out: 10/17/11 1241

Muffle Furnace Temperature: 550 °C
Drying Duration (Hours): 2 hrs
Date/Time in: 10/18/11 10:00
Date/Time out: 10/18/11 13:03

Dessicator
Date/Time in: 10/18/11 13:16
Date/Time out: 10/18/11 1354

QC'd by: MLV

	Replicate Number	A Number of Organisms at Test Initiation	B Dry Weight of Pan and Organisms (g)	C Ashed Weight of Pan and Organisms (g)	B-C Total Ash-Free Dry Weight (g)	D Number of Organisms Weighed	B-C/D Average Ash-Free Dry Weight (mg)	E Number of Pupae and Midges at Day 20	(B-C) / (A-E) *Biomass weight (mg)
Sample ID:	1	10	0.83613	0.82326	0.01287	10	1.2870	0	1.2870
DS-11-MU1	2	10	0.83602	0.82600	0.01002	8	1.2525	0	1.0020
GLC Number:	3	10	0.87685	0.86386	0.01299	10	1.2990	0	1.2990
9055	4	10	0.84899	0.83705	0.01194	10	1.1940	0	1.1940
	5	10	0.83685	0.82511	0.01174	10	1.1740	0	1.1740
						AVERAGE:	1.2413	—	1.1912

*Biomass weight (mg) : defined as the total ash-free dry weight of surviving organisms divided by the initial number of organisms minus pupae and midges

96% Survival

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RTIL (USACOE) DULUTH

10-Day *Chironomous dilutus* WEIGHT DATA

Sample ID: DS-11-MU5

Test Species: *C. dilutus*

Type/Model of Drying Oven: Blue M

Type/Model of Muffle Furnace: F6020 Thermolyne MOD.

Project Number: 5077 - 01

Dry Weigh Date / Technician's Initials: 10/17/11 SLW

Test Date: 10/04/2011 - 10/14/2011

Ashed Weigh Date / Technician's Initials: 10/18/11 SLW

Calculations: SLW 10/18/11

Oven Temperature: 60 °C
Drying Duration (Hours): ~ 24 hrs
Date/Time in: 10/14/11 0930
Date/Time out: 10/15/11 1230

Dessicator
Date/Time in: 10/15/11 ~~1030~~ 1230 SLW 10/17
Date/Time out: 10/17/11 1241

Muffle Furnace Temperature: 550 °C
Drying Duration (Hours): 2 hrs
Date/Time in: 10/18/11 10:08
Date/Time out: 10/18/11 13:03

Dessicator
Date/Time in: 10/18/11 13:16
Date/Time out: 10/18/11 1352

QC'd by: MLV

	Replicate Number	A Number of Organisms at Test Initiation	B Dry Weight of Pan and Organisms (g)	C Ashed Weight of Pan and Organisms (g)	B-C Total Ash-Free Dry Weight (g)	D Number of Organisms Weighed	B-C/D Average Ash-Free Dry Weight (mg)	E Number of Pupae and Midges at Day 20	(B-C) / (A-E) *Biomass weight (mg)
Sample ID:	1	10	0.84277	0.83033 SLW 10/18/11	0.01244	10	1.24400	0	1.24400
DS-11-MU5	2	10	0.84221	0.83277	0.00944	9	1.04889	0	0.94400
GLC Number:	3	10	0.84970 65 SLW 10/17/11	0.83783 1245	0.01182	10	1.18200	0	1.18200
9056	4	10	0.84479	0.83061	0.01418	10	1.41800	0	1.41800
	5	10	0.84225	0.83111	0.01114	10	1.1140	0	1.1140
						AVERAGE:	1.20138	—	1.1804D

*Biomass weight (mg) : defined as the total ash-free dry weight of surviving organisms divided by the initial number of organisms minus pupae and midges

98% Survival

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RTIL (USACOE) DULUTH

10-Day *Chironomous dilutus* WEIGHT DATA

Sample ID: DS-11-MU6
Test Species: *C. dilutus*
Type/Model of Drying Oven: Blue M
Type/Model of Muffle Furnace: F6020 Thermolyne MOD.
Project Number: 5077 - 01
Dry Weigh Date / Technician's Initials: 10/17/11 SLW
Calculations: SLW 10/18/11
Test Date: 10/04/2011 - 10/14/2011
Ashed Weigh Date / Technician's Initials: 10/18/11 SLW

Oven Temperature: 60 °C
Drying Duration (Hours): ~ 24 hrs
Date/Time in: 10/14/11 0930
Date/Time out: 10/15/11 1230

Dessicator
Date/Time in: 10/15/11 1230
Date/Time out: 10/17/11 1241

Muffle Furnace Temperature: 550 °C
Drying Duration (Hours): 2 hrs
Date/Time in: 10/18/11 1000
Date/Time out: 10/18/11 1303

Dessicator
Date/Time in: 10/18/11 13:16
Date/Time out: 10/18/11 1349

QC'd by: MLV

	Replicate Number	A Number of Organisms at Test Initiation	B Dry Weight of Pan and Organisms (g)	C Ashed Weight of Pan and Organisms (g)	B-C Total Ash-Free Dry Weight (g)	D Number of Organisms Weighed	B-C/D Average Ash-Free Dry Weight (mg)	E Number of Pupae and Midges at Day 20	(B-C) / (A-E) *Biomass weight (mg)
Sample ID:	1	10	0.84703	0.83647	0.01056	10	1.05600	0	1.05600
DS-11-MU6	2	10	0.83204	0.82315	0.00889	7	1.27000	0	0.88900
GLC Number:	3	10	0.83446	0.82413	0.01033	8	1.29125	1	1.14778
9057	4	10	0.84733	0.83654	0.01079	10	1.07900	0	1.07900
	5	10	0.83934	0.82894	0.0104	10	1.04000	0	1.04000
						AVERAGE:	1.14725	—	1.04236

*Biomass weight (mg) : defined as the total ash-free dry weight of surviving organisms divided by the initial number of organisms minus pupae and midges

90% Survival

Chironomus dilutus 10d Survival and Growth Test-10-Day Survival

Start Date:	10/4/2011	Test ID:	5077cdmopu	Sample ID:	DULUTH
End Date:	10/14/2011	Lab ID:	-GREAT LAKES ENVIRONM	Sample Type:	-WHOLE SEDIMENT
Sample Date:		Protocol:	EPA 600/R-99/064	Test Species:	CDIL-Chironomus dilutus
Comments:	10-day C. dilutus survival and growth RTi-USACOE Duluth Oct 4-14, 2011				

Conc-%	1	2	3	4	5	6	7	8	9	10
pu, wopu, iipu	1.0000	0.9000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9000	1.0000	1.0000
pu, wopu, iipu	0.9000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.7000	1.0000	1.0000
DS-11-MU-2	0.9000	0.9000	1.0000	1.0000	1.0000					
DS-11-MU-4	1.0000	1.0000	1.0000	0.9000	1.0000					
DS-11-MU-3	1.0000	1.0000	0.9000	1.0000	0.9000					
DS-11-MU-1	1.0000	0.8000	1.0000	1.0000	1.0000					
DS-11-MU-5	1.0000	0.9000	1.0000	1.0000	1.0000					
DS-11-MU-6	1.0000	0.7000	0.9000	1.0000	1.0000					

			Transform: Arcsin Square Root						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
pu, wopu, iipu	0.9700	1.0000	1.3665	0.9912	1.4120	7.792	20			
DS-11-MU-2	0.9600	0.9897	1.3468	1.2490	1.4120	6.628	5	0.380	1.714	0.0889
DS-11-MU-4	0.9800	1.0103	1.3794	1.2490	1.4120	5.284	5	-0.254	1.714	0.0869
DS-11-MU-3	0.9600	0.9897	1.3468	1.2490	1.4120	6.628	5	0.380	1.714	0.0889
DS-11-MU-1	0.9600	0.9897	1.3510	1.1071	1.4120	10.092	5	0.276	1.714	0.0962
DS-11-MU-5	0.9800	1.0103	1.3794	1.2490	1.4120	5.284	5	-0.254	1.714	0.0869
DS-11-MU-6	0.9200	0.9485	1.2953	0.9912	1.4120	14.210	5	1.154	1.714	0.1059

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.73769	0.947	-1.8728	3.52407
Bartlett's Test indicates equal variances (p = 0.45)	5.75742	16.8119		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Homoscedastic t Test indicates no significant differences	0.05198	0.05421	0.00452	0.01236	0.89671	6, 43
Treatments vs ref sed hipu,mopu, wopu, iipu						

Chironomus dilutus 10d Survival and Growth Test-10-Day Growth (AFDW)

Start Date:	10/4/2011	Test ID:	5077cdmopu	Sample ID:	DULUTH
End Date:	10/14/2011	Lab ID:	-GREAT LAKES ENVIRONM	Sample Type:	-WHOLE SEDIMENT
Sample Date:		Protocol:	EPA 600/R-99/064	Test Species:	CDIL-Chironomus dilutus
Comments:	10-day C. dilutus survival and growth RTi-USACOE Duluth Oct 4-14, 2011				

Conc-%	1	2	3	4	5	6	7	8	9	10
pu, wopu, iipu	1.9870	1.0822	1.3690	1.1640	1.2860	0.9840	0.8850	1.0411	1.0920	1.0860
pu, wopu, iipu	1.2811	1.1760	0.0000	1.1220	1.1940	0.9670	1.0820	1.4429	1.1180	1.1000
DS-11-MU-2	1.2989	1.3344	1.1990	1.1310	1.1160					
DS-11-MU-4	1.2750	1.1540	1.2680	1.2089	1.2960					
DS-11-MU-3	0.5040	1.2490	0.0000	1.2430	1.2456					
DS-11-MU-1	1.2870	1.2525	1.2990	1.1940	1.1740					
DS-11-MU-5	1.2440	1.0489	1.1820	1.4180	1.1140					
DS-11-MU-6	1.0560	1.2700	1.2912	1.0790	1.0400					

			Transform: Untransformed						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
pu, wopu, iipu	1.1230	1.0000	1.1230	0.0000	1.9870	31.283	20			
DS-11-MU-2	1.2159	1.0827	1.2159	1.1160	1.3344	8.060	5	-1.033	1.717	0.1545
DS-11-MU-4	1.2404	1.1046	1.2404	1.1540	1.2960	4.685	5	-1.419	1.717	0.1421
DS-11-MU-3	0.8483	0.7554	0.8483	0.0000	1.2490	67.520	5	1.025	2.132	0.5712
DS-11-MU-1	1.2413	1.1054	1.2413	1.1740	1.2990	4.469	5	-1.437	1.721	0.1417
DS-11-MU-5	1.2014	1.0698	1.2014	1.0489	1.4180	11.772	5	-0.778	1.740	0.1754
DS-11-MU-6	1.1473	1.0216	1.1473	1.0400	1.2912	10.701	5	-0.253	1.729	0.1657

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.82736	0.947	-1.143	7.12644
Bartlett's Test indicates unequal variances (p = 5.27E-06)	34.548	16.8119		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Heteroscedastic t Test indicates no significant differences	0.16572	0.14757	0.09678	0.08981	0.39081	6, 43
Treatments vs ref sed hipu,mopu, wopu, iipu						

Chironomus dilutus 10d Survival and Growth Test-10-Day Biomass (AFDW)

Start Date:	10/4/2011	Test ID:	5077cdmopu	Sample ID:	DULUTH
End Date:	10/14/2011	Lab ID:	-GREAT LAKES ENVIRONM	Sample Type:	-WHOLE SEDIMENT
Sample Date:		Protocol:	EPA 600/R-99/064	Test Species:	CDIL-Chironomus dilutus
Comments:	10-day C. dilutus survival and growth RTi-USACOE Duluth Oct 4-14, 2011				

Conc-%	1	2	3	4	5	6	7	8	9	10
pu, wopu, iipu	1.9870	0.9740	1.3690	1.1640	1.2860	0.9840	0.8850	0.9370	1.0920	1.0860
pu, wopu, iipu	1.1530	1.1760	0.0000	1.1220	1.1940	0.9670	1.0820	1.0100	1.1180	1.1000
DS-11-MU-2	1.1690	1.2010	1.1990	1.1310	1.1160					
DS-11-MU-4	1.2750	1.1540	1.2680	1.0880	1.2960					
DS-11-MU-3	0.5040	1.2490	0.0000	1.2430	1.1210					
DS-11-MU-1	1.2870	1.0020	1.2990	1.1940	1.1740					
DS-11-MU-5	1.2440	0.9440	1.1820	1.4180	1.1140					
DS-11-MU-6	1.0560	0.8890	1.0330	1.0790	1.0400					

			Transform: Untransformed						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
pu, wopu, iipu	1.0843	1.0000	1.0843	0.0000	1.9870	31.734	20			
DS-11-MU-2	1.1632	1.0728	1.1632	1.1160	1.2010	3.332	5	-1.000	1.725	0.1360
DS-11-MU-4	1.2162	1.1216	1.2162	1.0880	1.2960	7.447	5	-1.517	1.717	0.1493
DS-11-MU-3	0.8234	0.7594	0.8234	0.0000	1.2490	67.230	5	1.006	2.132	0.5527
DS-11-MU-1	1.1912	1.0986	1.1912	1.0020	1.2990	10.012	5	-1.142	1.729	0.1619
DS-11-MU-5	1.1804	1.0886	1.1804	0.9440	1.4180	14.722	5	-0.879	1.771	0.1937
DS-11-MU-6	1.0194	0.9401	1.0194	0.8890	1.0790	7.358	5	0.773	1.717	0.1441

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.05)	0.82252	0.947	-0.9594	7.27485
Bartlett's Test indicates unequal variances (p = 6.66E-06)	34.0223	16.8119		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Heteroscedastic t Test indicates no significant differences	0.14413	0.13293	0.09649	0.08638	0.36849	6, 43
Treatments vs ref sed hipu,mopu, wopu, iipu						

Test: EPA 100.2-Chironomus dilutus 10d Survival and Growth Test Test ID: 5077cdmopu
Species: CDIL-Chironomus dilutus Protocol: EPA 600/R-99/064
Sample ID: DULUTH Sample Type: -WHOLE SEDIMENT
Start Date: 10/4/2011 End Date: 10/14/2011 Lab ID: -GREAT LAKES ENVIRONMENTAL CENTER

Pos	ID	Rep	Group	Day 0	Day 1(	Day 1(	Day 2(	Day 2(	# pupae + Mi	Alive in Sedir	Remain in Se	Emerged	Weight pan/c	Weight ashed pan/	Notes
	1	1	ref sed hipu,mo	10	10	10			0				0.84537	0.8255	
	2	2	ref sed hipu,mo	10	9	9			0				0.82812	0.81838	
	3	3	ref sed hipu,mo	10	10	10			0				0.83664	0.82295	
	4	4	ref sed hipu,mo	10	10	10			0				0.8347	0.82306	
	5	5	ref sed hipu,mo	10	10	10			0				0.84401	0.83115	
	6	6	ref sed hipu,mo	10	10	10			0				0.84427	0.83443	
	7	7	ref sed hipu,mo	10	10	10			0				0.84161	0.83276	
	8	8	ref sed hipu,mo	10	9	9			0				0.83648	0.82711	
	9	9	ref sed hipu,mo	10	10	10			0				0.83442	0.8235	
	10	10	ref sed hipu,mo	10	10	10			0				0.8357	0.82484	
	11	11	ref sed hipu,mo	10	9	9			0				0.83421	0.82268	
	12	12	ref sed hipu,mo	10	10	10			0				0.84473	0.83297	
	13	13	ref sed hipu,mo	10	10	10			0						
	14	14	ref sed hipu,mo	10	10	10			0				0.85782	0.8466	
	15	15	ref sed hipu,mo	10	10	10			0				0.85658	0.84464	
	16	16	ref sed hipu,mo	10	10	10			0				0.84546	0.83579	
	17	17	ref sed hipu,mo	10	10	10			0				0.8383	0.82748	
	18	18	ref sed hipu,mo	10	7	7			0				0.82992	0.81982	
	19	19	ref sed hipu,mo	10	10	10			0				0.82886	0.81768	
	20	20	ref sed hipu,mo	10	10	10			0				0.83821	0.82721	
	21	1	DS-11-MU-2	10	9	9			0				0.83909	0.8274	
	22	2	DS-11-MU-2	10	9	9			0				0.85433	0.84232	
	23	3	DS-11-MU-2	10	10	10			0				0.84328	0.83129	
	24	4	DS-11-MU-2	10	10	10			0				0.84772	0.83641	
	25	5	DS-11-MU-2	10	10	10			0				0.8609	0.84974	
	26	1	DS-11-MU-4	10	10	10			0				0.84173	0.82898	
	27	2	DS-11-MU-4	10	10	10			0				0.84461	0.83307	
	28	3	DS-11-MU-4	10	10	10			0				0.87497	0.86229	
	29	4	DS-11-MU-4	10	9	9			0				0.84087	0.82999	
	30	5	DS-11-MU-4	10	10	10			0				0.85322	0.84026	
	31	1	DS-11-MU-3	10	10	10			0				0.83864	0.8336	
	32	2	DS-11-MU-3	10	10	10			0				0.83896	0.82647	
	33	3	DS-11-MU-3	10	9	9			0						
	34	4	DS-11-MU-3	10	10	10			0				0.85985	0.84742	
	35	5	DS-11-MU-3	10	9	9			0				0.85181	0.8406	
	36	1	DS-11-MU-1	10	10	10			0				0.83613	0.82326	
	37	2	DS-11-MU-1	10	8	8			0				0.83602	0.826	
	38	3	DS-11-MU-1	10	10	10			0				0.87685	0.86386	

Test: EPA 100.2-Chironomus dilutus 10d Survival and Growth Test Test ID: 5077cdmopu
Species: CDIL-Chironomus dilutus Protocol: EPA 600/R-99/064
Sample ID: DULUTH Sample Type: -WHOLE SEDIMENT
Start Date: 10/4/2011 End Date: 10/14/2011 Lab ID: -GREAT LAKES ENVIRONMENTAL CENTER

Pos	ID	Rep	Group	Day 0	Day 1(	Day 1(	Day 2(	Day 2(	# pupae + Mi	Alive in Sedi	Remain in Se	Emerged	Weight pan/c	Weight ashed pan/	Notes
	39	4	DS-11-MU-1	10	10	10			0				0.84899	0.83705	
	40	5	DS-11-MU-1	10	10	10			0				0.83685	0.82511	
	41	1	DS-11-MU-5	10	10	10			0				0.84277	0.83033	
	42	2	DS-11-MU-5	10	9	9			0				0.84221	0.83277	
	43	3	DS-11-MU-5	10	10	10			0				0.84965	0.83783	
	44	4	DS-11-MU-5	10	10	10			0				0.84479	0.83061	
	45	5	DS-11-MU-5	10	10	10			0				0.84225	0.83111	
	46	1	DS-11-MU-6	10	10	10			0				0.84703	0.83647	
	47	2	DS-11-MU-6	10	7	7			0				0.83204	0.82315	
	48	3	DS-11-MU-6	10	8	9			0				0.83446	0.82413	
	49	4	DS-11-MU-6	10	10	10			0				0.84733	0.83654	
	50	5	DS-11-MU-6	10	10	10			0				0.83934	0.82894	

Comments: 10-day C. dilutus survival and growth RTi-USACOE Duluth Oct 4-14, 2011

Reviewed by: SLW

Appendix D
Hyalella azteca
10-Day Statistical Data

- Survival

5077-01 USACOE Duluth

QC'd by:_____

Hyalella azteca 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: NA	Test Photoperiod: 16:8
Sample ID: Control	Test System: 175mL Manual Delivery
Test Species: *Hyalella azteca*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: 9/1/11 in house
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 10

Date: 9/23/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 6 renew renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

9/15/11 CB ~~Food: TFS# (4g/L)~~ YTC# ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☐ no ☒ n/a

☒ 530 new chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations
Meter ID	40	6	Int: new
1			10/10
2			10/10
3			10/10
4	22.6	4.7	10/10
5	22.6	4.9	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: DS

5077-01 USACOE Duluth

Hyalella azteca 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9042	Test Photoperiod: 16:8
Sample ID: DS-11-MU2	Test System: 175mL Manual Delivery
Test Species: *Hyalella azteca*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: 9/1/11 in house
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 10

Date: 9/23/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 600 renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

9/15/11 EB ~~Food: TFS# (4g/L)~~ YTC# ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 530 MW chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations
Meter ID	40	6	Int: MW
1			9/10
2			10/10
3			10/10
4	22.6	6.3	9/10
5	22.6	6.6	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: DS

5077-01 USACOE Duluth

Hyalella azteca 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01	Project Name: USACOE Duluth		
GLC#: 9043		Test Photoperiod: 16:8	
Sample ID: DS-11-MU4		Test System: 175mL Manual Delivery	
Test Species: *Hyalella azteca*		Test Temperature: 23± 1°C	
Date Addition of Sediment:	9/12/2011	Test Organism Source/Age: 9/1/11 in house	
Test Initiation Date:	9/13/2011	Test Termination Date: 9/23/2011	

Test Day: 10

Date: 9/23/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 600 NW renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

~~YTC# 9/15/11 EB~~ ~~Food: TFS# (4g/L)~~ YTC# ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 530 NW chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations
Meter ID	40	6	Int: NW
1			10/10
2			10/10
3			9/10
4	22.6	6.9	10/10
5	22.6	6.9	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: DS

5077-01 USACOE Duluth

Hyalella azteca 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9047	Test Photoperiod: 16:8
Sample ID: DS-11-MU3	Test System: 175mL Manual Delivery
Test Species: *Hyalella azteca*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: 9/1/11 in house
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 10

Date: 9/23/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 600 hrs renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

9/15/11 EB ~~Food: TFS# (4g/L)~~ YTC# — ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 530 hrs chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations
Meter ID	40	10	Int: hrs
1			10/10
2			10/10
3			9/10
4	22.6	7.0	9/10
5	22.5	6.7	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: DS

5077-01 USACOE Duluth

Hyalella azteca 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01	Project Name: USACOE Duluth		
GLC#: 9048		Test Photoperiod: 16:8	
Sample ID: DS-11-HIPU		Test System: 175mL Manual Delivery	
Test Species: *Hyalella azteca*		Test Temperature: 23± 1°C	
Date Addition of Sediment:	9/12/2011	Test Organism Source/Age: 9/1/11 in house	
Test Initiation Date:	9/13/2011	Test Termination Date: 9/23/2011	

Test Day: 10

Date: 9/23/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 1000 NW renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

9/15/11 EB ~~Food: TFS# (4g/L)~~ YTC# — ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 530 NW chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations
Meter ID	40	6	Int: NW
1			10/10
2			10/10
3			10/10
4	22.6	7.0	10/10
5	22.6	6.7	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: DS

5077-01 USACOE Duluth

Hyalella azteca 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9052	Test Photoperiod: 16:8
Sample ID: DS-11-MOPU	Test System: 175mL Manual Delivery
Test Species: *Hyalella azteca*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: 9/1/11 in house
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 10

Date: 9/23/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

~~☒ 10:00 MW~~ renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

9/15/11 ~~Food: TFS# (4g/L)~~ YTC-II — ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 530 MW chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations
Meter ID	40	6	Int: MW
1			10/10
2			9/10
3			10/10
4	22.7	6.4	10/10
5	22.7	6.6	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: DS

5077-01 USACOE Duluth

Hyalella azteca 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01	Project Name: USACOE Duluth		
GLC#: 9053		Test Photoperiod: 16:8	
Sample ID: DS-11-WOPU		Test System: 175mL Manual Delivery	
Test Species: *Hyalella azteca*		Test Temperature: 23± 1°C	
Date Addition of Sediment:	9/12/2011	Test Organism Source/Age: 9/1/11 in house	
Test Initiation Date:	9/13/2011	Test Termination Date: 9/23/2011	

Test Day: 10

Date: 9/23/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 600 MW renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

9/15/11 CB ~~Food: TFS# (4g/L)~~ YTC# — ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 530 MW chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations
Meter ID	40	6	Int: MW
1			10/10
2			10/10
3			10/10
4	22.6	6.7	10/10
5	22.7	6.7	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: DS

5077-01 USACOE Duluth

Hyalella azteca 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01	Project Name: USACOE Duluth		
GLC#: 9054		Test Photoperiod: 16:8	
Sample ID: DS-11-IIPU		Test System: 175mL Manual Delivery	
Test Species: *Hyalella azteca*		Test Temperature: 23± 1°C	
Date Addition of Sediment:	9/12/2011	Test Organism Source/Age: 9/1/11 in house	
Test Initiation Date:	9/13/2011	Test Termination Date: 9/23/2011	

Test Day: 10

Date: 9/23/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 600 mw renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

9/15/11 EB ~~Food: TFS# (4g/L)~~ YTC# — ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 530 mw chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations
Meter ID	40	6	Int: mw
1			8/10
2			10/10
3			9/10
4	22.7	6.8	10/10
5	22.6	6.5	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: DS

5077-01 USACOE Duluth

Hyalella azteca 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9055	Test Photoperiod: 16:8
Sample ID: DS-11-MU1	Test System: 175mL Manual Delivery
Test Species: *Hyalella azteca*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: 9/1/11 in house
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 10

Date: 9/23/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

X 600 mw renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

9/15/11 CB Food: ~~TFS# (4g/L)~~ YTC# — ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

X 530 mw chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations
Meter ID	40	6	Int: mw
1			8/10
2			8/10
3			10/10
4	22.6	6.0	8/10
5	22.6	6.1	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: DS

5077-01 USACOE Duluth

Hyalella azteca 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9056	Test Photoperiod: 16:8
Sample ID: DS-11-MU5	Test System: 175mL Manual Delivery
Test Species: *Hyalella azteca*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: 9/1/11 in house
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 10

Date: 9/23/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 600 MW renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

Food: ~~TFS# (4g/L)~~ YTC-1 — ☐ Feed 1.5 ml/replicate/Int

9/15/11 EB

Screens Cleaned: ☐ yes ☑ no ☐ n/a

☒ 530 MW chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations
Meter ID	40	6	Int: MW
1			10/10
2			10/10
3			10/10
4	22.7	7.2	9/10
5	22.7	7.5	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: DS

5077-01 USACOE Duluth

Hyalella azteca 10-Day Survival and Growth Whole Sediment Toxicity Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9057	Test Photoperiod: 16:8
Sample ID: DS-11-MU6	Test System: 175mL Manual Delivery
Test Species: *Hyalella azteca*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: 9/1/11 in house
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 10

Date: 9/23/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 600 MW renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

9/15/11 CB ~~Food: TFS# (4g/L)~~ YTC# — ☐ Feed 1.5 ml/replicate/Int

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 530 MW chemistries time/Initial

Replicate	Temperature (23± 1°C)* MW 9/23/11	Dissolved Oxygen (mg/L)*	Observations
Meter ID	240	6	Int: MW
1			10/10
2			10/10
3			10/10
4	22.7	7.0	9/10
5	22.6	7.0	10/10

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

Hyalella azteca 10d Survival and Growth Test-10-day survival

Start Date:	9/13/2011	Test ID:	5077hasu	Sample ID:	DULUTH
End Date:	9/23/2011	Lab ID:	-GREAT LAKES ENVIRONM	Sample Type:	-WHOLE SEDIMENT
Sample Date:		Protocol:	EPA 600/R-99/064	Test Species:	HA-Hyalella azteca

Comments: Duluth-USACOE 10-day h. azteca survival September 13-23, 2011

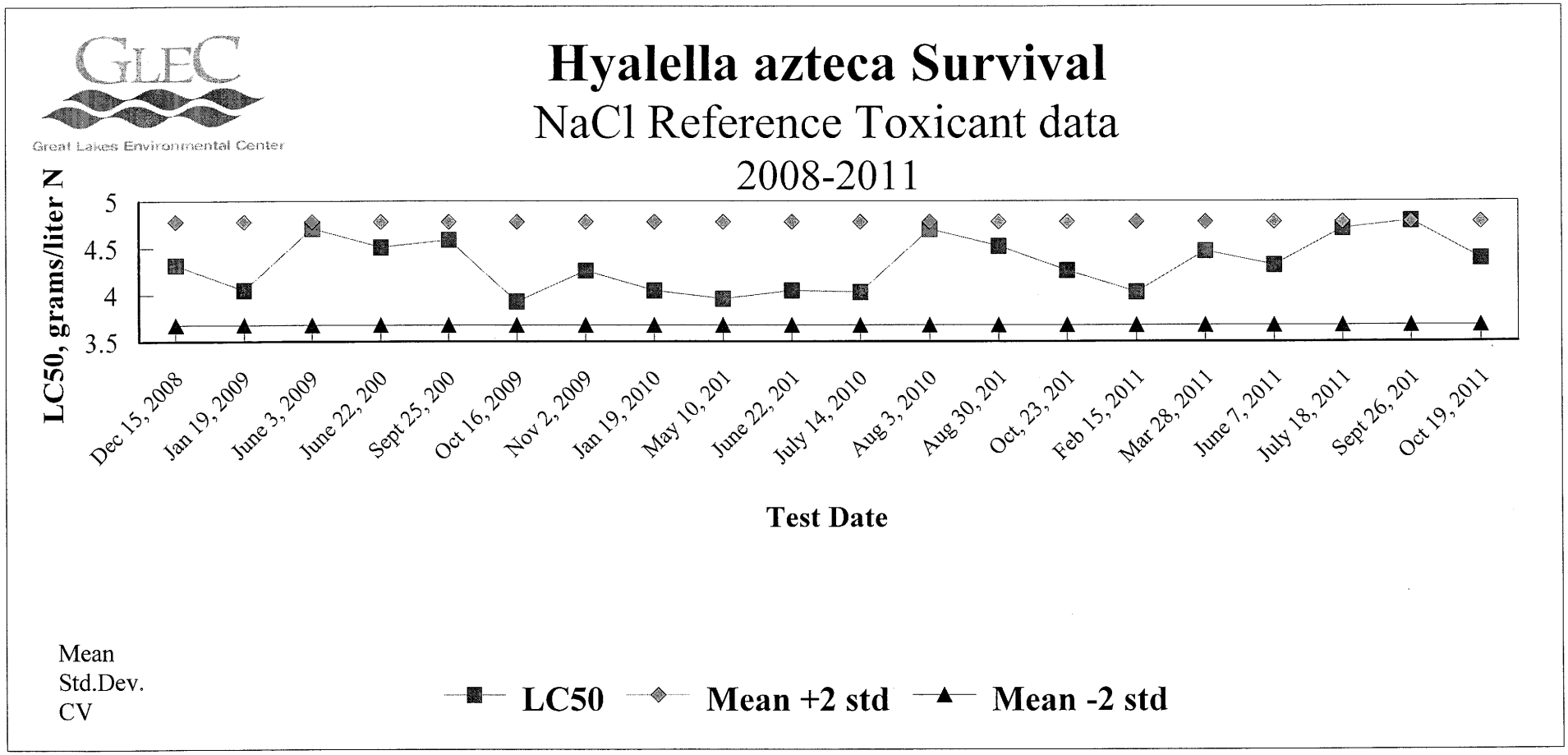
Conc-%	1	2	3	4	5	6	7	8	9	10
I, WOPU, IIPU	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	0.9000	1.0000	1.0000	1.0000
I, WOPU, IIPU	1.0000	1.0000	1.0000	1.0000	1.0000	0.8000	1.0000	0.9000	1.0000	1.0000
DS-11-MU-2	0.9000	1.0000	1.0000	0.9000	1.0000					
DS-11-MU-4	1.0000	1.0000	0.9000	1.0000	1.0000					
DS-11-MU-3	1.0000	1.0000	0.9000	0.9000	1.0000					
DS-11-MU-1	0.8000	0.8000	1.0000	0.8000	1.0000					
DS-11-MU-5	1.0000	1.0000	1.0000	0.9000	1.0000					
DS-11-MU-6	1.0000	1.0000	1.0000	0.9000	1.0000					

			Transform: Arcsin Square Root						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
I, WOPU, IIPU	0.9800	1.0000	1.3805	1.1071	1.4120	5.903	20			
DS-11-MU-2	0.9600	0.9796	1.3468	1.2490	1.4120	6.628	5	0.767	2.015	0.0884
DS-11-MU-4	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5	0.028	1.943	0.0726
DS-11-MU-3	0.9600	0.9796	1.3468	1.2490	1.4120	6.628	5	0.767	2.015	0.0884
DS-11-MU-1	0.8800	0.8980	1.2291	1.1071	1.4120	13.586	5	1.969	2.132	0.1639
DS-11-MU-5	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5	0.028	1.943	0.0726
DS-11-MU-6	0.9800	1.0000	1.3794	1.2490	1.4120	5.284	5	0.028	1.943	0.0726

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.79208	0.93	-0.857	1.1479
Bartlett's Test indicates equal variances (p = 0.47)	5.58624	16.8119		

Hypothesis Test (1-tail, 0.05)	MSDu	MSDp	MSB	MSE	F-Prob	df
Heteroscedastic t Test indicates no significant differences	0.03174	0.03292	0.01689	0.00849	0.08835	6, 43
Treatments vs ref sed HIPU, MOPU, WOPU, IIPU						

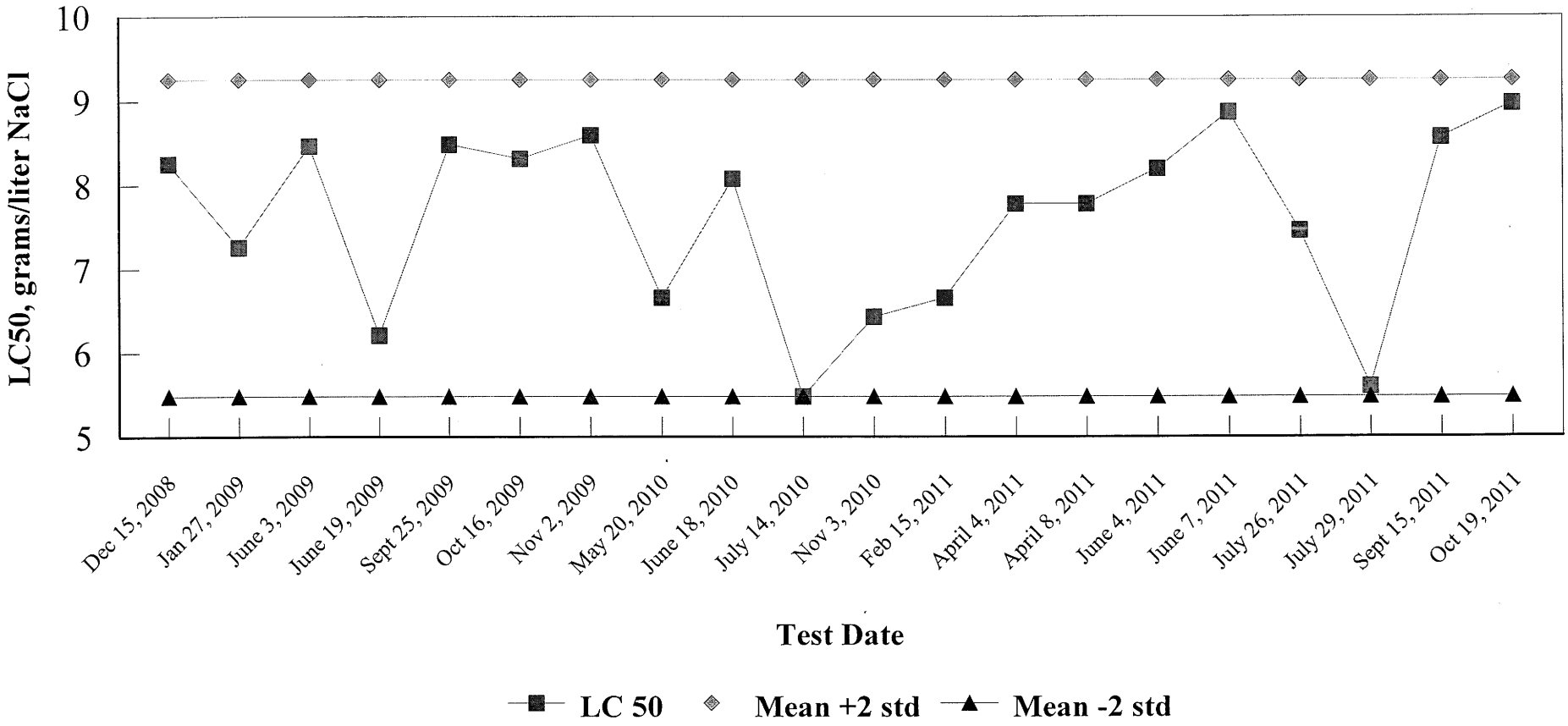
Appendix E
Reference Toxicant Data


GLEC
Great Lakes Environmental Center
Hyalella azteca Survival
NaCl Reference Toxicant data
2008-2011
LC50, grams/liter N
5
4.5
4
3.5
Dec 15, 2008
Jan 19, 2009
June 3, 2009
June 22, 200
Sept 25, 200
Oct 16, 2009
Nov 2, 2009
Jan 19, 2010
May 10, 201
June 22, 201
July 14, 2010
Aug 3, 2010
Aug 30, 201
Oct, 23, 201
Feb 15, 2011
Mar 28, 2011
June 7, 2011
July 18, 2011
Sept 26, 201
Oct 19, 2011
Test Date
Mean
Std.Dev.
CV
LC50
Mean +2 std
Mean -2 std

GLEC
Great Lakes Environmental Center

Chironomus dilutus Survival

NaCl Reference Toxicant data
2008-2011



APPENDIX L

GLEC Laboratory Report
28-day Lumbriculus variegatus Bioaccumulation Tests

FINAL REPORT:

28-day *Lumbriculus variegatus* Bioaccumulation Tests for U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water

Prepared for:

Mariah Hope
Future Net Group, Inc.
12801 Auburn Street
Detroit, MI 48223

Prepared by:

GLEC
Great Lakes Environmental Center

739 Hastings Street
Traverse City, MI 49686

Ph.: 231/941-2230
Fax: 231/941-2240

November 10, 2011

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November 14, 2011

Mariah Hope
FutureNet Group, Inc.
12801 Auburn Street
Detroit, MI 48223

RE: Final Report: 28-day *Lumbriculus variegatus* Bioaccumulation Tests
Sample Collection Dates: August 15-August 20, 2011
USACOE Duluth-Superior, MN-WI Open Water Evaluation
GLEC Project Number: 5077

Dear Ms. Hope:

Great Lakes Environmental Center, Inc. (GLEC) has completed our analysis of both the *Lumbriculus variegatus* 28-day bioaccumulation tests and the 4-day acute toxicity screening tests. These bioaccumulation and toxicity screening tests were performed on ten sediment samples that were collected by FutureNet Group, Inc. personnel from the USACOE Duluth-Superior, MN-WI Open Water Evaluation sampling site located in Duluth-Superior, MN-WI.

The ten sediment samples were collected and shipped by FutureNet Group, Inc. personnel and were received at GLEC, where they were assigned a unique GLEC laboratory identification number and stored at 0-6°C until test initiation (see table below).

Sample I.D.	Sample Description	GLEC Lab. ID Number	Date Sampled	Date Received
DS-11-HIPU	Reference –Hearding Island Placement Unit	9048	August 17, 2011	August 18, 2011
DS-11-MOPU	Reference –Minnesota Open Water Placement Unit	9052	August 18, 2011	August 20, 2011
DS-11-WOPU	Reference –Wisconsin Open Water Placement Unit	9053	August 18, 2011	August 20, 2011
DS-11-IIPU	Reference –Interstate Island Placement Unit	9054	August 18, 2011	August 20, 2011
DS-11-MU-2	Harbor Sample	9042	August 15-16, 2011	August 17, 2011

Sample I.D.	Sample Description	GLEC Lab. ID Number	Date Sampled	Date Received
DS-11-MU-4	Harbor Sample	9043	August 15-16, 2011	August 17, 2011
DS-11-MU-3	Harbor Sample	9047	August 16-17, 2011	August 18, 2011
DS-11-MU1	Harbor Sample	9055	August 20, 2011	August 23, 2011
DS-11-MU5	Harbor Sample	9056	August 20, 2011	August 23, 2011
DS-11-MU6	Harbor Sample	9057	August 20, 2011	August 23, 2011

The sample identification numbers and the results of the 4-day acute toxicity screening test as well as the average depurated wet weight of the *L. variegatus* following completion of the 28-day bioaccumulation test are summarized in the following tables.

- Table 1: 4-Day *L. variegatus* Average Percent Survival
- Tables 2a and 2b: 28-Day *L. variegatus* Average Depurated Wet Weight

Water quality data for the overlying water for each sediment sample tested are summarized in Tables 3, 4, and 5 for the *L. variegatus* tests. Chain of Custody forms are provided in Appendix A. A detailed summary of the overlying water quality measurements is provided in Appendix B. The daily laboratory bench data sheets are kept on file at GLEC and are also provided on the enclosed compact diskettes. The 4-day percent survival and 28-day depurated wet weight of the *L. variegatus* are provided in Appendix C.

METHODS

The ten sediment samples were analyzed at our Traverse City, Michigan laboratory following the Great Lakes Dredged Material Testing and Evaluation Manual (GLTEM, 1998) and GLEC's written protocols which are based on the procedures outlined in the following USEPA and ASTM test methods: *Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates*, Second Edition (EPA/600/R-99/064); *Standard Test Methods for Measuring the Toxicity of Sediment Associated Contaminants with Freshwater Invertebrates* (ASTM 1706-95B); and GLEC Standard Operating Procedures (SOPs).

Summary of Test Procedures: 28-day *Lumbriculus variegatus* Whole Sediment Bioaccumulation Toxicity Test

4-Day Acute Whole Sediment Toxicity Screening Test

Prior to conducting a 28-day bioaccumulation study, 4-day *L. variegatus* acute toxicity screening tests were conducted. The 4-day *L. variegatus* acute toxicity screening tests were initiated on September 13, 2011 with each of the ten investigative sediment samples (DS-11-HIPU, DS-11-MOPU, DS-11-WOPU, DS-11-IIPU, DS-11-MU-2, DS-11-MU-4, DS-11-MU-3, DS-11-MU-1, DS-11-MU-5, and DS-11-MU-6) and a laboratory control sediment sample. The laboratory control sediment is a reference sediment collected locally from the Boardman River, a blue ribbon trout stream, located in the Pere Marquette State Forest.

Adult *L. variegatus* were used to initiate the 4-day whole sediment toxicity screening tests. *L. variegatus* were continuously exposed for 4 days to each of the ten sediment samples and to the laboratory control sediment.

Consistent with the GLTEM (1998), there were four replicate samples for each investigative sediment sample and the laboratory control sample; each *L. variegatus* replicate was initiated with 10 animals each. The *L. variegatus* were exposed in 470 mL glass test chambers, each containing 100 mL of whole sediment and 175 mL of overlying water.

Prior to adding the whole sediment to each test chamber, the control sediment and the ten investigative sediments were thoroughly homogenized until a uniform color and texture were achieved. Overlying water was supplied to each test chamber at least twice daily (once every 12-hour period) via a static-renewal water delivery system. The overlying water consisted of de-chlorinated municipal (Lake Michigan) water of moderate hardness (140 mg/L $CaCO_3$).

The test chambers were placed in a temperature controlled water bath under the specified conditions of 23 ± 1°C; photoperiod of 16 hours light and 8 hours dark; and ambient lighting. Temperature and the dissolved oxygen (DO) concentration of the overlying water in the test chambers were measured daily in two alternating replicates for each test sediment, and the results were recorded on the laboratory bench data sheets (Table 3).

Alkalinity, hardness, pH and total ammonia were measured at test initiation and at test termination (Appendix B). Observations of organism behavior were made daily in each test chamber and recorded on the laboratory bench data sheets. The number of organisms surviving was recorded at test termination (4 days) and is summarized in Table 1 (Appendix C).
A statistical analysis, using the program TOXCALC (version 5.0.32) and following statistical guidelines provided in GLTEM, EPA Method 600/R-99/064 and ASTM

(2000) Method 1706-95B, was used to compare the 4-day survival of the laboratory control sediment to the ten investigative site sediment data.

Prior to analysis, all percent survival data were transformed using an arc sine-square root transformation. All transformed data were then tested using either the homoscedastic or heteroscedastic t-tests, which are used for comparing a single treatment to a single control. The homoscedastic t-test assumes the data are normally distributed (Shapiro-Wilk Test or Kolmogorov D Test) and the variances are equal (F-test). If the variances are not equal, the data are analyzed using the heteroscedastic t-test. If the data are not normally distributed, then the data are analyzed using the nonparametric t-test (e.g., Steel's Many-One Rank Test or Wilcoxon Rank Sum Test with Bonferroni's Adjustment).

Analysis of the statistical data revealed that there was no statistically significant reduction ($p \geq 0.05$) in *L. variegatus* survival after 4-days of exposure in the ten investigative samples when compared to the laboratory control sediment (Table 1).

GLEC laboratory controls for the 4-day toxicity test met the minimum survival as specified in the GLTEM (1998). The GLTEM recommends that the survival of controls be greater than or equal to 70%.

28-Day Whole Sediment Bioaccumulation Tests

Adult *L. variegatus* were continuously exposed for 28-days to the ten investigative sediment samples and to the laboratory control sediment sample. The ten investigative sediment samples were divided into two groups of five and initiated on two separate days. On September 22, 2011 the 28-day *L. variegatus* bioaccumulation tests were initiated with the following investigative sediment samples: DS-11-MU-2, DS-11-MU-4, DS-11-MU-3, DS-11-HIPU, and DS-11-MOPU. The remaining five sediments; DS-11-WOPU, DS-11-IIPU, DS-MU-1, DS-11-MU-5, and DS-11-MU-6 were used to initiate the 28-day *L. variegatus* bioaccumulation tests on October 7, 2011.

The *L. variegatus* were exposed in 3 liter (L) glass tanks, each containing 1L of whole sediment and 2L of overlying water. Temperature-controlled overlying water was supplied to each test chamber via a continuous-renewal water delivery system at a rate of 5 mL/min (± 2 mL/min). All test chambers were aerated at approximately 100 bubbles per minute for the full duration of the test. The overlying water consisted of de-chlorinated municipal (Lake Michigan) water of moderate hardness (140 mg/L $CaCO_3$). Consistent with the test procedure, there were five replicate tanks for each sediment sample, each initiated with 30 grams of *L. variegatus*.

were five replicate tanks for each sediment sample, each initiated with 30 grams of *L. variegatus*.

The test chambers were placed in a temperature controlled room under the specified conditions of 23 ± 1°C; photoperiod of 16 hours light and 8 hours dark; and ambient lighting. Water temperature and dissolved oxygen were monitored daily in two alternating replicates for each test sample. Alkalinity, hardness, pH, dissolved oxygen (D.O.), conductivity, temperature, and total ammonia were measured at Day 0 (test initiation) and on days 7, 14, 21, and 27 (Tables 4 and 5 and Appendix B).

The overlying water quality measurements for the *L. variegatus* tests (Table 3 and 4, and Appendix B) were within the acceptable limits following the EPA testing protocol (i.e., daily mean temperatures were within 23 ± 1 °C; D.O. was maintained above 2.5 mg/L in the overlying water, and there were no variations greater than 50% in hardness, alkalinity and ammonia measurements within each test type, in the overlying water (Appendix B)). All test chambers were checked daily to assess organism behavior and no unusual observations were noted with the test organisms.

At test termination, the test organisms were recovered from each replicate chamber using reasonable effort until a minimum of 15 g of *L. variegatus* per replicate was recovered. The final total depurated wet weight (g) of surviving *L. variegatus* was also determined at test termination (Tables 2a and 2b, and Appendix C). After 28-days of exposure, the surviving *L. variegatus* were depurated for 24 hours in overlying water to purge all gut contents. After the depuration period, the surviving *L. variegatus* were weighed, then frozen in amber glass jars and shipped to two laboratories for tissue analysis, RTI Laboratories, Inc. (26 PCB congeners and % lipids) and Test America (209 PCB congeners and % lipids) (Appendix C).

If you have any questions, or if you would like additional information, please contact either myself or Dennis McCauley at (231) 941-2230, or John Barkach at (248) 538-0900. Thank you for the opportunity to provide this service to FutureNet Group, Inc. We look forward to continuing to provide environmental services to you in the future.

Sincerely,

Dennis McCauley for

Mailee W. Garton
Laboratory Coordinator

DH McCauley for

John H. Barkach
Senior Program Manager

MWG:mg

TABLE 1.

Comparison of the Number of Surviving Organisms per Replicate and Percent Survival Between the Laboratory Control Sediment and the Investigative Sediments (DS-11-HIPU, DS-11-MOPU, DS-11-WOPU, DS-11-IIPU, DS-11-MU-1, DS-11-MU-2, DS-11-MU-3, DS-11-MU-4, DS-11-MU-5, and DS-11-MU-6) for the U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation, *Lumbriculus variegatus* 4-Day Screening Survival Sediment Toxicity Tests conducted September 13-17, 2011.

	Number Test Organisms Surviving per Replicate[r]										
REPLICATE NUMBER	**Laboratory Control**	**DS-11-HIPU GLC# 9048**	**DS-11-MOPU GLC# 9052**	**DS-11-WOPU GLC# 9053**	**DS-11-IIPU GLC# 9054**	**DS-11-MU1 GLC# 9055**	**DS-11-MU2 GLC# 9042**	**DS-11-MU3 GLC# 9047**	**DS-11-MU4 GLC# 9043**	**DS-11-MU5 GLC# 9056**	**DS-11-MU6 GLC# 9057**
1	9	9	10	10	9	9	10	9	10	9	8
2	10	10	10	10	9	9	9	9	10	9	9
3	10	10	10	10	9	9	9	8	10	9	9
4	10	9	10	10	9	9	9	10	10	9	9
4-Day Screening Test Percent Survival	**97.5**	**95.0**	**100.0**	**100.0**	**90.0**	**90.0**	**92.5**	**90.0**	**100.0**	**90.0**	**87.5**

[r] Replicates initiated with 10 organisms each

TABLE 2a. **Comparison of Average Wet Depurated Weight (g) Between the Laboratory Control sediments and the Investigative Sediments (DS-11-HIPU, DS-11-MOPU, DS-11-MU2, DS-11-MU3, and DS-11-MU4) for the U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation, *Lumbriculus variegatus* 28-Day Bioaccumulation Whole Sediment Toxicity Tests conducted September 22 - October 20, 2011.**

REPLICATE NUMBER	Laboratory Control	DS-11-HIPU GLC# 9048	DS-11-MOPU GLC# 9052	DS-11-MU2 GLC# 9042	DS-11-MU3 GLC# 9047	DS-11-MU4 GLC# 9043
1	16.68	18.55	21.56	18.98	19.31	17.34
2	14.22	15.65	19.63	18.57	18.32	18.58
3	15.93	19.49	19.48	23.81	19.05	18.93
4	14.83	21.00	18.26	18.64	20.74	16.26
5	18.44	21.28	16.51	17.15	17.86	16.36
Average Wet Depurated Weight (g)	**16.0**	**19.2**	**19.1**	**19.4**	**19.1**	**17.5**

Note: Initiated 28-day test with 30 grams of *L. variegatus* per replicate.

TABLE 2b. **Comparison of Average Wet Depurated Weight (g) Between the Laboratory Control Sediment and the Investigative Sediments (DS-11-WOPU, DS-11-IIPU, DS 11-MU1, DS-11-MU5, and DS-11-MU6) for the U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation, *Lumbriculus variegatus* 28-Day Bioaccumulation Whole Sediment Toxicity Tests conducted October 7 - November 03, 2011.**

REPLICATE NUMBER	Laboratory Control	DS-11-WOPU GLC# 9053	DS-11-IIPU GLC# 9054	DS-11-MU1 GLC# 9055	DS-11-MU5 GLC# 9056	DS-11-MU6 GLC# 9057
1	17.81	16.12	21.50	19.13	18.46	17.76
2	18.14	18.68	17.08	22.74	18.59	23.91
3	17.70	18.87	18.51	21.06	20.65	21.37
4	16.82	18.53	17.86	17.20	17.16	19.83
5	17.87	18.91	16.55	20.81	18.98	18.82
Average Wet Depurated Weight (g)	**17.7**	**18.2**	**18.3**	**20.2**	**18.8**	**20.3**

Note: Initiated 28-day test with 30 grams of *L. variegatus* per replicate.

GLEC

TABLE 3. Summary of Mean Water Quality Parameters of Test Exposure Water Collected Prior to Renewal for U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation, *Lumbriculus variegatus* 10-Day Screening Survival Sediment Toxicity Tests Conducted September 13-17, 2011.

Sample ID GLC#	Temperature (°C) (range) n=10	pH (s.u.) (range) n=4	Dissolved Oxygen (mg/L) (range) n=10	Specific Conductivity (µmhos/cm) (range) n=4	Hardness (CaCO3 mg/L) (range) n=2	Alkalinity (CaCO3 mg/L) (range) n=2	Ammonia (mg/L as N) (range) n=2
Laboratory Control	**22.7** (22.6-22.9)	**7.81** (7.78-7.89)	**5.2** (4.6-5.9)	**331** (323-338)	**144** (144-144)	**121** (116-126)	**0.55** (0.10-0.99)
DS-11-HIPU GLC# 9048	**22.6** (22.1-22.8)	**7.62** (7.54-7.67)	**5.7** (5.1-5.9)	**302** (296-310)	**130** (124-136)	**105** (98-112)	**0.28** (0.03-0.52)
DS-11-MOPU GLC# 9052	**22.6** (22.1-22.8)	**7.77** (7.71-7.86)	**7.0** (6.8-7.1)	**295** (287-304)	**132** (124-140)	**105** (100-110)	**0.08** (0.01-0.15)
DS-11-WOPU GLC# 9053	**22.7** (22.3-22.9)	**7.96** (7.93-8.03)	**7.4** (7.1-7.5)	**301** (292-307)	**136** (132-140)	**105** (104-106)	**0.08** (0.00-0.15)
DS-11-IIPU GLC# 9054	**22.6** (22.2-22.8)	**7.51** (7.44-7.56)	**5.6** (5.1-5.7)	**296** (292-301)	**124** (116-132)	**98** (92-104)	**0.58** (0.16-1.00)
DS-11-MU1 GLC# 9055	**22.6** (22.2-22.8)	**7.58** (7.43-7.68)	**6.0** (5.6-6.4)	**295** (291-299)	**132** (124-140)	**101** (96-106)	**0.29** (0.00-0.58)
DS-11-MU2 GLC# 9042	**22.6** (22.3-22.8)	**7.58** (7.51-7.66)	**6.2** (6.0-6.5)	**316** (308-323)	**138** (132-144)	**109** (104-114)	**1.07** (0.65-1.48)
DS-11-MU3 GLC# 9047	**22.7** (22.5-22.8)	**7.76** (7.73-7.78)	**7.0** (6.6-7.2)	**295** (294-296)	**142** (120-164)	**94** (94-94)	**0.17** (0.00-0.33)
DS-11-MU4 GLC# 9043	**22.7** (22.5-22.8)	**7.75** (7.72-7.77)	**7.0** (6.5-7.3)	**302** (300-303)	**146** (128-164)	**97** (94-100)	**0.24** (0.00-0.47)
DS-11-MU5 GLC# 9056	**22.7** (22.4-22.8)	**7.55** (7.53-7.58)	**5.8** (5.5-6.2)	**297** (294-302)	**134** (124-144)	**99** (92-106)	**0.52** (0.06-0.97)
DS-11-MU6 GLC# 9057	**22.6** (22.2-22.8)	**7.73** (7.69-7.79)	**6.5** (6.0-6.8)	**325** (321-330)	**142** (136-148)	**112** (112-112)	**0.42** (0.00-0.83)

TABLE 4. Summary of Mean Water Quality Parameters of Test Exposure Water Collected Prior to Renewal for U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation, *Lumbriculus variegatus* 28-Day Bioaccumulation Whole Sediment Toxicity Tests conducted September 22 - October 20, 2011.

Sample ID GLC#	Temperature (°C) (range) n=59	pH (s.u.) (range) n=13, n=12 for 9047, 9048, & 9052	Dissolved Oxygen (mg/L) (range) n=59	Flows (mL/min) (range) n=148, n= 142 for Control, n=145 for 9048, n=147 for 9052, n=150 for 9042	Specific Conductivity (µmhos/cm) (range) n=13, n=12 for 9043	Hardness (CaCO3 mg/L) (range) n=6, n=7 for 9048 & 9052, n=8 for 9047	Alkalinity (CaCO3 mg/L) (range) n=6, n=7 for 9048 & 9052, n=8 for 9047	Ammonia (mg/L as N) (range) n=6, n=7 for 9042, 9047, 9048 & 9052
Laboratory Control	**22.9** (22.0-23.6)	**8.02** (7.85-8.28)	**7.1** (5.9-8.2)	**4.7** (3.5-6.0)	**319** (312-331)	**141** (128-152)	**110** (106-114)	**0.84** (0.35-1.18)
DS-11-HIPU GLC# 9048	**23.3** (22.1-24.2)	**8.02** (7.88-8.26)	**7.1** (4.4-8.2)	**5.2** (3.9-6.4)	**302** (296-308)	**129** (112-140)	**99** (94-104)	**0.33** (0.02-0.95)
DS-11-MOPU GLC# 9052	**23.3** (22.1-24.1)	**8.09** (7.93-8.33)	**7.6** (6.3-8.4)	**4.4** (2.8-11.8)	**307** (299-313)	**129** (124-136)	**106** (102-116)	**0.34** (0.14-0.74)
DS-11-MU2 GLC# 9042	**23.1** (22.0-24.0)	**8.00** (7.83-8.22)	**7.1** (4.4-8.3)	**3.9** (2.3-6.2)	**307** (297-316)	**133** (120-148)	**102** (100-106)	**0.48** (0.06-1.04)
DS-11-MU3 GLC# 9047	**23.3** (22.1-24.0)	**8.08** (7.96-8.34)	**7.6** (6.2-8.5)	**4.9** (2.4-6.4)	**306** (301-314)	**132** (124-148)	**103** (100-106)	**0.39** (0.03-0.85)
DS-11-MU4 GLC# 9043	**23.2** (22.2-24.0)	**8.07** (7.97-8.30)	**7.6** (6.7-8.4)	**4.6** (2.4-6.2)	**308** (303-317)	**130** (116-136)	**103** (98-106)	**0.45** (0.01-0.99)

GLEC

TABLE 5. Summary of Mean Water Quality Parameters of Test Exposure Water Collected Prior to Renewal for U. S. Army Corps of Engineers, Duluth-Superior, MN-WI Open Water Evaluation, *Lumbriculus variegatus* 28-Day Bioaccumulation Whole Sediment Toxicity Tests conducted October 6 - November 3, 2011.

Sample ID GLC#	Temperature (°C) (range) n=61, n=59 for 9055	pH (s.u.) (range) n=12	Dissolved Oxygen (mg/L) (range) n=61	Flows (mL/min) (range) n=147, n=146 for Control, n=145 for 9055 & 9056	Specific Conductivity (µmhos/cm) (range) n=12, n=11 for 9056	Hardness (CaCO3 mg/L) (range) n=6, n=7 for 9056 & 9057, n=8 for 9053	Alkalinity (CaCO3 mg/L) (range) n=6, n=8 for 9053 & 9056	Ammonia (mg/L as N) (range) n=6, n=7 for 9053, 9054, & 9057
Laboratory Control	**23.3** (22.1-24.2)	**8.00** (7.71-8.21)	**7.3** (4.1-8.1)	**4.4** (2.2-6.0)	**318** (306-332)	**135** (124-140)	**110** (104-116)	**0.62** (0.00-1.62)
DS-11-WOPU GLC# 9053	**23.4** (22.2-24.7)	**8.09** (7.74-8.32)	**7.4** (5.1-8.2)	**4.5** (2.5-6.8)	**310** (305-327)	**133** (128-140)	**109** (102-118)	**0.48** (0.00-1.47)
DS-11-IIPU GLC# 9054	**23.2** (22.2-24.2)	**8.06** (7.80-8.25)	**7.4** (3.9-8.2)	**4.6** (2.6-7.0)	**304** (293-320)	**130** (124-144)	**98** (92-102)	**0.36** (0.00-1.22)
DS-11-MU1 GLC# 9055	**22.9** (21.8-24.1)	**8.06** (7.87-8.30)	**7.4** (6.5-8.9)	**4.4** (2.8-6.0)	**306** (301-323)	**127** (116-140)	**102** (98-106)	**0.30** (0.00-1.02)
DS-11-MU5 GLC# 9056	**23.0** (22.0-24.5)	**8.02** (7.78-8.27)	**7.1** (3.9-8.1)	**5.5** (3.2-6.8)	**308** (301-328)	**131** (120-144)	**102** (98-108)	**0.23** (0.00-0.89)
DS-11-MU6 GLC# 9057	**23.4** (22.3-24.6)	**8.05** (7.80-8.27)	**7.4** (4.4-8.2)	**4.7** (2.2-8.0)	**309** (300-316)	**131** (120-148)	**106** (102-114)	**0.11** (0.00-0.38)

Appendix A
Chain of Custodies

CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

739 Hastings St.
Traverse City, MI 49686
Phone: 231-941-2230
Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-16-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Elutriate Phosphorus	Cerio-daphnia 3-brood	2 day tox	Fat head minnow	4 day tox										
							Check the requested analysis (see definitions below)														
143	DS-11 MU4	8-15-11 8-16-11	1.2 gal	bucket	Sediment Elutriate	ice	X		X		X	Labeled		MU-11-04							
142	DS-11 MU2	8-15-11 8-16-11	1.2 gal	bucket	Sediment Elutriate	ice	X		X		X										

Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1. [signature]	8/16-11 12:00	[signature]	8/17/11 10:00	1.6/2.8
2.				

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

CHAIN OF CUSTODY RECORD
(To be completed and submitted with samples)

Page 1 of 1

739 Hastings St.
Traverse City, MI 49686
Phone: 231-941-2230
Fax: 231-941-2240
www.glec.com

Facility: FutureNet Group
Location: Duluth MN / Superior WI

Date: 8-16-11
Contact Person: Mariah Hope
Email Address: mariahh@futurenetgroup.com
Phone Number: 313-544-7117
Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Chironomus Tentans	10-Day Toxicity	Hyalella Azteca	10 Day Toxicity	Lumbriculus Variegatus	Bio-accumulation 28 Day Test									
143	DS-11 MU-4	8-15-11 → 8-16-11	2.5 gal	bucket	Sediment	1 a		X		X		X	Labeled MU-11-04								
142	DS-11 MU2	8-15-11 8-16-11	2.5 gal	bucket	Sediment	1 a		X		X		X									

Shipper: 1. _____ 2. _____
Date/Time: _____ _____
Receiver: [signature] [signature]
Date/Time: 8/17/11 10:00
Temperature: 0.4/1.1

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
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Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-17-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Lumbriculus 28-day	Chironomus Tentans 10 day	Hyalella Azteca 10 day	Ceriodaphnia Dubia 2 day	Pot Head Minnow 4 day			
17	DS-11 MD3	8-16-8-17 1030	3.5 gal	bucket	Sediment	Ice	X	X	X	X	X			
6	DS-11-MD3	shipped yesterday			water	Ice				X	X			

Shipper: 1. Mariah Hope 2.

Date/Time: 8-17-11 1800

Receiver: A. Delaurene

Date/Time: 8/18/11 1030

Temperature: 1.1

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
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CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

Page 1 of 1

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Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-17-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

Cell: 313-333-0147

Check the requested analysis (see definitions below)

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Lumbriculus Variegatus 28 day	Chironomus Tentans 10 day	Hyalella Azteca 10 day										
18	DS-11 H7PU	8-17-11 1300	2.5 gal	bucket	Sediment	Ice		X		X		X							

Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1. [signature]	8-17-11 1800	[signature]	8/18/11	0.2
2.				

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

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Phone: 231-941-2230
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www.glec.com

Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date: 8-18-11

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

C#	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Lumbriculus Variegatus 28 day biotest	Chironomus tentans 10 day stat	Hyalella Azteca 10 day stat										
52	DS-11-MOPU	8-18-11 940	2.5 gal	bucket	Sand - Lake Superior Sediment	Ice	X	X	X										
					Mix thoroughly in lab														
53	DS-11-WOPU	8-18-11 1400	2.5 gal	bucket	Lake Superior Sediment	Ice	X	X	X										
					Mix thoroughly	in lab													
54	DS-11-FIPU	8-18-11 1900	2.5 gal	bucket	St. Louis River Sediment	Ice	X	X	X										
					Mix thoroughly	in lab													

Check the requested analysis (see definitions below)

Shipper:	Date/Time:	Receiver:	Date/Time:	Temperature:
1. [signature]	8-19-11 1100	[signature]	8/20/11 1000	9052 1.0
2.				9053 0.8
				9054 0.8

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

CHAIN OF CUSTODY RECORD

(To be completed and submitted with samples)

Page _____ of _____

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Traverse City, MI 49686
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Facility: FutureNet Group

Location: Duluth MN / Superior WI

Date:

Contact Person: Mariah Hope

Email Address: mariahh@futurenetgroup.com

Phone Number: 313-544-7117

Collector: Mariah Hope

	Bottle ID	Date / Time of Sample	Volume Collected	Type of Sample Container	Sample Description (Site information / sample type)	Preservation	Check the requested analysis (see definitions below): Lumbriculus Variegatus	28 day bio	Chironomus Tentans	10 day Toxicity	Hyalella Azteca	10 day	Elutriate Prep	Fathead Minnow	4 day Elutriate TOX	Ceriodaphnia Dubia	Elutriate 7 day Toxicity				
056	DS-11-MU5 8-20-11 800	3.5 gal	bucket	Sediment Duluth harbor	Ice			X		X		X	X		X		X				
057	DS-11-MU6 8-20 900	3.5 gal	bucket	Sediment composite	Ice			X		X		X	X		X		X				
055	DS-11-MU1 8-20 1200	3.5 gal	bucket	Sediment composite	Ice			X		X		X	X		X		X				
058	DS-11-MU5 8-20-11 735	3.5 gal	tube	Water Elutriate	Ice								X		X		X				

Shipper:
1. [signature]
2. _____

Date/Time:
8-20 1302

Receiver:
[signature]
[signature]

Date/Time:
8/20 15:00
8/23/11 10:00

Temperature:
0.1 – 1.3

Definitions

BOD_5 = Biochemical Oxygen Demand-5 day
NH_3-N = Ammonia-Nitrogen
NO_3/NO_2-N = Nitrate/Nitrite-Nitrogen
TDS = Total Dissolve Solids
TKN = Total Kjeldahl Nitrogen
TP = Total Phosphorus
TSS = Total Suspended Solids

Abbreviations for other frequently requested analyses

NO_2-N = Nitrite Nitrogen
NO_3-N = Nitrate Nitrogen
Total N = Total Nitrogen
SRP = Soluble Reactive Phosphorus

Sample
CHECK-IN FORM

CLIENT: FutureNet USACOE PROJECT NUMBER: 5077-00

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/17/11	8/17/11	8/17/11	DS	INITIALS
SAMPLE ID	DS-11-MU3	DS-11-MU4	DS-11-MU2		
TYPE (W=water, SED=sediment, M=material)	Sed	Sed	WATER		
COLLECTION (G=grab, C=composite)	G	G	G		
GLC NUMBER	9042	9043	9044		
COLLECTION DATE (Time Interval)	8/15-16/11	8/15-16/11	8/15/11 18:00		
TEMPERATURE (≤6 degrees Celsius[1])	1.6/1.1	0.6 2.8	0.4/0.6 ~~+2~~ DS 8/17		
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	mud NO odor	Sandy No odor	Brown NO odor		

[1] If out of range see project manager

Elutriate

SAMPLE CHEMISTRY AT TEST TEMPERATURES KN 8/26/11

GLC NUMBER	9042/9044	9043/9045	9044	DS	INITIALS
TEMPERATURE (°C)	25.2	25.3	25.0		
pH (s.u.)	6.97	7.18	7.22		
DISSOLVED OXYGEN (mg/L)	5.8	8.5	10.2		
CONDUCTIVITY (μmhos/cm)	205.5	171.5	160.3		
HARDNESS (mg/L)	68	76	40		
ALKALINITY (mg/L)	72	58	60		
TOTAL CHLORINE (mg/L)*	NM	NM			
TOTAL AMMONIA (mg/L)* as N	6 quick ✓	2 quick ✓			

*Check with project manager to see if necessary.
NM: Not Measured, ND: Non-detect

9044 8/26/11 KN

9044 8/26/11 *

Hardness: GLC#	Hardness: GLC#	Hardness: GLC#	Alkalinity: GLC#	Alkalinity: GLC#	Alkalinity: GLC#
End mL: 43.2	End mL: 3.6	End mL: 1.9	End mL: 2.9	End mL: 6.5	End mL: 50.1 | 16.1
Start mL: 41.2	Start mL: 1.9	Start mL: 0.0	Start mL: 0.0	Start mL: 2.9	Start mL: 47.7 | 15.5
mL used: 2.0	mL used: 1.7	mL used: 1.9	mL used: 2.9	mL used: 3.6	mL used: 2.4 + .6 =
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume: 3.0

Sample
CHECK-IN FORM

CLIENT: Future Net Group PROJECT NUMBER: 5077-01

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/18/11	8/18/11		AD	INITIALS
SAMPLE ID	DS-11-MU3	DS-11-HIPU			
TYPE (W=water, SED=sediment, M=material)	S	S			
COLLECTION (G=grab, C=composite)	G	G			
GLC NUMBER	9047	9048			
COLLECTION DATE (Time Interval)	8/16-8/17/11 1030	8/17/11 1300			
TEMPERATURE (≤6 degrees Celsius[1])	1.1	0.2			
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	Mud, no odor	Mud, no odor			

[1] If out of range see project manager

SAMPLE CHEMISTRY AT TEST TEMPERATURES

GLC NUMBER	~~9047~~				INITIALS
TEMPERATURE (°C)	NM 9/21/11				
pH (s.u.)					
DISSOLVED OXYGEN (mg/L)					
CONDUCTIVITY (μmhos/cm)					
HARDNESS (mg/L)					
ALKALINITY (mg/L)					
TOTAL CHLORINE (mg/L)*					
TOTAL AMMONIA (mg/L)* as N					

*Check with project manager to see if necessary.
NM: Not Measured, ND: Non-detect

Hardness: GLC#	Hardness: GLC#	Hardness: GLC#	Alkalinity: GLC#	Alkalinity: GLC#	Alkalinity: GLC#
End mL:	End mL:	End mL:	End mL:	End mL:	End mL:
Start mL:	Start mL:	Start mL:	Start mL:	Start mL:	Start mL:
mL used:	mL used:	mL used:	mL used:	mL used:	mL used:
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:

Sample
CHECK-IN FORM

CLIENT: US ACE PROJECT NUMBER: SC 01

INITIAL SAMPLE CHEMISTRY (UPON RECEIPT)

DATE RECEIVED	8/23/11	8/23/11	8/23/11	8/23/11	D.S
SAMPLE ID	DS-11-MU1	DS-11-MU5	-DS-11-MU6	DS-11-MU5	
TYPE (W=water, SED=sediment, M=material)	Sed	Sed	Sed	Water	
COLLECTION (G=grab, C=composite)	G	G	G	G	
GLC NUMBER	9055	9056	9057	9058	INITIALS
COLLECTION DATE (Time Interval)	8/20/11 12:00	8/20/11 8:00	8/20/11 9:00	8/20/11 7:38	
TEMPERATURE (≤6 degrees Celsius[1])	0.5-1.3	.5-1.3	0.1-1.1	1.1-1.3	
SAMPLE DESCRIPTION / OBSERVATIONS (clarity, color, odor)	Muddy Odorless	Muddy Odorless	Sandy/Muddy Odorless	Brown Odorless	

[1] If out of range see project manager

SAMPLE CHEMISTRY AT TEST TEMPERATURES

	Elutriate	Elutriate		8/26/11 KN	
GLC NUMBER	9055/9051	9056/9058 DS		9058	I
TEMPERATURE (°C)	24.7	24.8		25.0	
pH (s.u.)	7.16	6.87		7.63	
DISSOLVED OXYGEN (mg/L)	5.6	6.5		9.5	INITIALS
CONDUCTIVITY (μmhos/cm)	172.9	183.4		171.4	
HARDNESS (mg/L)	68	56		76	
ALKALINITY (mg/L)	70	66		62	
TOTAL CHLORINE (mg/L)*	NM	NM			
TOTAL AMMONIA (mg/L)* as N					

*Check with project manager to see if necessary.

NM: Not Measured, ND: Non-detect

9051/9055 Hardness: GLC#	9056/9058 Hardness: GLC# 56	9058 Hardness: GLC#	9056/9058 Alkalinity: GLC#	9051/9055 Alkalinity: GLC#	9058 Alkalinity: GLC#
End mL: 13.2	End mL: [illegible].2	End mL: 41.2	End mL: 41.8	End mL: 45.3	End mL: 47.7
Start mL: 11.5	Start mL: 9.6	Start mL: 39.3	Start mL: 38.5	Start mL: 41.8	Start mL: 44.6
mL used: DS 8/30/11 ~~1.8~~ 1.7	mL used: 1.4	mL used: 1.9	mL used: 3.3	mL used: 3.5	mL used: 3.1
Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:	Sample Volume:

From: (313) 544-7117
Mariah Hope
FutureNet Group, Inc.
12801 Auburn Street

Detroit, MI 48223

Origin ID: DETA

FedEx Express

J11201104290225

Ship Date: 15AUG11
ActWgt: 1.0 LB
CAD: 5304009/INET3180

Delivery Address Bar Code

Ref # 11652-0040
Invoice #
PO #
Dept #

SHIP TO: (231) 941-2230 BILL SENDER

Great Lakes Environmental Center

739 HASTINGS ST

TRAVERSE CITY, MI 49686

TUE - 16 AUG A4
PRIORITY OVERNIGHT

TRK# 7950 7649 4237
0201

49686
MI-US
GRR

68 TVCA

CUSTODY SEAL
DATE 8-17-11
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900

50FG1/EEE7/F5F4

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic valueof the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $500, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

From: (313) 544-7117
Mariah Hope
FutureNet Group, Inc.
12801 Auburn Street

Detroit, MI 48223

Origin ID: DETA

FedEx Express

J11201104290225

Ship Date: 15AUG11
ActWgt: 1.0 LB
CAD: 5304009/INET3180

Delivery Address Bar Code

Ref # 11652-0040
Invoice #
PO #
Dept #

SHIP TO: (231) 941-2230 BILL SENDER

Great Lakes Environmental Center

739 HASTINGS ST

TRAVERSE CITY, MI 49686

TUE - 16 AUG A4
PRIORITY OVERNIGHT

TRK# 7950 7638 3476
0201

68 T CA

49686
MI-US
GRR

50FG1/EEE7/F5F4

button o nt your label to your laser or inkjet printer.
e printed pa ntal line.
Place labe and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warni printed origina labe for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic valueof the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $500 jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict its, see current FedEx Service Guide.

CUSTODY SEAL
DATE 8-17-11
SIGNATURE

QEC
Quality Environmental Containers
800-255-3950 • 304-255-3900

From: (313) 544-7117
Mariah Hope
FutureNet Group, Inc.
12801 Auburn Street

Detroit, MI 48223

Origin ID: DETA

FedEx Express

J11201104290225

Ship Date: 23AUG11
ActWgt: 60.0 LB
CAD: 5304009/INET3180

Delivery Address Bar Code

Ref # 11652-0040
Invoice #
PO #
Dept #

SHIP TO: (231) 941-2230 BILL SENDER

Great Lakes Environmental Center

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Appendix B

Overlying Water Quality Summaries

- 4-Day *Lumbriculus variegatus*
- 28-day *Lumbriculus variegatus*

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 ***Lumbriculus variegatus 4-day screening survival 09/13-17/11***

Data Entry

Date	Initials	Data Entered
9/21/2011	eb	days 0-4

Data QC

Date	Initials	Data QC'd
9/28/2011	DS	ALL

Data QC 10%

10/11/2011	NS	ALL

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 USACOE Duluth- *Lumbriculus variegates* 4 Day Survival 09/13/11-09/17/11

GLC: Con **Sample ID**: Laboratory Control

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result code
13-Sep-11	0	22.6	7.78	5.5	329.0	144	116	0.99	
		22.6	7.79	5.9	323.0				
14-Sep-11	1	22.7		5.1					
		22.7		5.9					
15-Sep-11	2	22.6		4.8					
		22.6		5.2					
16-Sep-11	3	22.9	7.78	4.6	338.0	144	126	0.10	
		22.8	7.89	5.4	334.0				
17-Sep-11	4	22.8		5.1					
		22.8		4.7					
MEAN		**22.7**	**7.81**	**5.2**	**331**	**144**	**121**	**0.55**	
N=		**10**	**4**	**10**	**4**	**2**	**2**	**2**	
Max #		**22.9**	**7.89**	**5.9**	**338**	**144**	**126**	**0.99**	
Min #		**22.6**	**7.78**	**4.6**	**323**	**144**	**116**	**0.10**	

4 Day Stats

Replicate	1	2	3	4
# Surviving	9	10	10	10

% Survival 97.5

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 USACOE Duluth- ***Lumbriculus variegates*** **4 Day Survival 09/13/11-09/17/11**
GLC: 9048 **Sample ID:** DS-11-HIPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result code
13-Sep-11	0	22.5	7.67	5.9	310.0	136	112	0.52	
		22.6	7.66	5.8	307.0				
14-Sep-11	1	22.7		5.9					
		22.7		5.9					
15-Sep-11	2	22.7		5.5					
		22.7		5.1					
16-Sep-11	3	22.1	7.61	5.7	296.0	124	98	0.03	U
		22.1	7.54	5.5	296.9				
17-Sep-11	4	22.8		5.8					
		22.8		5.6					
MEAN		**22.6**	**7.62**	**5.7**	**302**	**130**	**105**	**0.28**	
N=		**10**	**4**	**10**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.67**	**5.9**	**310**	**136**	**112**	**0.52**	
Min #		**22.1**	**7.54**	**5.1**	**296**	**124**	**98**	**0.03**	

4 Day Stats

Replicate	1	2	3	4
# Surviving	9	10	10	9

% Survival 95.0

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 USACOE Duluth- ***Lumbriculus variegates*** **4 Day Survival 09/13/11-09/17/11**

GLC: 9052 **Sample ID**: DS-11-MOPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result code
13-Sep-11	0	22.6	7.71	7.0	289.0	140	110	0.15	
		22.6	7.72	7.1	287.1				
14-Sep-11	1	22.7		7.1					
		22.7		7.0					
15-Sep-11	2	22.7		6.9					
		22.7		6.8					
16-Sep-11	3	22.2	7.79	7.0	301.0	124	100	0.01	U
		22.1	7.86	7.1	304.0				
17-Sep-11	4	22.8		7.0					
		22.8		7.1					
MEAN		**22.6**	**7.77**	**7.0**	**295**	**132**	**105**	**0.08**	
N=		**10**	**4**	**10**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.86**	**7.1**	**304**	**140**	**110**	**0.15**	
Min #		**22.1**	**7.71**	**6.8**	**287**	**124**	**100**	**0.01**	

4 Day Stats

Replicate	1	2	3	4
# Surviving	10	10	10	10

% Survival 100.0

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 USACOE Duluth- *Lumbriculus variegates* 4 Day Survival 09/13/11-09/17/11
GLC: 9053 **Sample ID:** DS-11-WOPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result code
13-Sep-11	0	22.7	7.95	7.4	292.4	140	106	0.15	
		22.8	7.93	7.4	299.5				
14-Sep-11	1	22.7		7.1					
		22.7		7.4					
15-Sep-11	2	22.7		7.5					
		22.7		7.3					
16-Sep-11	3	22.3	7.94	7.3	307.0	132	104	0.00	U
		22.3	8.03	7.3	304.0				
17-Sep-11	4	22.8		7.5					
		22.9		7.4					
MEAN		**22.7**	**7.96**	**7.4**	**301**	**136**	**105**	**0.08**	
N=		**10**	**4**	**10**	**4**	**2**	**2**	**2**	
Max #		**22.9**	**8.03**	**7.5**	**307**	**140**	**106**	**0.15**	
Min #		**22.3**	**7.93**	**7.1**	**292**	**132**	**104**	**0.00**	

4 Day Stats

Replicate	1	2	3	4
# Surviving	10	10	10	10

% Survival 100.0

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 USACOE Duluth- *Lumbriculus variegates* 4 Day Survival 09/13/11-09/17/11
GLC: 9054 **Sample ID**: DS-11-IIPU

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result code
13-Sep-11	0	22.7	7.50	5.7	301.0	132	104	1.00	
		22.7	7.44	5.6	299.6				
14-Sep-11	1	22.7		5.7					
		22.7		5.7					
15-Sep-11	2	22.7		5.1					
		22.7		5.4					
16-Sep-11	3	22.2	7.56	5.7	291.7	116	92	0.16	
		22.2	7.52	5.6	291.7				
17-Sep-11	4	22.8		5.5					
		22.8		5.7					
MEAN		**22.6**	**7.51**	**5.6**	**296**	**124**	**98**	**0.58**	
N=		**10**	**4**	**10**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.56**	**5.7**	**301**	**132**	**104**	**1.00**	
Min #		**22.2**	**7.44**	**5.1**	**292**	**116**	**92**	**0.16**	

4 Day Stats

Replicate	1	2	3	4
# Surviving	9	9	9	9

% Survival 90.0

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 USACOE Duluth- *Lumbriculus variegates* 4 Day Survival 09/13/11-09/17/11

GLC: 9055 **Sample ID**: DS-11-MU1

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result code
13-Sep-11	0	22.6	7.43	6.1	296.6	140	106	0.58	
		22.6	7.55	6.3	298.8				
14-Sep-11	1	22.7		6.1					
		22.7		6.2					
15-Sep-11	2	22.6		5.6					
		22.6		5.8					
16-Sep-11	3	22.2	7.66	6.4	290.9	124	96	0.00	u
		22.3	7.68	5.9	293.9				
17-Sep-11	4	22.8		6.0					
		22.8		6.0					
MEAN		**22.6**	**7.58**	**6.0**	**295**	**132**	**101**	**0.29**	
N=		**10**	**4**	**10**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.68**	**6.4**	**299**	**140**	**106**	**0.58**	
Min #		**22.2**	**7.43**	**5.6**	**291**	**124**	**96**	**0.00**	

4 Day Stats

Replicate	1	2	3	4
# Surviving	9	9	9	9

% Survival 90.0

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 USACOE Duluth- ***Lumbriculus variegates*** **4 Day Survival 09/13/11-09/17/11**

GLC: 9042 **Sample ID:** DS-11-MU2

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result code
13-Sep-11	0	22.6	7.51	6.1	323.0	144	114	1.48	
		22.7	7.53	6.1	322.0				
14-Sep-11	1	22.7		6.4					
		22.7		6.5					
15-Sep-11	2	22.6		6.2					
		22.6		6.0					
16-Sep-11	3	22.3	7.66	6.2	308.0	132	104	0.65	
		22.4	7.63	6.2	309.0				
17-Sep-11	4	22.8		6.0					
		22.8		6.1					
MEAN		**22.6**	**7.58**	**6.2**	**316**	**138**	**109**	**1.07**	
N=		**10**	**4**	**10**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.66**	**6.5**	**323**	**144**	**114**	**1.48**	
Min #		**22.3**	**7.51**	**6.0**	**308**	**132**	**104**	**0.65**	

4 Day Stats

Replicate	1	2	3	4
# Surviving	10	9	9	9

% Survival 92.5

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 USACOE Duluth- *Lumbriculus variegates* 4 Day Survival 09/13/11-09/17/11

GLC: 9047 **Sample ID:** DS-11-MU3

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result code
13-Sep-11	0	22.7	7.76	7.0	294.5	164	94	0.33	
		22.7	7.75	7.1	294.4				
14-Sep-11	1	22.7		7.1					
		22.7		7.1					
15-Sep-11	2	22.6		6.6					
		22.6		6.7					
16-Sep-11	3	22.6	7.73	7.2	296.4	120	94	0.00	U
		22.5	7.78	6.9	293.8				
17-Sep-11	4	22.8		7.2					
		22.8		7.2					
MEAN		**22.7**	**7.76**	**7.0**	**295**	**142**	**94**	**0.17**	
N=		**10**	**4**	**10**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.78**	**7.2**	**296**	**164**	**94**	**0.33**	
Min #		**22.5**	**7.73**	**6.6**	**294**	**120**	**94**	**0.00**	

4 Day Stats

Replicate	1	2	3	4
# Surviving	9	9	8	10

% Survival 90.0

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 USACOE Duluth- *Lumbriculus variegates* 4 Day Survival 09/13/11-09/17/11

GLC: 9043 **Sample ID:** DS-11-MU4

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result code
13-Sep-11	0	22.6	7.77	7.2	303.0	164	100	0.47	
		22.7	7.74	7.3	303.0				
14-Sep-11	1	22.7		6.9					
		22.7		6.9					
15-Sep-11	2	22.7		6.5					
		22.7		6.5					
16-Sep-11	3	22.5	7.72	7.0	300.0	128	94	0.00	U
		22.5	7.75	7.2	301.0				
17-Sep-11	4	22.8		7.1					
		22.8		7.2					
MEAN		**22.7**	**7.75**	**7.0**	**302**	**146**	**97**	**0.24**	
N=		**10**	**4**	**10**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.77**	**7.3**	**303**	**164**	**100**	**0.47**	
Min #		**22.5**	**7.72**	**6.5**	**300**	**128**	**94**	**0.00**	

4 Day Stats

Replicate	1	2	3	4
# Surviving	10	10	10	10

% Survival 100.0

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 USACOE Duluth- *Lumbriculus variegates* 4 Day Survival 09/13/11-09/17/11
GLC: 9056 **Sample ID:** DS-11-MU5

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result code
13-Sep-11	0	22.7	7.55	6.0	300.0	144	106	0.97	
		22.7	7.55	6.0	302.0				
14-Sep-11	1	22.7		6.2					
		22.7		6.2					
15-Sep-11	2	22.7		5.5					
		22.7		5.7					
16-Sep-11	3	22.4	7.53	5.7	294.0	124	92	0.06	J
		22.5	7.58	5.7	293.9				
17-Sep-11	4	22.8		5.7					
		22.8		5.7					
MEAN		**22.7**	**7.55**	**5.8**	**297**	**134**	**99**	**0.52**	
N=		**10**	**4**	**10**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.58**	**6.2**	**302**	**144**	**106**	**0.97**	
Min #		**22.4**	**7.53**	**5.5**	**294**	**124**	**92**	**0.06**	

4 Day Stats

Replicate	1	2	3	4
# Surviving	9	9	9	9

% Survival 90.0

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Number: 5077-01 USACOE Duluth- *Lumbriculus variegates* 4 Day Survival 09/13/11-09/17/11
GLC: 9057 **Sample ID**: DS-11-MU6

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Conductivity (µmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result code
13-Sep-11	0	22.7	7.69	6.6	321.0	148	112	0.83	
		22.7	7.69	6.8	321.0				
14-Sep-11	1	22.7		6.6					
		22.7		6.7					
15-Sep-11	2	22.6		6.5					
		22.6		6.4					
16-Sep-11	3	22.2	7.75	6.5	326.0	136	112	0.00	U
		22.2	7.79	6.0	330.0				
17-Sep-11	4	22.8		6.4					
		22.8		6.6					
MEAN		**22.6**	**7.73**	**6.5**	**325**	**142**	**112**	**0.42**	
N=		**10**	**4**	**10**	**4**	**2**	**2**	**2**	
Max #		**22.8**	**7.79**	**6.8**	**330**	**148**	**112**	**0.83**	
Min #		**22.2**	**7.69**	**6.0**	**321**	**136**	**112**	**0.00**	

4 Day Stats

Replicate	1	2	3	4
# Surviving	8	9	9	9

% Survival 87.5

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Data Entry

Date	Initials	Data Entry
09/29/11	eb	days 0-6
09/30/11	eb	days 7-8
10/05/11	srw	days 9-13
		days 14-18
10/11/11	NS	days 0-18 Flows only
10/13/11	NS	Days 19-20
10/18/11	eb	days 21-25
10/24/11	eb	days 26-28
10/25/11	srw	weights

Data QC

Date	Initials	Data QC
10/05/11	srw	days 0-8
10/11/11	NS	Days 8-18
10/17/11	srw	Days 0-18 Flows only
10/24/11	eb	days 19-20
10/26/11	srw	days 21-28
10/26/11	srw	calculations
11/09/11	MLV	weights

Data 10% QC

11/09/11	MLV	Days 0-28, Weight

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: Control
GLC ID: control

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
22-Sep-11	0	22.7	8.26	8.1	6.0	312.0	152	110	0.35	
		22.7	8.28	7.9	6.0	313.0				
					6.0					
					5.8					
					5.8					
23-Sep-11	1	23.0		6.9	5.4					
		23.0		6.2	4.4					
					5.4					
					5.3					
					5.2					
24-Sep-11	2	23.0		6.8	5.2					
		23.0		7.1	5.6					
					5.6					
					5.6					
					5.2					
25-Sep-11	3	22.7		5.9	5.0					
		22.7		6.1	5.0					
					5.2					
					5.2					
					5.2					
26-Sep-11	4	23.2	7.89	5.9	4.0	331.0	140	114	1.18	
		23.4	7.93	6.4	3.5	331.0				
					4.0					
					4.3					
					4.2					
27-Sep-11	5	23.0		6.2	4.2					
		23.1		7.1	3.6					
					4.0					
					4.2					
					4.2					
28-Sep-11	6	22.6		6.6	4.6					
		22.6		7.0	4.0					
					4.4					
					4.7					
					4.4					
29-Sep-11	7	23.0		6.8	4.6					
		23.1		7.1	4.0					
					4.4					
					4.6					
					4.6					
30-Sep-11	8	22.4		6.2	4.6					
		22.5		6.8	4.2					
					4.2					
					4.5					
					4.4					
1-Oct-11	9	22.2		7.4	5.4					
		22.2		7.8	5.0					
					5.0					
					4.8					
					4.8					
2-Oct-11	10	22.2		6.9	5.6					
		22.2		7.9	5.0					
					5.2					
					5.0					
					5.0					
3-Oct-11	11	22.2	8.01	7.5	5.2	319.0	144	112	0.97	
		22.0	7.86	7.4	4.4	321.0				

Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: Control
GLC ID: control

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
		22.3	7.98	7.7	5.0	317.0				
					5.0					
					5.2					
4-Oct-11	12	22.6		6.7	4.8					
		22.6		6.9	4.0					
					4.6					
					4.4					
					4.7					
5-Oct-11	13	22.6		6.7	5.0					
		22.6		7.2	4.4					
					5.0					
					4.8					
					4.8					
6-Oct-11	14	23.5		6.5	5.2					
		23.5		6.9	4.6					
					4.8					
					4.8					
					4.5					
7-Oct-11	15	23.5		6.7	4.6					
		23.6		7.4	4.3					
					4.6					
					4.4					
					4.3					
8-Oct-11	16	23.3		7.5	3.8					
		23.4		6.7	3.6					
					4.0					
					4.0					
					3.8					
9-Oct-11	17	23.1		6.7	4.8					
		23.0		6.8	4.0					
					5.0					
					4.8					
					4.8					
10-Oct-11	18	23.5	7.85	6.8	4.8	322.0	140	108	0.73	
		23.3	7.92	6.9	5.2	326.0				
					4.8					
					4.8					
					4.8					
11-Oct-11	19	23.5		8.2	4.4					
		23.6		7.6	4.8					
					4.4					
					4.7					
					4.4					
12-Oct-11	20	23.5		6.7	4.8					
		23.4		6.9	4.8					
					4.9					
					4.9					
					4.8					
13-Oct-11	21	23.2		7.3	4.8					
		23.3		7.5	4.4					
					4.4					
					4.8					

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: Control
GLC ID: control

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
					4.8					
14-Oct-11	22	23.2		7.5	5.0					
		23.4		7.9	4.6					
					4.4					
					4.6					
					4.6					
15-Oct-11	23	22.5		7.7	4.8					
		22.9		7.7	5.0					
					4.6					
					4.6					
					4.8					
16-Oct-11	24	22.4		7.7	4.0					
		22.3		7.4	5.0					
					4.6					
					4.6					
					4.8					
17-Oct-11	25	22.0	8.10	7.7	4.5	316.0	128	106	0.79	
		22.0	7.95	7.8	4.4	316.0				
					4.4					
					4.6					
					4.8					
18-Oct-11	26	22.7		7.8	5.6					
		22.8		7.8	5.5					
					4.8					
					5.2					
					4.9					
19-Oct-11	27	22.7		7.7	4.8					
		22.7		7.5	5.0					
					4.4					
					4.4					
					4.4					
20-Oct-11	28	23.5	8.13	7.7	6.0	315.0	144	108	1.00	
		23.5	8.14	7.6	5.6	314.0				
					5.6					
					5.2					
					5.9					
Mean		**22.9**	**8.02**	**7.1**	**4.7**	**319**	**141**	**110**	**0.84**	
Number		**59**	**13**	**59**	**142**	**13**	**6**	**6**	**6**	
Max #		**23.6**	**8.28**	**8.2**	**6.0**	**331**	**152**	**114**	**1.18**	
Min#		**22.0**	**7.85**	**5.9**	**3.5**	**312**	**128**	**106**	**0.35**	

Replicate	1	2	3	4	5
Surviving Weight	16.68	14.22	15.93	14.83	18.44

Average Weight **16.02**

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID:DS-11-HIPU
GLC ID: 9048

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
22-Sep-11	0	23.6	8.25	7.9	6.2		302.0	132	104	0.34	
		23.5	8.26	8.0	6.2		302.0				
					6.4						
					6.2						
					5.8						
23-Sep-11	1	23.1		7.4	6.0						
		23.2		7.4	5.4						
					6.0						
					6.0						
					4.8						
24-Sep-11	2	23.2		6.7	6.2						
		23.2		7.2	6.2						
					6.2						
					6.4						
					5.6						
25-Sep-11	3	23.6		5.5	6.2						
		23.3		6.7	6.2						
					6.2						
					6.2						
					5.8						
26-Sep-11	4	23.7	7.89	7.0	4.2		296.8	112	94	0.95	
		23.7	7.88	6.9	5.2		297.3				
					4.9						
					4.4						
					5.0						
27-Sep-11	5	23.7		6.0	5.2						
		23.2		7.0	4.6						
					5.0						
					5.4						
					4.0						
28-Sep-11	6	23.1		6.2	5.3						
		23.1		6.9	4.8						
					5.4						
					5.4						
					4.4						
29-Sep-11	7	23.4		6.6	6.0						
		23.3		7.1	5.3						
					6.0						
					6.0						
					4.6						
30-Sep-11	8	23.1		5.5	4.1						
		23.1		6.6	3.9						
					4.4						
					4.3						
					4.0						
1-Oct-11	9	22.5		7.0	5.8						
		22.5		7.5	5.0						
					4.8						
					5.2						
					5.2						
2-Oct-11	10	22.5		7.7	5.8						
		22.4		7.7	5.4						
					4.8						
					4.8						
					5.0						
3-Oct-11	11	22.1	7.88	7.8	6.0		299.2	132	98	0.57	
		22.8	7.92	7.0	5.4		298.1				
		22.6		7.5	5.4		296.4				
					5.8						
					4.6						
4-Oct-11	12	23.3		4.4	4.8						
		23.0		7.4	4.0						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID:DS-11-HIPU
GLC ID: 9048

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
					4.8						
					5.3						
					4.2						
5-Oct-11	13	23.2		5.5	6.0						
		23.2		6.5	5.2						
					5.4						
					5.6						
					4.4						
6-Oct-11	14	24.2		6.2	5.1						
		24.1		6.7	4.4						
					5.6						
					5.2						
					4.6						
7-Oct-11	15	23.5		7.6	4.9						
		23.5		7.5	4.0						
					5.0						
					5.0						
					4.2						
8-Oct-11	16	23.5		7.6	5.8						
		23.5		7.5	4.8						
					5.8						
					6.0						
					4.6						
9-Oct-11	17	24.0		4.8	5.4						
		23.6		6.7	4.6						
					5.8						
					5.8						
					4.6						
10-Oct-11	18	23.4	7.99	7.5	5.4		303.0	128	98	0.18	
		23.4	7.99	7.5	4.4		303.0				
					5.4						
					4.4						
					5.4						
11-Oct-11	19	23.6		8.2	6.0						
		23.7		7.3	5.2						
					5.2						
					6.0						
					4.4						
12-Oct-11	20	24.1		8.1	6.0						
		24.0		6.8	4.5						
					5.2						
					5.2						
					4.8						
13-Oct-11	21	23.5		7.3	5.6						
		23.5		7.6	4.8						
					5.2						
					5.0						
					4.4						
14-Oct-11	22	23.3		7.8	5.8						
		23.2		7.7	4.2						
					5.2						
					4.6						
					4.6						
15-Oct-11	23	22.8		7.7	6.2						
		22.8		7.7	5.0						
					5.2						
					5.6						
					4.8						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID:DS-11-HIPU
GLC ID: 9048

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
16-Oct-11	24	23.4		6.7	5.8						
		23.2		7.0	4.2						
					5.2						
					4.8						
					4.6						
17-Oct-11	25	22.3	8.01	7.9	4.5		304.0	128	102	0.02	U
		22.4	8.05	7.9	4.8		305.0				
					5.3						
					4.4						
					5.6						
18-Oct-11	26	23.2		7.3	5.9						
		23.2		7.7	4.4						
					5.2						
					4.8						
					4.8						
19-Oct-11	27	23.3		7.4	5.6						
		23.3		6.7	4.4						
					5.2						
					4.8						
					4.4						
20-Oct-11	28	23.5	8.05	7.9	5.6		308.0	140	100	0.14	
		23.5	8.11	7.8	4.4		307.0	132	100	0.14	
					5.6						
					5.6						
					4.5						
Mean		**23.3**	**8.02**	**7.1**		**5.2**	**302**	**129**	**99**	**0.33**	
Number		**59**	**12**	**59**		**145**	**13**	**7**	**7**	**7**	
Max #		**24.2**	**8.26**	**8.2**		**6.4**	**308**	**140**	**104**	**0.95**	
Min#		**22.1**	**7.88**	**4.4**		**3.9**	**296**	**112**	**94**	**0.02**	

Replicate	1	2.0	3	4	5
Surviving Weight	18.55	15.65	19.49	21.00	21.28

Average Weight **19.19**

[ ] = QC Data Correction

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MOPU
GLC ID: 9052

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
22-Sep-11	0	23.6	8.31	8.2	5.8		300.0	136	104	0.14	
		23.3	8.33	8.2	6.0		299.4				
					5.8						
					5.4						
					5.6						
23-Sep-11	1	23.2		7.4	6.0						
		23.2		7.4	6.0						
					5.8						
					4.6						
					5.0						
24-Sep-11	2	23.1		7.9	4.6						
		23.2		7.6	5.8						
					5.8						
					5.0						
					5.0						
25-Sep-11	3	23.5		6.7	4.8						
		23.2		7.4	4.8						
					5.8						
					5.6						
					5.0						
26-Sep-11	4	23.7	8.02	7.5	3.6		306	124	102	0.55	
		23.7	8.03	7.5	5.0		305				
					4.8	11.8					
					4.2						
					4.0						
27-Sep-11	5	23.7		6.9	4.0						
		23.3		7.7	5.4						
					5.1						
					4.2						
					4.6						
28-Sep-11	6	23.1		7.7	4.0						
		23.2		7.4	5.4						
					4.6						
					4.2						
					4.2						
29-Sep-11	7	23.5		7.7	3.6						
		23.5		7.7	4.8						
					4.4						
					4.0						
					4.2						
30-Sep-11	8	23.3		7.4	3.8						
		23.2		7.9	4.5						
					4.2						
					4.1						
					4.0						
1-Oct-11	9	22.5		8.2	4.4						
		22.5		8.0	4.8						
					4.4						
					5.0						
					4.8						
2-Oct-11	10	22.4		7.8	4.6						
		22.4		7.3	4.6						
					4.2						
					4.8						
					4.8						
3-Oct-11	11	22.1		7.8	3.4		307.0	132	116	0.74	
		22.7	8.02	8.0	3.8		304.0				
		22.6	8.00	7.3	3.2		313				
					3.0						
					3.0						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MOPU
GLC ID: 9052

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	12	23.1		6.8	3.2						
		22.9		7.6	4.5						
					3.8						
					3.8						
					3.4						
5-Oct-11	13	23.0		6.8	3.8						
		23.1		7.7	5.0						
					4.6						
					4.0						
					5.8						
6-Oct-11	14	24.1		6.3	3.8						
		24.0		7.6	5.0						
					4.5						
					4.3						
					4.0						
7-Oct-11	15	23.5		7.6	3.4						
		23.5		7.6	4.2						
					3.9						
					3.1						
					3.4						
8-Oct-11	16	23.6		8.0	4.2	2.8					
		23.6		7.5	3.6						
					5.0						
					4.6						
					4.4						
9-Oct-11	17	23.6		6.4	4.0						
		23.5		7.8	5.2						
					4.6						
					4.0						
					3.8						
10-Oct-11	18	23.5	7.93	6.4	4.4		313.0	128	106	0.30	
		23.4	8.06	7.4	5.6		309.0	124	104	0.33	
					5.6						
					4.4						
					3.6						
11-Oct-11	19	23.7		8.4	3.6						
		23.7		8.0	4.8						
					4.3						
					3.3						
					3.3						
12-Oct-11	20	24.1		8.0	3.6						
		24.0		7.8	4.8						
					4.2						
					3.6						
					3.6						
13-Oct-11	21	23.6		7.6	3.4						
		23.7		7.7	4.4						
					4.0						
					3.4						
					3.4						
14-Oct-11	22	23.2		7.8	3.2						
		23.3		7.9	4.0						
					3.6						
					4.0						
					3.0						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MOPU
GLC ID: 9052

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
15-Oct-11	23	23.1		7.9	3.2						
		23.1		7.6	3.8						
					3.8						
					4.0						
					3.0						
16-Oct-11	24	23.2		6.6	3.8						
		22.9		7.6	4.6						
					4.2						
					4.6						
					4.0						
17-Oct-11	25	22.5	8.02	8.0	3.3		310.0	124	106	0.18	
		22.5	8.13	8.1	4.0		311.0				
					3.7						
					4.0						
					3.7						
18-Oct-11	26	23.3		8.2	4.0						
		23.2		8.2	5.2						
					5.2						
					5.9						
					5.6						
19-Oct-11	27	23.3		6.6	4.0						
		23.3		7.6	5.2						
					4.4						
					5.4						
					5.2						
20-Oct-11	28	23.5	8.11	7.7	4.4		308.0	136	106	0.15	
		23.5	8.11	7.7	5.3		309.0				
					5.2						
					6.1						
					5.6						
Mean		**23.3**	**8.09**	**7.6**		**4.4**	**307**	**129**	**106**	**0.34**	
Number		**59**	**12**	**59**		**147**	**13**	**7**	**7**	**7**	
Max #		**24.1**	**8.33**	**8.4**		**11.8**	**313**	**136**	**116**	**0.74**	
Min#		**22.1**	**7.93**	**6.3**		**2.8**	**299**	**124**	**102**	**0.14**	

Replicate	1	2.0	3	4	5
Surviving Weight	21.56	19.63	19.48	18.26	16.51

Average Weight 19.09

[ ] = QC Data Correction

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU2
GLC ID: 9042

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
22-Sep-11	0	23.3	8.19	7.9	5.8		308.0	148	106	0.68	
		23.2	8.22	8.0	5.6		309.0				
					5.6						
					5.8						
					5.6						
23-Sep-11	1	23.0		5.8	4.8						
		23.0		6.9	4.8						
					4.8						
					4.8						
					4.0						
24-Sep-11	2	23.0		7.2	5.2						
		23.0		7.9	5.0						
					5.6						
					4.8						
					4.2						
25-Sep-11	3	23.1		6.3	5.2						
		23.1		6.8	5.0						
					5.2						
					5.0						
					4.6						
26-Sep-11	4	23.4	7.85	4.4	3.4		307.0	120	100	1.04	
		23.4	7.83	6.4	3.4		306.0				
					3.3						
					3.2						
					3.6						
27-Sep-11	5	23.5		6.2	3.6	2.5					
		23.1		7.7	3.4						
					3.4						
					3.8						
					3.6	2.8					
28-Sep-11	6	23.1		6.9	3.8						
		23.0		4.4	3.4						
					3.6						
					3.7						
					3.1						
29-Sep-11	7	23.2		7.0	4.4						
		23.1		7.4	3.8						
					3.2						
					3.8						
					4.0						
30-Sep-11	8	23.0		6.4	4.0						
		22.9		7.1	3.4						
					4.0						
					3.6						
					3.8						
1-Oct-11	9	22.3		7.5	5.6						
		22.3		4.6	5.8						
					6.1						
					6.0						
					5.4						
2-Oct-11	10	22.2		7.2	5.8						
		22.2		7.9	5.8						
					6.2						
					6.0						
					5.8						
3-Oct-11	11	22.0	7.95	7.6	4.2		301.0	148	100	0.86	
		22.4	7.96	7.7	4.0		300.0				
		22.5	7.98	7.9	4.0		296.9				
					4.2						
					3.0						
4-Oct-11	12	23.1		6.7	3.7						

Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU2
GLC ID: 9042

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
		22.5		7.4	3.5						
					3.4						
					3.8						
					4.4	2.3					
5-Oct-11	13	23.0		6.6	4.0						
		22.9		7.3	3.6						
					3.8						
					4.2						
					3.6						
6-Oct-11	14	23.9		6.3	3.6						
		23.8		7.1	3.2						
					3.0						
					3.3						
					3.2						
7-Oct-11	15	23.0		7.1	3.2						
		23.1		7.8	3.0						
					3.0						
					3.2						
					3.0						
8-Oct-11	16	23.1		7.8	3.0						
		23.1		6.8	4.0	2.4					
					4.0						
					4.8						
					4.5						
9-Oct-11	17	23.6		6.0	3.6						
		23.5		6.9	3.4						
					3.4						
					3.6						
					3.6						
10-Oct-11	18	23.7	7.84	6.4	4.8		312.0	128	100	0.44	
		23.5	7.91	7.0	3.2		310.0				
					3.2						
					3.2						
					3.2						
11-Oct-11	19	23.4		8.3	3.2						
		23.3		7.6	3.2						
					3.2						
					3.2						
					3.6						
12-Oct-11	20	24.0		6.5	4.0						
		24.0		7.1	3.6						
					3.6						
					4.0						
					3.7						
13-Oct-11	21	23.7		7.2	4.0						
		23.5		7.2	3.8						
					3.2						
					4.4						
					3.9						
14-Oct-11	22	22.9		7.6	3.8						
		23.0		8.0	3.6						
					3.0						
					3.0						
					3.2						
15-Oct-11	23	22.5		8.2	3.8						
		22.5		8.1	3.2						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU2
GLC ID: 9042

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
					3.4						
					3.0						
					3.4						
16-Oct-11	24	23.1		6.4	4.0						
		23.0		7.3	3.2						
					3.4						
					3.4						
					3.6						
17-Oct-11	25	22.0	8.05	7.8	3.6		306	124	102	0.06	J
		22.1	8.04	8.0	3.2		308			0.06	J
					3.3						
					3.2						
					3.6						
18-Oct-11	26	23.2		7.6	4.0						
		23.2		8.0	3.6						
					3.6						
					3.2						
					3.6						
19-Oct-11	27	23.1		7.9	3.8	2.4					
		23.1		7.5	3.8						
					3.8						
					4.4						
					4.4						
20-Oct-11	28	23.5	8.11	7.9	4.8		316.0	132	102	0.19	
		23.5	8.11	7.7	3.6		311.0				
					4.0						
					4.4						
					3.6						
Mean		**23.1**	**8.00**	**7.1**		**3.9**	**307**	**133**	**102**	**0.48**	
Number		**59**	**13**	**59**		**150**	**13**	**6**	**6**	**7**	
Max #		**24.0**	**8.22**	**8.3**		**6.2**	**316**	**148**	**106**	**1.04**	
Min#		**22.0**	**7.83**	**4.4**		**2.3**	**297**	**120**	**100**	**0.06**	

Replicate	1	2	3	4	5
Surviving Weight	18.98	18.57	23.81	18.64	17.15

Average Weight **19.43**

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU3
GLC ID: 9047

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
22-Sep-11	0	23.4	8.34	8.1	6.0		301.0	148	104	0.24	
		23.4	8.32	8.2	6.0		302.0				
					6.0						
					5.8						
					5.8						
23-Sep-11	1	23.2		7.3	5.4						
		23.2		7.3	6.0						
					5.6						
					5.2						
					5.0						
24-Sep-11	2	23.3		7.2	5.6						
		23.5		7.4	5.8						
					5.8						
					5.6						
					5.0						
25-Sep-11	3	23.2		6.2	5.6						
		23.2		7.1	5.6						
					5.8						
					5.6						
					5.2						
26-Sep-11	4	23.8	7.99	7.5	4.2		305.0	128	102	0.62	
		23.8	7.99	7.2	4.8		304.0	124	100	0.85	
					4.4						
					4.0						
					3.8	2.9					
27-Sep-11	5	23.5		7.0	5.2						
		23.5		7.8	5.6						
					5.2						
					4.8						
					3.1						
28-Sep-11	6	23.2		7.0	5.1						
		23.2		7.2	5.6						
					5.0						
					5.0						
					4.2						
29-Sep-11	7	23.5		7.5	4.8						
		23.6		7.0	5.6						
					4.8						
					4.8						
					4.0						
30-Sep-11	8	23.0		7.0	4.7						
		23.0		7.5	4.7						
					4.2						
					4.6						
					4.0						
1-Oct-11	9	22.5		7.9	5.4						
		22.5		8.0	5.4						
					5.8						
					5.6						
					5.0						
2-Oct-11	10	22.4		7.7	5.4						
		22.6		8.0	5.8						
					5.8						
					5.6						
					4.8						
3-Oct-11	11	22.1	8.04	7.8	4.9		306.0	132	104	0.68	
		22.7	7.99	7.6	5.0		304.0				
		22.6		7.5	4.3		305.0				
					3.9						
					3.0						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU3
GLC ID: 9047

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	12	23.0		7.2	5.0						
		23.0		7.5	5.4						
					4.6						
					4.2						
					3.0						
5-Oct-11	13	23.0		7.2	5.4						
		23.0		7.6	5.4						
					5.6						
					5.0						
					3.8						
6-Oct-11	14	23.7		7.2	5.1						
		23.8		7.4	5.3						
					5.0						
					4.6						
					5.3						
7-Oct-11	15	23.7		7.4	5.2						
		24.0		7.0	5.4						
					5.3						
					5.0						
					4.6						
8-Oct-11	16	23.5		7.7	4.0						
		23.7		7.4	4.2						
					4.0						
					3.8						
					3.8						
9-Oct-11	17	23.3		7.4	5.2						
		23.4		7.5	6.0						
					5.3						
					5.6						
					5.6						
10-Oct-11	18	23.5	7.96	6.7	3.2	2.4	314.0	128	106	0.25	
		23.5	8.03	7.2	6.4		309.0				
					6.4						
					6.0						
					6.0						
11-Oct-11	19	23.8		8.5	3.2						
		23.8		8.2	5.2						
					5.2						
					4.8						
					4.8						
12-Oct-11	20	23.8		8.0	4.0						
		23.8		7.8	4.4						
					5.2						
					4.8						
					4.8						
13-Oct-11	21	23.7		7.7	5.4						
		23.7		7.6	4.4						
					4.8						
					4.4						
					4.8						
14-Oct-11	22	23.6		7.8	3.0						
		23.8		7.9	4.2						
					4.4						
					4.2						
					4.4						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU3
GLC ID: 9047

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
15-Oct-11	23	23.0		7.9	3.2						
		23.4		8.0	4.0						
					4.2						
					4.4						
					4.4						
16-Oct-11	24	22.9		7.3	3.8						
		22.8		7.4	4.0						
					5.2						
					5.2						
					5.0						
17-Oct-11	25	22.4	8.11	8.4	3.2		308.0	124	102	0.03	U
		22.5	8.10	8.1	4.0		309.0	132	102		
					4.4						
					4.4						
					4.4						
18-Oct-11	26	23.3		8.2	3.6						
		23.3		8.1	5.4						
					5.9						
					5.6						
					5.9						
19-Oct-11	27	23.1		7.2	3.6	2.8					
		23.1		7.6	5.0						
					5.6						
					5.4						
					5.8						
20-Oct-11	28	23.6	8.05	8.0	4.0		304.0	136	104	0.09	J
		23.6	8.09	8.0	5.6		308.0				
					6.0						
					5.6						
					5.7						
Mean		**23.3**	**8.08**	**7.6**		**4.9**	**306**	**132**	**103**	**0.39**	
Number		**59**	**12**	**59**		**148**	**13**	**8**	**8**	**7**	
Max #		**24.0**	**8.34**	**8.5**		**6.4**	**314**	**148**	**106**	**0.85**	
Min#		**22.1**	**7.96**	**6.2**		**2.4**	**301**	**124**	**100**	**0.03**	

Replicate	1	2	3	4	5
Surviving Weight	19.31	18.32	19.05	20.74	17.86

Average Weight 19.06

[ ] = QC Data Correction

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID:DS-11-MU4
GLC ID: 9043

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
22-Sep-11	0	23.2	8.30	8.1	6.0		306.0	136	104	0.52	
		23.2	8.19	7.8	6.0		306.0				
					6.2						
					6.2						
					6.0						
23-Sep-11	1	23.0		7.4	5.0						
		23.1		7.5	5.4						
					5.6						
					6.0						
					4.8						
24-Sep-11	2	23.1		7.0	5.6						
		23.2		7.0	5.6						
					6.0						
					5.8						
					5.6						
25-Sep-11	3	23.2		7.1	5.6						
		23.2		7.4	5.6						
					5.8						
					5.6						
					5.6						
26-Sep-11	4	23.7	7.98	7.3	3.4		306.0	116	102	0.73	
		23.8	7.98	6.9	4.4		305.0				
					4.3						
					4.1						
					3.2						
27-Sep-11	5	23.3		7.4	3.6						
		23.5		7.2	4.2						
					4.4						
					4.0						
					3.2						
28-Sep-11	6	23.1		7.4	3.5						
		23.0		7.4	4.3						
					5.0						
					4.6						
					3.6						
29-Sep-11	7	23.3		7.7	4.4						
		23.5		7.2	5.2						
					5.4						
					5.6						
					4.4						
30-Sep-11	8	22.8		7.8	4.6						
		22.8		7.6	4.4						
					4.7						
					4.8						
					4.1						
1-Oct-11	9	22.5		7.7	5.1						
		22.5		8.0	5.4						
					5.6						
					5.0						
					4.8						
2-Oct-11	10	22.5		7.9	5.0						
		22.5		7.3	5.2						
					5.0						
					4.8						
					4.8						
3-Oct-11	11	22.2	8.01	7.6	4.6	2.8		132	106	0.99	
		22.5	7.97	7.5	4.2		303.0				
		22.5	7.99	7.9	4.5		317.0				
					4.4						
					3.8						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID:DS-11-MU4
GLC ID: 9043

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
4-Oct-11	12	23.0		7.7	4.4						
		23.0		7.9	4.5						
					4.7						
					4.6						
					3.8						
5-Oct-11	13	22.9		7.6	5.0						
		22.9		7.7	5.0						
					5.0						
					4.8						
					4.0						
6-Oct-11	14	23.9		7.7	4.0						
		23.8		7.6	4.2						
					4.5						
					4.2						
					3.6						
7-Oct-11	15	23.6		7.9	3.8						
		23.8		6.7	4.0						
					4.2						
					3.7						
					3.3						
8-Oct-11	16	23.2		7.6	3.2						
		23.5		7.7	3.4						
					3.4						
					3.0						
					4.2	2.5					
9-Oct-11	17	23.4		8.0	4.5						
		23.3		7.6	4.6						
					5.4						
					4.0						
					3.0						
10-Oct-11	18	23.5	8.00	7.1	4.4		308.0	132	106	0.30	
		23.5	8.02	7.2	4.8		309.0				
					4.8						
					3.4						
					3.2	2.4					
11-Oct-11	19	23.6		8.4	5.6						
		23.6		8.0	5.9						
					4.9						
					4.0						
					3.6						
12-Oct-11	20	24.0		8.0	4.9						
		23.8		7.9	5.2						
					4.2						
					4.4						
					5.0						
13-Oct-11	21	23.6		7.5	5.2						
		23.7		7.6	5.2						
					4.4						
					5.6						
					4.8						
14-Oct-11	22	23.5		8.2	4.4						
		23.9		7.5	4.4						
					4.0						
					5.4						
					4.4						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID:DS-11-MU4
GLC ID: 9043

Test Dates: 09/22/11-10/20/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
15-Oct-11	23	22.8		7.8	5.2						
		22.8		7.7	5.6						
					4.6						
					5.8						
					5.2						
16-Oct-11	24	22.8		8.0	4.6						
		22.8		7.2	4.8						
					4.0						
					5.4						
					4.4						
17-Oct-11	25	22.3	8.16	8.0	4.4		310.0	128	98	0.01	U
		22.3	8.07	8.1	5.2		311.0				
					4.0						
					4.8						
					4.5						
18-Oct-11	26	23.0		8.2	4.8						
		23.1		8.1	5.2						
					4.0						
					5.6						
					4.8						
19-Oct-11	27	22.9		7.6	4.4						
		22.8		7.0	4.4						
					4.0						
					5.2						
					4.2						
20-Oct-11	28	23.5	8.14	8.0	5.6		306.0	136	104	0.15	
		23.5	8.16	7.7	4.8		307.0				
					4.4						
					6.0						
					5.0						
Mean		**23.2**	**8.07**	**7.6**		**4.6**	**308**	**130**	**103**	**0.45**	
Number		**59**	**13**	**59**		**148**	**12**	**6**	**6**	**6**	
Max #		**24.0**	**8.30**	**8.4**		**6.2**	**317**	**136**	**106**	**0.99**	
Min#		**22.2**	**7.97**	**6.7**		**2.4**	**303**	**116**	**98**	**0.01**	

Replicate	1	2	3	4	5
Surviving Weight	17.34	18.58	18.93	16.26	16.36

Average Weight 17.49

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01

Test Dates: 10/06/11-11/03/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Data Entry

Date	Initials	Data Entry
10/18/11	eb	days 0-11
10/24/11	eb	days 12-18
10/27/11	srw	days 19-20
10/28/11	srw	days 21-22
11/01/11	NS	days 23-25
11/09/11	MLV	Days 26-28, Weights

Data QC

Date	Initials	Data QC
10/24/11	AS	days 0-17
10/26/11	NS	day 18
10/27/11	NS	days 19-20
11/01/11	NS	days 21-22
11/01/11	eb	days 23-25
11/9//11	DS	Days 26-28, Weights

Data 10% QC

11/09/11	MLV	Days 0-28, Weights

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: control
GLC ID: NA

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
6-Oct-11	0	23.6	8.16	7.8	4.2		306.0	140	110	0.00	U
		23.4	8.21	7.8	3.7	2.2	313.0				
					3.6						
					3.7						
					3.7						
7-Oct-11	1	24.1		6.8	5.4						
		24.2		6.8	6.0						
					5.5						
					5.6						
					5.8						
8-Oct-11	2	23.2		5.9	5.2						
		23.3		7.1	5.2						
					4.6						
					5.0						
					5.2						
9-Oct-11	3	23.1		4.1	5.2						
		23.1		5.5	5.0						
					4.6						
					5.2						
					5.4						
10-Oct-11	4	23.1	7.71	4.2	5.2		318.0	136	110	1.62	
		23.1	7.80	5.8	4.8		325.0				
					4.4						
					5.2						
					5.2						
11-Oct-11	5	23.2		6.2	5.2						
		23.2		7.0	5.2						
					4.8						
					4.8						
					5.6						
12-Oct-11	6	23.5		7.6	3.8						
		23.5		6.2	4.8						
					4.8						
					5.6						
					4.8						
13-Oct-11	7	23.2		7.1	5.0						
		23.3		7.1	5.6						
					4.4						
					4.4						
					5.2						
14-Oct-11	8	23.2		7.4	4.4						
		23.1		8.0	4.0						
					4.0						
					4.2						
					4.4						
15-Oct-11	9	23.0		7.6	4.0						
		23.4		7.7	3.8						
					4.0						
					4.0						
					4.2						
16-Oct-11	10	23.5		7.7	4.2						
		23.3		7.2	4.0						
					4.0						
					4.2						
					4.4						
17-Oct-11	11	23.1	8.10	7.9	4.2		322.0	132	108	0.78	
		23.1	8.14	8.1	4.0		322.0				
					4.0						
					4.0						
					4.0						
18-Oct-11	12	23.5		7.5	4.4						
		23.6		7.6	3.6						
					4.0						
					4.4						
					4.4						
19-Oct-11	13	23.5		7.2	4.4						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: control
GLC ID: NA

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
		23.5		7.3	4.4						
					4.0						
					5.2						
					4.4						
20-Oct-11	14	23.9		7.3	4.4						
		23.9		7.4	4.4						
					4.0						
					3.6						
					4.4						
21-Oct-11	15	23.8		7.7	4.4						
		23.8		7.7	4.0						
					4.2						
					4.0						
					4.0						
22-Oct-11	16	23.3		7.6	4.0						
		23.8		7.2	3.6						
					4.0						
					4.0						
					4.0						
23-Oct-11	17	23.7		7.0	4.0						
		24.0		7.3	3.6						
					3.6						
					4.0						
					4.0						
24-Oct-11	18	23.1	8.05	7.7	4.0		321.0	136	110	1.10	
		23.2	8.11	7.0	3.4		321.0				
					3.6						
					3.8						
					3.8						
25-Oct-11	19	23.8		7.6	3.6						
		24.0		7.5	3.3						
					3.6						
					3.6						
					3.6						
26-Oct-11	20	22.1		7.8	3.6						
		22.1		7.9	3.2						
					3.2						
					3.3						
					3.4						
27-Oct-11	21	23.7		7.4	5.2						
		23.7		6.9	4.5						
					4.8						
					4.8						
					5.2						
28-Oct-11	22	23.2		7.4	4.8						
		23.2		7.5	4.3						
					4.8						
					4.8						
					5.1						
29-Oct-11	23	23.5		7.4	4.3						
		23.2		7.5	4.0						
		23.2		7.7	4.4						
		23.1		7.6	4.1						
		23.0		7.7	4.4						
30-Oct-11	24	23.4		7.8	4.2						
		23.4		7.6	3.4						
					3.6						
					3.6						
					4.6						
31-Oct-11	25	23.1	8.03	8.0	4.5		315	124	104	0.06	J
		23.1	8.11	8.1	4.0		314				

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: control
GLC ID: NA

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
					4.4						
					4.6						
					5.1						
1-Nov-11	26	23.2		7.0	4.5						
		23.2		7.3	4.2						
					4.4						
					4.4						
					5.2						
2-Nov-11	27	23.0		8.0	5.0						
		23.0		7.5	4.8						
					5.0						
					5.2						
					6.0						
3-Nov-11	28	22.4	7.74	7.8	4.8		309.0	140	116	0.17	
		22.3	7.89	7.7	4.0		332.0				
					4.7						
					4.4						
					4.4						
Mean		**23.3**	**8.00**	**7.3**		**4.4**	**318**	**135**	**110**	**0.62**	
Number		**61**	**12**	**61**		**146**	**12**	**6**	**6**	**6**	
Max #		**24.2**	**8.21**	**8.1**		**6.0**	**332**	**140**	**116**	**1.62**	
Min#		**22.1**	**7.71**	**4.1**		**2.2**	**306**	**124**	**104**	**0.00**	

Replicate	1	2	3	4	5
Surviving Weight	17.81	18.14	17.70	16.82	17.87

Average Weight **17.67**

[ ] = QC Data Correction

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-WOPU
GLC ID: 9053

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
6-Oct-11	0	23.4	8.32	7.6	3.0		305.0	136	108	0.00	U
		23.3	8.30	7.8	3.8	2.5	307.0				
					5.6						
					3.4						
					5.8						
7-Oct-11	1	24.2		5.9	3.8						
		24.2		5.9	3.4						
					5.2						
					3.0						
					5.4						
8-Oct-11	2	23.3		6.6	3.0						
		23.5		5.4	3.2	2.6					
					5.0						
					3.0						
					5.0						
9-Oct-11	3	23.0		5.9	3.0						
		23.0		5.1	3.6						
					3.2						
					3.6						
					3.4						
10-Oct-11	4	23.1	7.80	6.5	3.6		308.0	128	110	1.47	
		23.1	7.74	6.1	4.4		310.0	132	110	1.41	
					4.4						
					5.6						
					4.8						
11-Oct-11	5	23.5		6.2	4.3						
		23.5		5.6	4.9						
					4.4						
					5.2						
					3.3						
12-Oct-11	6	23.5		7.6	4.8						
		23.5		7.9	5.2						
					5.2						
					5.2						
					4.8						
13-Oct-11	7	23.6		7.9	5.2						
		23.6		7.8	5.6						
					5.0						
					5.6						
					4.4						
14-Oct-11	8	23.1		8.0	4.6						
		23.2		7.0	5.2						
					4.4						
					5.2						
					4.0						
15-Oct-11	9	23.5		8.0	5.2						
		23.6		7.1	5.6						
					5.2						
					5.2						
					4.0						
16-Oct-11	10	23.4		7.9	5.2						
		23.5		7.8	5.4						
					4.8						
					5.2						
					4.2						
17-Oct-11	11	23.1	8.13	7.9	4.4		311.0	132	108	0.41	
		23.2	8.17	8.2	4.3		312.0	132	108		
					5.2						
					5.6						
					4.8						
18-Oct-11	12	23.7		8.1	4.0						
		23.8		8.0	4.8						
					4.8						
					4.9						
					4.0						
19-Oct-11	13	23.5		7.8	3.8						

Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-WOPU
GLC ID: 9053

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
		23.5		7.8	4.4						
					4.4						
					4.4						
					3.8						
20-Oct-11	14	24.0		7.6	3.7						
		24.0		7.6	4.4						
					4.4						
					3.6						
					4.4						
21-Oct-11	15	24.0		7.8	3.8						
		24.0		7.8	4.4						
					4.2						
					4.4						
					4.4						
22-Oct-11	16	23.8		7.6	3.6						
		23.9		7.5	4.2						
					4.2						
					4.2						
					3.6						
23-Oct-11	17	23.6		7.8	3.8						
		24.0		7.3	4.6						
					4.2						
					4.0						
					3.6						
24-Oct-11	18	23.5	8.09	7.8	4.0		311.0	132	102	0.05	J
		23.5	8.09	7.6	4.3		310.0				
					3.8						
					4.0						
					3.0						
25-Oct-11	19	24.7		7.8	3.6						
		24.7		7.0	4.0						
					3.6						
					3.4						
					3.2						
26-Oct-11	20	22.2		7.9	5.2						
		22.2		7.8	6.4						
					6.1						
					6.2						
					5.2						
27-Oct-11	21	23.7		7.9	5.1						
		23.7		7.9	6.0						
					5.6						
					5.6						
					3.8						
28-Oct-11	22	23.3		7.9	5.2						
		23.2		7.9	6.0						
					5.6						
					6.0						
					3.8						
29-Oct-11	23	23.3		7.6	5.0						
		23.3		7.5	6.2						
		23.3		7.5	6.2						
		23.2		7.5	6.0						
		23.2		7.3	4.0						
30-Oct-11	24	23.4		7.9	4.4						
		23.4		7.3	5.4						
					5.2						
					5.0						
					3.2						
31-Oct-11	25	23.1	8.08	7.9	4.4		309	140	106	0.00	U
		23.1	8.11	7.8	5.6		308				

Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-WOPU
GLC ID: 9053

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
					5.2						
					5.2						
					3.2						
1-Nov-11	26	23.2		8.0	4.0						
		23.2		7.6	5.3						
					5.2						
					5.2						
					3.2						
2-Nov-11	27	22.8		7.9	4.4						
		22.8		8.1	4.4						
					5.0						
					4.4						
					3.2						
3-Nov-11	28	22.3	8.22	7.7	5.2		327.0	132	118	0.04	J
		22.3	7.99	7.7	5.2		307.0				
					4.8						
					6.8						
					6.0						
Mean		**23.4**	**8.09**	**7.4**		**4.5**	**310**	**133**	**109**	**0.48**	
Number		**61**	**12**	**61**		**147**	**12**	**8**	**8**	**7**	
Max #		**24.7**	**8.32**	**8.2**		**6.8**	**327**	**140**	**118**	**1.47**	
Min#		**22.2**	**7.74**	**5.1**		**2.5**	**305**	**128**	**102**	**0.00**	

Replicate	1	2	3	4	5
Surviving Weight	16.12	18.68	18.87	18.53	18.91

Average Weight **18.22**

[ ] = QC Data Correction

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-IIPU
GLC ID: 9054

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
6-Oct-11	0	23.5	8.25	7.9	3.0		302.0	136	102	0.10	
		23.3	8.04	7.9	3.0		302.0				
					4.6						
					5.2						
					3.0	2.8					
7-Oct-11	1	24.1		5.0	4.0	2.6					
		24.2		6.4	3.8						
					5.6						
					7.0						
					3.6						
8-Oct-11	2	23.3		7.5	4.9						
		23.3		5.9	3.0						
					3.9						
					4.1						
					4.4						
9-Oct-11	3	23.1		7.6	4.0						
		23.0		3.9	3.2						
					3.6						
					3.0						
					3.4						
10-Oct-11	4	23.1	7.80	6.8	5.2		293.2	124	92	1.22	
		23.1	7.81	7.0	5.2		295.6				
					5.6						
					4.4						
					4.5						
11-Oct-11	5	23.2		8.1	4.0						
		23.2		6.0	5.2						
					4.5						
					4.4						
					4.4						
12-Oct-11	6	23.4		8.0	3.2						
		23.5		7.2	4.0						
					5.0						
					4.8						
					5.2						
13-Oct-11	7	23.4		6.8	5.0						
		23.4		7.2	5.2						
					5.2						
					4.8						
					5.2						
14-Oct-11	8	22.8		7.6	5.2						
		22.8		7.3	4.6						
					4.8						
					4.4						
					5.2						
15-Oct-11	9	23.1		7.3	5.2						
		23.0		7.3	5.0						
					4.8						
					4.6						
					5.2						
16-Oct-11	10	23.3		7.2	5.2						
		23.3		7.1	5.0						
					4.8						
					5.0						
					5.6						
17-Oct-11	11	23.0	7.98	7.6	5.2		303.0	124	96	0.55	
		23.0	8.02	7.9	4.4		305.0			0.56	
					4.8						
					4.4						
					4.8						
18-Oct-11	12	23.5		7.8	5.2						
		23.5		7.6	4.4						
					4.5						
					4.1						
					5.2						
19-Oct-11	13	23.4		7.2	4.4						

Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-IIPU
GLC ID: 9054

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
		23.4		6.9	3.8						
					4.0						
					3.8						
					4.4						
20-Oct-11	14	22.8		7.6	4.4						
		22.8		7.6	4.4						
					4.4						
					3.6						
					4.4						
21-Oct-11	15	23.5		7.5	4.4						
		23.5		7.7	4.4						
					4.2						
					3.8						
					4.0						
22-Oct-11	16	23.1		7.5	4.4						
		23.0		7.5	3.8						
					4.2						
					4.4						
					3.8						
23-Oct-11	17	23.2		7.2	4.2						
		22.8		7.4	3.6						
					4.0						
					4.4						
					4.0						
24-Oct-11	18	23.1	8.05	7.1	3.8		305.0	124	94	0.06	J
		23.1	8.06	7.7	3.8		304.0				
					4.0						
					3.6						
					4.0						
25-Oct-11	19	23.7		7.5	3.8						
		23.6		7.6	3.6						
					4.1						
					3.6						
					4.0						
26-Oct-11	20	22.2		8.2	4.8						
		22.2		8.1	5.2						
					5.6						
					5.2						
					6.4						
27-Oct-11	21	23.3		7.8	4.0						
		23.4		7.6	5.2						
					5.3						
					4.8						
					6.0						
28-Oct-11	22	23.1		8.2	4.2						
		23.2		8.1	5.2						
					5.2						
					4.8						
					5.9						
29-Oct-11	23	23.3		7.5	4.6						
		23.3		7.5	4.4						
		23.3		7.6	4.4						
		23.3		7.6	4.2						
		23.2		7.6	5.6						
30-Oct-11	24	23.4		7.7	5.6						
		23.3		7.7	5.8						
					4.6						
					4.2						
					5.4						
31-Oct-11	25	23.2	8.12	8.2	5.6		307	144	102	0.00	U
		23.2	8.13	8.0	6.0		307				

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-IIPU
GLC ID: 9054

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
					4.7						
					4.1						
					5.6						
1-Nov-11	26	23.5		8.0	5.6						
		23.5		7.4	6.0						
					4.4						
					4.0						
					5.3						
2-Nov-11	27	22.7		7.8	5.2						
		22.7		7.9	5.6						
					4.3						
					3.6						
					5.4						
3-Nov-11	28	22.4	8.23	7.9	4.0		306.0	128	100	0.06	J
		22.4	8.19	8.0	6.0		320.0				
					4.5						
					3.6						
					5.0						
Mean		**23.2**	**8.06**	**7.4**		**4.6**	**304**	**130**	**98**	**0.36**	
Number		**61**	**12**	**61**		**147**	**12**	**6**	**6**	**7**	
Max #		**24.2**	**8.25**	**8.2**		**7.0**	**320**	**144**	**102**	**1.22**	
Min#		**22.2**	**7.80**	**3.9**		**2.6**	**293**	**124**	**92**	**0.00**	

Replicate	1	2	3	4	5
Surviving Weight	21.50	17.08	18.51	17.86	16.55

Average Weight **18.30**

[ ] = QC Data Correction

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU1
GLC ID: 9055

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
6-Oct-11	0	23.4	8.24	7.7	4.6		303.0	140	106	0.05	J
		23.4	8.30	8.0	4.2		301.0				
					4.5						
					3.6						
					3.6						
7-Oct-11	1	23.3		7.3	5.2						
		23.3		7.2	4.5						
					5.0						
					4.3						
					3.3						
8-Oct-11	2	23.5		7.3	5.8						
		23.4		7.2	5.0						
					5.4						
					4.6						
					3.6						
9-Oct-11	3	23.7		7.4	5.2						
		23.4		7.4	4.6						
					5.6						
					4.4						
					3.6						
10-Oct-11	4	23.1	7.87	7.1	4.3		302.0	116	98	1.02	
		23.1	7.90	7.1	5.6		302.0				
					4.4						
					5.6						
					3.6						
11-Oct-11	5	23.3		8.0	5.6						
		23.4		7.9	4.8						
					4.0						
					4.4						
					3.6						
12-Oct-11	6	24.1		7.0	4.4						
		24.0		7.0	3.2						
					4.0						
					5.3						
					6.0						
13-Oct-11	7	23.5		6.7	5.6						
		23.2		6.8	5.6						
					3.8						
					4.2						
					4.0						
14-Oct-11	8	23.0		6.8	5.0						
		23.0		7.2	4.8						
					3.6						
					3.6						
					3.0						
15-Oct-11	9	22.7		7.6	5.2						
		22.6		7.6	4.8						
					3.6						
					3.6						
					3.0						
16-Oct-11	10	23.0		7.1	4.8						
		23.6		7.1	4.8						
					3.4						
					3.4						
					4.2						
17-Oct-11	11	22.2	8.03	7.9	4.8		303.0	120	100	0.59	
		22.3	8.07	8.9	4.5		304.0				
					3.6						
					3.2						
					4.4						
18-Oct-11	12	22.9		8.0	4.8						
		22.8		7.8	4.4						
					3.6						
					3.6						
					4.4						
19-Oct-11	13	23.1		7.2	5.2						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU1
GLC ID: 9055

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
		23.1		7.1	5.0						
					4.4						
					4.4						
					4.8						
20-Oct-11	14	22.2		7.7	5.2						
		22.3		7.8	4.8						
					3.6						
					3.7						
					4.4						
21-Oct-11	15	22.5		6.5	5.0						
		22.5		6.9	5.0						
					4.4						
					4.0						
					4.8						
22-Oct-11	16	*21.8		7.6	5.2						
		*21.8		7.7	4.0						
					4.0						
					4.8						
					5.6						
23-Oct-11	17	22.0		7.0	5.0						
		22.0		7.2	4.0						
					4.0						
					5.0						
					5.6						
24-Oct-11	18	22.2	8.00	7.6	5.4		305.0	128	100	0.11	
		22.3	8.02	7.6	5.0		305.0				
					4.2						
					4.0						
					5.4						
25-Oct-11	19	22.2		7.8	5.2						
		22.2		7.5	4.8						
					4.2						
					3.8						
					4.8						
26-Oct-11	20	22.5		7.4	4.8						
		22.5		7.1	4.5						
					4.2						
					3.6						
					4.8						
27-Oct-11	21	22.6		7.7	4.4						
		22.5		7.5	4.4						
					4.0						
					3.6						
					4.6						
28-Oct-11	22	23.2		7.9	4.0						
		23.5		7.8	4.0						
					4.0						
					3.2						
					4.0						
29-Oct-11	23	22.1		7.6	4.2						
		22.1		7.7	3.6						
		22.0		7.7	3.6						
		21.8		7.3	2.8						
		21.8		7.3	3.9						
30-Oct-11	24	22.7		7.7	4.4						
		22.7		7.2	3.4						
					3.6						
					3.0						
					3.6						
31-Oct-11	25	23.0	8.06	8.0	4.8		307	136	106	0.00	U
		23.0	8.06	8.1	3.6		307				

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU1
GLC ID: 9055

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
					4.0						
					3.2						
					3.8						
1-Nov-11	26	23.8		7.0	3.9						
		23.8		7.1	3.6						
					4.0						
					3.1						
					4.4						
2-Nov-11	27	24.0		6.9	4.4						
		24.0		6.9	3.6						
					4.0						
					5.4						
					5.0						
3-Nov-11	28	22.4	8.07	7.0	4.8		307.0	124	100	0.05	J
		22.4	8.12	7.1	5.2		323.0				
					5.6						
					6.0						
					4.0						
Mean		**22.9**	**8.06**	**7.4**		**4.4**	**306**	**127**	**102**	**0.30**	
Number		**59**	**12**	**61**		**145**	**12**	**6**	**6**	**6**	
Max #		**24.1**	**8.30**	**8.9**		**6.0**	**323**	**140**	**106**	**1.02**	
Min#		**21.8**	**7.87**	**6.5**		**2.8**	**301**	**116**	**98**	**0.00**	

Replicate	1	2	3	4	5
Surviving Weight	19.13	22.74	21.06	17.20	20.81

Average Weight **20.19**

[ ] = QC Data Correction

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU5
GLC ID: 9056

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
6-Oct-11	0	23.5	8.27	7.8	5.6		303.0	144	108	0.06	J
		23.4	8.27	8.0	5.2		303.0				
					4.6						
					5.2						
					3.6						
7-Oct-11	1	24.0		7.2	5.5						
		24.2		6.0	5.0						
					4.5						
					5.0						
					3.4						
8-Oct-11	2	23.9		3.9	5.6						
		24.0		7.0	5.2						
					4.6						
					5.4						
					3.6						
9-Oct-11	3	23.4		6.1	6.0						
		24.5		6.4	4.6						
					4.6						
					5.2						
					3.6						
10-Oct-11	4	23.4	7.78	6.1	6.0		328	128.0	100	0.89	
		23.4	7.83	6.6	5.6		322				
					5.2						
					5.6						
					3.6						
11-Oct-11	5	23.8		5.2	6.0						
		23.8		7.1	5.2						
					4.8						
					5.5						
					3.6						
12-Oct-11	6	23.7		6.2	4.0						
		23.7		6.1	5.3						
					4.4						
					5.6						
					5.6						
13-Oct-11	7	23.5		6.5	5.6						
		23.6		6.7	5.6						
					5.0						
					5.2						
					5.4						
14-Oct-11	8	23.5		7.2	5.4						
		23.8		6.0	4.6						
					5.6						
					5.6						
					5.6						
15-Oct-11	9	23.0		7.1	5.4						
		23.5		6.2	4.6						
					6.0						
					4.8						
					5.2						
16-Oct-11	10	23.0		6.4	5.4						
		22.8		6.5	4.6						
					5.6						
					5.6						
					5.4						
17-Oct-11	11	22.7	7.97	7.5	5.2		301.0	120	100	0.43	
		22.7	7.95	7.6	4.8		303.0				
					5.6						
					5.6						
					5.2						
18-Oct-11	12	23.0		7.3	5.2						
		23.0		7.0	4.4						
					6.0						
					5.6						
					5.3						
19-Oct-11	13	22.8		6.5	5.0						

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU5
GLC ID: 9056

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
		22.8		6.7	5.6						
					5.2						
					4.8						
					5.2						
20-Oct-11	14	22.0		7.2	5.9						
		22.0		7.4	4.8						
					6.1						
					6.0						
					5.6						
21-Oct-11	15	22.2		7.0	5.2						
		22.2		7.4	5.0						
					5.2						
					5.4						
					5.4						
22-Oct-11	16	22.0		7.7	5.6						
		22.0		7.7	6.4						
					6.4						
					5.2						
					6.0						
23-Oct-11	17	22.0		7.6	5.0						
		22.0		7.4	5.8						
					6.4						
					6.0						
					6.0						
24-Oct-11	18	22.2	8.01	7.5	6.4		304.0	128	98	0.09	J
		22.3	8.04	7.4	6.0		304.0	124	98	0.09	J
					6.8						
					6.6						
					6.2						
25-Oct-11	19	22.2		7.9	6.2						
		22.3		7.3	6.0						
					6.4						
					6.4						
					6.0						
26-Oct-11	20	22.5		8.0	6.0						
		22.6		7.6	6.0						
					6.6						
					6.3						
					6.0						
27-Oct-11	21	22.3		7.5	6.2						
		22.3		7.3	5.6						
					6.7						
					6.4						
					6.0						
28-Oct-11	22	23.0		8.0	6.0						
		22.8		8.0	5.6						
					6.4						
					6.4						
					5.9						
29-Oct-11	23	22.3		7.4	6.1						
		22.2		7.5	5.6						
		22.3		7.7	6.3						
		22.2		8.0	6.1						
		22.2		8.1	5.9						
30-Oct-11	24	23.0		7.7	5.6						
		23.0		7.8	4.8						
					6.0						
					6.0						
					5.8						
31-Oct-11	25	23.2	8.10	7.8	5.6		305	140	104	0.00	U
		23.2	8.11	7.9	5.2		305				

Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU5
GLC ID: 9056

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
					6.2						
					6.0						
					5.6						
1-Nov-11	26	24.0		7.4	6.0						
		24.0		7.1	5.6						
					6.8						
					6.4						
					6.0						
2-Nov-11	27	24.0		7.4	4.4						
		24.0		7.6	5.0						
					6.0						
					5.8						
					5.6						
3-Nov-11	28	22.4	7.94	7.7	5.2		308.0	132	102	0.04	J
		22.4	8.01	7.8	3.2		315.0		102		
					3.6						
					4.8						
					5.2						
Mean		**23.0**	**8.02**	**7.1**		**5.5**	**308**	**131**	**102**	**0.23**	
Number		**61**	**12**	**61**		**145**	**12**	**7**	**8**	**7**	
Max #		**24.5**	**8.27**	**8.1**		**6.8**	**328**	**144**	**108**	**0.89**	
Min#		**22.0**	**7.78**	**3.9**		**3.2**	**301**	**120**	**98**	**0.00**	

Replicate	1	2	3	4	5
Surviving Weight	18.46	18.59	20.65	17.16	18.98

Average Weight **18.77**

[ ] = QC Data Correction

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU6
GLC ID: 9057

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
6-Oct-11	0	23.5	8.27	7.9	3.0		314.0	136	114	0.14	
		23.3	8.25	7.8	3.0	2.2	316.0				
					6.3						
					3.4						
					4.6						
7-Oct-11	1	24.5		6.6	3.2						
		24.5		4.4	3.3	2.6					
					8.0						
					4.0						
					5.4						
8-Oct-11	2	23.6		6.6	5.5						
		23.5		6.6	5.3						
					5.4						
					3.3						
					4.4						
9-Oct-11	3	23.2		7.0	5.8						
		23.2		6.3	5.4						
					5.6						
					3.2						
					4.0						
10-Oct-11	4	23.4	7.86	4.8	5.6		300.0	132	104	0.04	J
		23.4	7.80	5.6	5.6		300.0				
					5.6						
					3.0						
					4.0						
11-Oct-11	5	23.5		7.0	5.6						
		23.5		7.1	5.6						
					5.6						
					3.2						
					3.6						
12-Oct-11	6	23.6		7.3	5.6						
		23.6		6.5	5.7						
					3.2						
					5.3						
					5.2						
13-Oct-11	7	23.3		7.7	5.6						
		23.5		7.9	5.2						
					5.6						
					5.6						
					4.2						
14-Oct-11	8	23.1		8.0	4.4						
		23.1		7.7	4.6						
					4.6						
					5.2						
					3.8						
15-Oct-11	9	23.3		7.8	4.8						
		23.5		7.4	4.6						
					4.6						
					5.2						
					3.6						
16-Oct-11	10	23.3		7.4	4.8						
		23.4		7.7	4.6						
					4.6						
					5.4						
					3.8						
17-Oct-11	11	23.1	8.10	8.0	4.4		309.0	120	102	0.38	
		23.2	8.13	8.1	4.4		303.0				
					4.4						
					5.2						
					3.6						
18-Oct-11	12	23.5		8.0	4.8						
		23.5		8.0	4.4						
					4.5						
					5.2						
					3.6						
19-Oct-11	13	23.3		7.6	4.8						

Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU6
GLC ID: 9057

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
		23.2		7.7	4.8						
					4.8						
					5.4						
					5.4						
20-Oct-11	14	23.7		7.5	3.6						
		23.8		7.7	5.2						
					4.3						
					4.8						
					4.8						
21-Oct-11	15	23.4		7.9	4.2						
		23.4		8.0	5.0						
					4.4						
					4.8						
					4.8						
22-Oct-11	16	23.3		7.6	4.4						
		23.7		7.7	4.4						
					4.4						
					5.2						
					3.2						
23-Oct-11	17	23.2		7.4	4.2						
		23.8		7.4	4.0						
					4.2						
					4.8						
					3.0						
24-Oct-11	18	23.3	8.01	7.2	4.4		313	128	104	0.07	J
		23.3	8.02	7.1	4.2		312				
					4.2						
					5.0						
					3.0						
25-Oct-11	19	24.3		7.6	4.2						
		24.6		6.6	4.0						
					4.0						
					4.8						
					3.2						
26-Oct-11	20	22.5		8.0	4.0						
		22.5		7.7	4.0						
					4.0						
					4.8						
					3.2						
27-Oct-11	21	23.5		7.2	5.6						
		23.5		7.0	5.6						
					5.2						
					6.0						
					3.8						
28-Oct-11	22	23.2		8.0	5.2						
		23.5		7.8	5.2						
					5.1						
					6.0						
					3.6						
29-Oct-11	23	23.3		7.5	4.2						
		23.3		7.3	4.4						
		23.4		7.4	4.0						
		23.5		7.6	5.6						
		23.6		7.6	4.4						
30-Oct-11	24	23.5		7.6	5.0						
		23.6		7.6	4.6						
					4.6						
					5.6						
					5.0						
31-Oct-11	25	23.2	8.13	8.2	3.2		309	148	106	0.00	U
		23.2	8.15	8.1	3.6		309				

GLEC
Great Lakes Environmental Center

Project Name: USACOE Duluth
Project Number: 5077-01
Sample ID: DS-11-MU6
GLC ID: 9057

Test Dates: 10/6/11-11/3/11
Test Type: 28 Day Survival Test
Test Species: *Lumbriculus variegatus*

Date	Test Day	Temperature (°C)	pH (s.u.)	D.O. (mg/L)	Flows (ml/min)	Flows Adjusted from (ml/min)	Conductivity (mmos)	Hardness (mg/L)	Alkalinity (mg/L)	Ammonia (mg/L)	Ammonia Result Code
					4.8						
					6.4						
					5.8						
1-Nov-11	26	23.5		6.8	5.4						
		23.5		7.3	5.2						
					4.8						
					6.4						
					5.6						
2-Nov-11	27	22.7		7.6	5.6						
		22.7		7.6	5.6						
					5.2						
					6.4						
					5.6						
3-Nov-11	28	22.3	7.92	7.9	5.4		309.0	124	106	0.05	J
		22.3	7.97	8.0	5.2		308.0	128		0.06	J
					5.2						
					6.8						
					6.0						
Mean		**23.4**	**8.05**	**7.4**		**4.7**	**309**	**131**	**106**	**0.11**	
Number		**61**	**12**	**61**		**147**	**12**	**7**	**6**	**7**	
Max #		**24.6**	**8.27**	**8.2**		**8.0**	**316**	**148**	**114**	**0.38**	
Min#		**22.3**	**7.80**	**4.4**		**2.2**	**300**	**120**	**102**	**0.00**	

Replicate	1	2	3	4	5
Surviving Weight	17.76	23.91	21.37	19.83	18.82

Average Weight **20.34**

80 organisms weighed at test initiation
Avg. weight (mg) 0.20825

Ammonia Key:
MDL = 0.04
RL = Reporting Limit (lowest standard, 0.1)
J = Between MDL and RL
U = Below MDL (non detect)
NA = Not Applicable

Appendix C
Lumbriculus variegatus

- 4-Day Survival
- 28-Day Weight

QC'd by: MLV

5077-01 USACOE Duluth

Lumbriculus variegatus 4-Day Screening Survival Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: NA	Test Photoperiod: 16:8
Sample ID: Control	Test System: 175mL Manual Delivery
Test Species: *Lumbriculus variegatus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: Bayou Aquatic
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 4

Date: 9/17/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 0718 MLV renewal time/Initials ☐ ——— renewal time/Initials

☐ ——— renewal time/Initials ☐ ——— renewal time/Initials

Food: TFS# (4g/L) ☐ ~~Feed 1.5 ml/replicate/Int~~ 9/13/11 DS

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 0656 MLV chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations	
Meter ID	40	6	Int: TB	MLV
1	———	———	AV BHV	9/10
2	22.8	5.1		10/10
3	———	———		10/10
4	22.8	4.7		10/10
~~5~~				EB 9/15/11

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: MLV

5077-01 USACOE Duluth

Lumbriculus variegatus 4-Day Screening Survival Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9048	Test Photoperiod: 16:8
Sample ID: DS-11-HIPU	Test System: 175mL Manual Delivery
Test Species: *Lumbriculus variegatus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: Bayou Aquatic
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 4

Date: 9/17/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 0718 MLV renewal time/Initials ☐ ——— renewal time/Initials

☐ ——— renewal time/Initials ☐ ——— renewal time/Initials

~~Food: TFS# (4g/L)~~ ☐ ~~Feed 1.5 ml/replicate/Int~~ NO FOOD 9/15/11 EB

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 0656 MLV chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations	
Meter ID	40	6	Int: TB	MLV
1	—	—	NAV BHV	9/10
2	22.8	5.8	FOV	10/10
3	—	—		10/10
4	22.8	5.6		9/10
5				EB 9/15/11

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: MLV

5077-01 USACOE Duluth

Lumbriculus variegatus 4-Day Screening Survival Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9052	Test Photoperiod: 16:8
Sample ID: DS-11-MOPU	Test System: 175mL Manual Delivery
Test Species: *Lumbriculus variegatus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: Bayou Aquatic
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 4

Date: 9/17/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals:

~~0718 MLV~~ renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

~~Food: TFS# (4g/L)~~ ☐ ~~Feed 1.5 ml/replicate/Int~~ NO FOOD 9/15/11 EB

Screens Cleaned: ☐ yes ☒ no ☐ n/a

~~0656 MLV~~ chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations	
Meter ID	40	6	Int: TB	MLV
1	—	—	FAV AV BHV	10/10
2	22.8	7.0		10/10
3	—	—		10/10
4	22.8	7.1		10/10
5				EB 9/15/11

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: MLV

5077-01 USACOE Duluth

Lumbriculus variegatus 4-Day Screening Survival Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9053	Test Photoperiod: 16:8
Sample ID: DS-11-WOPU	Test System: 175mL Manual Delivery
Test Species: *Lumbriculus variegatus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: Bayou Aquatic
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 4

Date: 9/17/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

☒ 0718 MLV renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

~~Food: TFS# (4g/L)~~ ~~☐ Feed 1.5 ml/replicate/Int~~ NO FOOD 9/15/11 EB

Screens Cleaned: ☐ yes ☒ no ☐ n/a

☒ 0656 MLV chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations	
Meter ID	40	6	Int: TB	MLV
1	—	—	AV FOV BHV	10/10
2	22.8	7.5	| | |	10/10
3	—	—	| | |	10/10
4	22.9	7.4	| | |	10/10
5				9/15/11 EB

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: MLV

5077-01 USACOE Duluth

Lumbriculus variegatus 4-Day Screening Survival Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9054	Test Photoperiod: 16:8
Sample ID: DS-11-IIPU	Test System: 175mL Manual Delivery
Test Species: *Lumbriculus variegatus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: Bayou Aquatic
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 4

Date: 9/17/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

~~X~~0710 MLV renewal time/Initials ☐ ——— renewal time/Initials

☐ ——— renewal time/Initials ☐ ——— renewal time/Initials

~~Food: TFS# (4g/L)~~ ☐ ~~Feed 1.5 ml/replicate/Int~~ NO FOOD 9/15/11 EB

Screens Cleaned: ☐ yes ☒ no ☐ n/a

~~X~~0656 MLV chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations	
Meter ID	40	6	Int: TB	new
1	———	———	AV BHV	9/10
2	22.8	5.5	| |	9/10
3	———	———	| |	9/10
4	22.8	5.7	| |	9/10
5				EB 9/15/11

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: MLV

5077-01 USACOE Duluth

Lumbriculus variegatus 4-Day Screening Survival Test

Project Number: 5077-01 Project Name: USACOE Duluth
GLC#: 9055
Sample ID: DS-11-MU1
Test Species: *Lumbriculus variegatus*
Date Addition of Sediment: 9/12/2011
Test Initiation Date: 9/13/2011

Test Photoperiod: 16:8
Test System: 175mL Manual Delivery
Test Temperature: 23± 1°C
Test Organism Source/Age: Bayou Aquatic
Test Termination Date: 9/23/2011

Test Day: 4
Date: 9/17/2011
Overlying Water: Dechlor
Overlying Water Batch ID (GLC Number): NA
Number Daily Renewals: 1
X 0718 MLV renewal time/Initials ☐ ——— renewal time/Initials
☐ ——— renewal time/Initials ☐ ——— renewal time/Initials
~~Food: TFS# (4g/L)~~ ☐ ~~Feed 1.5 ml/replicate/Int~~ NO FOOD 9/15/11 EB
Screens Cleaned: ☐ yes X no ☐ n/a
X 0656 MLV chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations	
Meter ID	40	6	Int: TB	MLV
1	———	———	AV BHV FAV	9/10
2	22.8	6.0	| | |	9/10
3	———	———		9/10
4	22.8	6.0		9/10
5	———	———	———	EB 9/15/11

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:
AV: Animals Visible
NAV: No Animals Visible
FOV: Foreign Organism Visible
BHV: Bore Holes Visible

QC'd by: MLV

5077-01 USACOE Duluth

Lumbriculus variegatus 4-Day Screening Survival Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9042	Test Photoperiod: 16:8
Sample ID: DS-11-MU2	Test System: 175mL Manual Delivery
Test Species: *Lumbriculus variegatus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: Bayou Aquatic
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 4

Date: 9/17/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

X 0718 MLV renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

~~Food: TFS# (4g/L)~~ ~~☐ Feed 1.5 ml/replicate/Int~~ NO FOOD 9/15/11 EB

~~Scr~~cens Cleaned: ☐ yes X no ☐ n/a

X 0656 MLV chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations	
Meter ID	40	6	Int: TB	MLV
1	—	—	FAV BHV	10/10
2	22.8	6.0	| |	9/10
3	—	—	| |	9/10
4	22.8	6.1	| |	9/10
5				EB 9/15/11

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: MLV

5077-01 USACOE Duluth

Lumbriculus variegatus 4-Day Screening Survival Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9047	Test Photoperiod: 16:8
Sample ID: DS-11-MU3	Test System: 175mL Manual Delivery
Test Species: *Lumbriculus variegatus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: Bayou Aquatic
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 4

Date: 9/17/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

X0718MLV renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

~~Food: TFS# (4g/L)~~ ~~☐ Feed 1.5 ml/replicate/Int~~ NO FEED 9/15/11 EB

Screens Cleaned: ☐ yes ☒ no ☐ n/a

X0656 MLV chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations	
Meter ID	40	6	Int: TB	New
1	—	—	FAV BHV	9/10
2	22.8	7.2		9/10
3	—	—		8/10
4	22.8	7.2	AV	10/10
5	—	—	—	MLV 9/17/11

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: MLV

5077-01 USACOE Duluth

Lumbriculus variegatus 4-Day Screening Survival Test

Project Number: 5077-01 Project Name: USACOE Duluth

GLC#: 9043	Test Photoperiod: 16:8
Sample ID: DS-11-MU4	Test System: 175mL Manual Delivery
Test Species: *Lumbriculus variegatus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: Bayou Aquatic
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 4

Date: 9/17/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

X0718 MLV renewal time/Initials ☐ ——— renewal time/Initials

☐ ——— renewal time/Initials ☐ ——— renewal time/Initials

~~Food: TFS# (4g/L)~~ ~~☐ Feed 1.5 ml/replicate/lm~~ NO FOOD 9/15/11 eB

Screens Cleaned: ☐ yes X no ☐ n/a

X0656 MLV chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations	
Meter ID	40	6	Int: TB	Auth
1	———	———	AV FAV BHV	10/10
2	22.8	7.1	| |	10/10
3	———	———		10/10
4	22.8	7.2		10/10
5				eB 9/15/11

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: MLV

5077-01 USACOE Duluth

Lumbriculus variegatus 4-Day Screening Survival Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9056	Test Photoperiod: 16:8
Sample ID: DS-11-MU5	Test System: 175mL Manual Delivery
Test Species: *Lumbriculus variegatus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: Bayou Aquatic
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 4

Date: 9/17/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

X 0718 MLV renewal time/Initials ☐ ——— renewal time/Initials

☐ ——— renewal time/Initials ☐ ——— renewal time/Initials

~~Food: TFS# (4g/L)~~ ☐ ~~Feed 1.5 ml/replicate/Int~~ NO FOOD 9/15/11 eB

Screens Cleaned: ☐ yes X no ☐ n/a

X 0656 MLV chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations	
Meter ID	40	6	Int: TB	MLV
1	———	———	FOV BHV	9/10
2	22.8	5.7	AV	9/10
3	———	———		9/10
4	22.8	5.7		9/10
5				eB 9/15/11

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:

AV: Animals Visible

NAV: No Animals Visible

FOV: Foreign Organism Visible

BHV: Bore Holes Visible

QC'd by: MLV

5077-01 USACOE Duluth

Lumbriculus variegatus 4-Day Screening Survival Test

Project Number: 5077-01 Project Name: USACOE Duluth	
GLC#: 9057	Test Photoperiod: 16:8
Sample ID: DS-11-MU6	Test System: 175mL Manual Delivery
Test Species: *Lumbriculus variegatus*	Test Temperature: 23± 1°C
Date Addition of Sediment: 9/12/2011	Test Organism Source/Age: Bayou Aquatic
Test Initiation Date: 9/13/2011	Test Termination Date: 9/23/2011

Test Day: 4

Date: 9/17/2011

Overlying Water: Dechlor

Overlying Water Batch ID (GLC Number): NA

Number Daily Renewals: 1

X 0710 MW renewal time/Initials ☐ — renewal time/Initials

☐ — renewal time/Initials ☐ — renewal time/Initials

~~Food: TFS# (4g/L)~~ ☐ ~~Feed 1.5 ml/replicate/Int~~ NO FOOD 9/15/11 EB

Screens Cleaned: ☐ yes X no ☐ n/a

X 0656 MW chemistries time/Initial

Replicate	Temperature (23± 1°C)*	Dissolved Oxygen (mg/L)*	Observations	
Meter ID	40	6	Int: TB	MW
1	—	—	NAV BHV	8/10
2	22.8	6.4	|	9/10
3	—	—	|	9/10
4	22.8	6.6	FOV	9/10
5	—	—	—	EB 9/15/11

* Contact Laboratory Coordinator if Dissoved Oxygen level is < 2.5 mg/L or Temperature is out of range.

Key:
AV: Animals Visible
NAV: No Animals Visible
FOV: Foreign Organism Visible
BHV: Bore Holes Visible

Lumbriculus 4-day screen-4-day survival

Start Date:	9/13/2011	Test ID:	5077lumb	Sample ID:	Duluth 4day
End Date:	9/17/2011	Lab ID:	-GREAT LAKES ENVIRONM	Sample Type:	-WHOLE SEDIMENT
Sample Date:		Protocol:	EPA 600/R-99/064	Test Species:	LV-lumbriculus variegatus
Comments:	USACOE Duluth 4-day Lmbriculus survival Sept 13-17, 2011				

Conc-%	1	2	3	4
lab con	0.9000	1.0000	1.0000	1.0000
ds-11-mu-2	1.0000	0.9000	0.9000	0.9000
ds-11-mu-4	1.0000	1.0000	1.0000	1.0000
ds-11-mu-3	0.9000	0.9000	0.8000	1.0000
ds-11-hipu	0.9000	1.0000	1.0000	0.9000
ds-11-mopu	1.0000	1.0000	1.0000	1.0000
ds-11-wopu	1.0000	1.0000	1.0000	1.0000
ds-11-iipu	0.9000	0.9000	0.9000	0.9000
ds-11-mu-1	0.9000	0.9000	0.9000	0.9000
ds-11-mu-5	0.9000	0.9000	0.9000	0.9000
ds-11-mu-6	0.8000	0.9000	0.9000	0.9000

			Transform: Arcsin Square Root						1-Tailed	
Conc-%	Mean	N-Mean	Mean	Min	Max	CV%	N	t-Stat	Critical	MSD
lab con	0.9750	1.0000	1.3713	1.2490	1.4120	5.942	4			
ds-11-mu-2	0.9250	0.9487	1.2898	1.2490	1.4120	6.318	4	1.414	3.143	0.1811
ds-11-mu-4	1.0000	1.0256	1.4120	1.4120	1.4120	0.000	4	-1.000	4.541	0.1850
ds-11-mu-3	0.9000	0.9231	1.2543	1.1071	1.4120	9.935	4	1.571	3.365	0.2505
ds-11-hipu	0.9500	0.9744	1.3305	1.2490	1.4120	7.072	4	0.655	3.365	0.2094
ds-11-mopu	1.0000	1.0256	1.4120	1.4120	1.4120	0.000	4	-1.000	4.541	0.1850
ds-11-wopu	1.0000	1.0256	1.4120	1.4120	1.4120	0.000	4	-1.000	4.541	0.1850
ds-11-iipu	0.9000	0.9231	1.2490	1.2490	1.2490	0.000	4	3.000	4.541	0.1850
ds-11-mu-1	0.9000	0.9231	1.2490	1.2490	1.2490	0.000	4	3.000	4.541	0.1850
ds-11-mu-5	0.9000	0.9231	1.2490	1.2490	1.2490	0.000	4	3.000	4.541	0.1850
ds-11-mu-6	0.8750	0.8974	1.2136	1.1071	1.2490	5.846	4	2.919	3.365	0.1818

Auxiliary Tests	Statistic	Critical	Skew	Kurt
Shapiro-Wilk's Test indicates non-normal distribution (p <= 0.01)	0.85286	0.924	-0.0505	2.38408
Equality of variance cannot be confirmed				

Hypothesis Test (1-tail, 0.01)	MSDu	MSDp	MSB	MSE	F-Prob	df
Heteroscedastic t Test indicates no significant differences	0.0992	0.10325	0.0237	0.00388	3.4E-05	10, 33
Treatments vs lab con						

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, October 21, 2011
Test Day: 29
Test Termination Date: October 20, 2011
Technician Initials: NS, EB, MS

GLC #: Lab Control
Test Material: Lab Control
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar NS	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	88.78	105.46	16.68
2	88.60	102.82	14.22
3	88.50	104.43	15.93
4	88.85	103.68	14.83
5	88.97	~~101.18~~ MS 10-24-11	~~12.22~~ MS 10-24-11
		107.41 W/1.6	18.44

Math QC: TB 8/24/11

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, October 21, 2011
Test Day: 29
Test Termination Date: October 20, 2011
Technician Initials: NS, OB, MS

GLC #: 9042
Test Material: DS-11-MU2
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar NS	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	88.59	107.57	18.98
2	88.15	106.72	18.57
3	88.84	112.65	23.81
4	88.83	107.47	18.64
5	88.97	106.12	17.15

Math QC: TB 8/24/11

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, October 21, 2011
Test Day: 29
Test Termination Date: October 20, 2011
Technician Initials: NS, eB, ms, eS

GLC #: 9043
Test Material: DS-11-MU4
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	~~88.91~~ NS 10/21/11 ~~88.59~~ NS 10/21/11 88.91	106.25	17.34
2	88.86	107.44	18.58
3	~~88.84~~ NS 10/21/11 88.52	107.45	~~18.94~~ 18.93 TB 10/24/11
4	~~88.83~~ NS 10/21/11 88.75	105.01	16.26
5	~~88.97~~ 10/21/11 88.69	105.05	16.36

math QC: TB 10/24/11

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, October 21, 2011
Test Day: 29
Test Termination Date: October 20, 2011
Technician Initials: NS, AS, EB, MS

GLC #: 9047
Test Material: DS-11-MU3
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar NS	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	88.86	108.17	19.31
2	88.82	107.14	18.32
3	88.60	107.65	19.05
4	88.90	108.64	20.74
5	88.70	106.56	17.86

math QC: TB 10/24/11

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, October 21, 2011
Test Day: 29
Test Termination Date: October 20, 2011
Technician Initials: NS, EB, MS

GLC #: 9048
Test Material: DS-11-HIPU
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar NS	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	88.70	107.25	18.55
2	88.90	104.55	15.65
3	88.86	~~110.97~~ 10-21-11 MS 108.35	~~22.11~~ 10-21-11 MS 19.49
4	88.59	109.59	~~20.99~~ 21.00 TB 10/24/11
5	88.68	109.96	21.28

Math QC: TB 10/24/11

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, October 21, 2011
Test Day: 29
Test Termination Date: October 20, 2011
Technician Initials: NS, RB, eB, MS, ES

GLC #: 9052
Test Material: DS-11-MOPU
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar NS	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	88.67	110.23 eB 10/21/11 ~~108.29 19.63~~ RB 10/24/11	21.56 ~~19.63~~ RB 10/21/11
2	88.66	108.29	19.63
3	88.41	107.89	19.48
4	88.66	106.92	18.26
5	88.82	105.33	16.51

math QC : TB 10/24/11

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, November 4, 2011
Test Day: 29
Test Termination Date: November 3, 2011
Technician Initials: CB

GLC #: NA
Test Material: Control
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar CB	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	88.89	106.70	17.81
2	89.62	107.16	18.14
3	88.82	106.52	17.70
4	88.74	105.56	16.82
5	88.98	106.85	17.87

math QC = TB

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, November 4, 2011
Test Day: 29
Test Termination Date: November 3, 2011

Technician Initials: eB ES

GLC #: 9053
Test Material: DS-11-WOPU
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar EB	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	88.72	104.84	16.12
2	88.77	107.45	18.68
3	88.79	107.66	18.87
4	88.82	~~106.12~~ 107.35 wrong sample 11-7	~~17.3~~ MLS 11-3 18.53
5	88.68	107.59 MS	18.91

math QC = TB

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, November 4, 2011
Test Day: 29
Test Termination Date: November 3, 2011
Technician Initials: CB

GLC #: 9054
Test Material: DS-11-IIPU
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar CB	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	88.62	110.12	21.50
2	89.07	106.15	17.08
3	88.95	107.46	18.51
4	89.08	106.94	~~17.88~~ 17.86 TB 11/7/11
5	88.74	105.29	16.55

Math QC = TB

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, November 4, 2011
Test Day: 29
Test Termination Date: November 3, 2011
Technician Initials: EB

GLC #: 9055
Test Material: DS-11-MU1
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar EB	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	88.59	107.72	19.13
2	88.64	~~111.38~~ 111.38 MS 11-8-11	~~22.75~~ 22.74 TB 11/7/11
3	88.89	109.95	21.06
4	88.74	105.94	17.20
5	88.72	109.53	20.81

math QC = TB

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, November 4, 2011
Test Day: 29
Test Termination Date: November 3, 2011
Technician Initials: EB

GLC #: 9056
Test Material: DS-11-MU5
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar EB	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	88.78	107.24	18.46
2	89.00	107.59	18.59
3	88.79	109.44	20.65
4	88.96	106.12	17.16
5	88.92	107.90	18.98

math QC = TB

5077-01 USACOE Duluth
Lumbriculus variegatus 28 Day Survival Test

Date: Friday, November 4, 2011
Test Day: 29
Test Termination Date: November 3, 2011

Technician Initials: eB eS

GLC #: 9057
Test Material: DS-11-MU6
Test Species: *Lumbriculus variegates*
Food: None

Test System: Diluter Automatic renewal
Overlying Water: Dechlorinated municipal water
Photoperiod: 16:8
Temperature (°C): 23 ± 1°C
Organisms Source/Age: Bayou Aquatic Adult

Replicate	(A) Weight of Jar eB	(B) Weight of Jar and *Lumbriculus*	(A – B) Weight of *Lumbriculus*
1	88.49	106.25	17.76
2	88.03	111.94	~~23.93~~ 23.91 TB 11/7/11
3	88.55	109.92	21.37
4	88.89	108.72	19.83
5	88.64	107.46	18.82

math QC = TB

APPENDIX M

RTI 26 Congeners PCB Lumbriculus Laboratory Report

Table 14: RTI Laboratory Analytical Results Table for October Samples

Table 15: RTI Laboratory Analytical Results Table for November Samples

RTI Analytical Reports and Chain-of Custodies

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-001A	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.6	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-002A	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.2	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-003A	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.5	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-004A	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.8	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-005A	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011		Total Lipids	3.4	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-006A	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.7	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-007A	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.3	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-008A	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.5	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-009A	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	4.0	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-010A	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.7	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-011A	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	4.0	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-012A	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	2.8	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-013A	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.9	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-014A	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.6	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-015A	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	4.5	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-016A	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	2.8	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-017A	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.8	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-018A	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	4.1	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-019A	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.8	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-020A	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	2.7	0.0050	0.0050	0.0050	B	%	10/31/2011	LIPIDS
1110760-021A	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.0	0.0050	0.0050	0.0050		%	10/31/2011	LIPIDS
1110760-022A	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	2.9	0.0050	0.0050	0.0050		%	10/31/2011	LIPIDS
1110760-023A	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	2.6	0.0050	0.0050	0.0050		%	10/31/2011	LIPIDS
1110760-024A	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	2.8	0.0050	0.0050	0.0050		%	10/31/2011	LIPIDS
1110760-025A	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	2.8	0.0050	0.0050	0.0050		%	10/31/2011	LIPIDS
1110760-026A	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.2	0.0050	0.0050	0.0050		%	10/31/2011	LIPIDS
1110760-027A	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.1	0.0050	0.0050	0.0050		%	10/31/2011	LIPIDS
1110760-028A	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.6	0.0050	0.0050	0.0050		%	10/31/2011	LIPIDS
1110760-029A	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011		Total Lipids	3.9	0.0050	0.0050	0.0050		%	10/31/2011	LIPIDS
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	11	0	0			%REC	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.32	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.31	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	11	0	0			%REC	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.30	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.30	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.35	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-002a	Lab Control 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	10	0	0			%REC	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.32	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.31	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	11	0	0			%REC	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.1	0	0			%REC	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.17	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.18	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.28	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.28	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	1.2	0.28	0	1.9	J	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	1.8	0.32	0	1.9	J	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.31	0	1.9	U	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.37	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.33	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	0.91	0.17	0	1.9	J	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.97	0.27	0	1.9	J	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	34883-43-7	2,4´-DiCB	ND	0.45	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.38	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-005a	Day 0, Background	USACOE Lumbriculus Tissue Samples		10/25/2011	2051-24-3	DeCB	ND	0.20	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.7	0	0			%REC	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	1.1	0.16	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	4.4	0.18	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	2.2	0.17	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.5	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	0.47	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.7	0.29	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	3.7	0.33	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.69	0.32	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.4	0.38	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.2	0.18	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.9	0.17	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	2.0	0.27	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-006a	DS-11-MU2 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.6	0	0			%REC	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	3.9	0.19	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	1.9	0.17	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.4	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	0.42	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.3	0.29	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	3.3	0.33	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.60	0.32	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.2	0.39	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.1	0.19	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.7	0.18	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.8	0.28	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-007a	DS-11-MU2 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	10	0	0			%REC	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	3.4	0.19	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	1.7	0.17	0	2.0	J	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.3	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	0.40	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	2.9	0.29	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	2.9	0.33	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.49	0.32	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.0	0.39	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	0.99	0.19	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.3	0.18	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.6	0.28	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-008a	DS-11-MU2 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	10	0	0			%REC	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	1.0	0.17	0	2.0	Jm	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	4.4	0.19	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	2.2	0.18	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.5	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	0.53	0.30	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.7	0.30	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	3.7	0.34	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.69	0.32	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.4	0.39	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.35	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.2	0.19	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	3.0	0.18	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	2.0	0.28	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	6.6	0.48	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-009a	DS-11-MU2 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	10	0	0			%REC	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	4.1	0.19	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	1.9	0.17	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.4	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	0.41	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.5	0.29	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	3.3	0.33	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.56	0.32	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.2	0.39	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.1	0.19	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.7	0.18	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.8	0.28	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-010a	DS-11-MU2 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.9	0	0			%REC	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	1.6	0.18	0	2.0	Jm	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	0.67	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	1.8	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	1.5	0.33	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	0.49	0.38	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	0.59	0.18	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.3	0.17	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.85	0.27	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-011a	DS-11-MU4 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	10	0	0			%REC	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	2.3	0.18	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	0.69	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	2.1	0.29	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	1.8	0.33	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.40	0.32	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	0.63	0.38	0	2.0	J	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	0.65	0.18	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.4	0.17	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.98	0.27	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-012a	DS-11-MU4 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.9	0	0			%REC	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.17	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	4.2	0.18	0	1.9		µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.3	0.28	0	1.9	J	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	0.75	0.28	0	1.9	J	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.8	0.28	0	1.9		µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	3.6	0.32	0	1.9		µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.85	0.31	0	1.9	J	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.4	0.38	0	1.9	J	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.33	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.5	0.18	0	1.9	J	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.7	0.17	0	1.9		µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	2.1	0.27	0	1.9		µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	1.5	0.38	0	1.9	J	µg/Kg	11/9/2011	SW8082CON
1110760-013a	DS-11-MU4 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	1.9	U	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	10	0	0			%REC	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	4.2	0.19	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.3	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	0.74	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.7	0.29	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	3.5	0.33	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.80	0.32	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.4	0.39	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.4	0.19	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.6	0.18	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	2.0	0.28	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-014a	DS-11-MU4 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	11	0	0			%REC	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	1.7	0.18	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	0.28	0.17	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.5	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	0.84	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	4.2	0.29	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	4.0	0.33	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.97	0.32	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.6	0.38	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	1.6	0.34	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.8	0.18	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.9	0.18	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	2.3	0.28	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-015a	DS-11-MU4 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	10	0	0			%REC	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	4.0	0.19	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.2	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	0.55	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.6	0.29	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	3.7	0.33	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.77	0.32	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.3	0.39	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.4	0.19	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.7	0.18	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	2.1	0.28	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-016a	DS-11-MU3 - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	10	0	0			%REC	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	4.5	0.18	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.3	0.28	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	0.59	0.29	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	4.1	0.29	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	4.0	0.33	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.90	0.31	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.4	0.38	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.6	0.18	0	2.0	J	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	3.1	0.17	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	2.3	0.27	0	2.0		µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-017a	DS-11-MU3 - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/9/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	11	0	0			%REC	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	4.0	0.19	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.2	0.29	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	0.48	0.29	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.5	0.29	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	3.6	0.33	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.69	0.32	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.1	0.39	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.1	0.19	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.7	0.18	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	2.0	0.28	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-018a	DS-11-MU3 - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.5	0	0			%REC	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	2.6	0.18	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.0	0.28	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.2	0.29	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	3.2	0.33	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.31	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	0.99	0.38	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/10/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.3	0.18	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.4	0.17	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.8	0.27	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	1.4	0.46	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-019a	DS-11-MU3 - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	10	0	0			%REC	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	3.7	0.18	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.1	0.29	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.2	0.29	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	3.3	0.33	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	1.2	0.38	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.0	0.18	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.5	0.18	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.9	0.28	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-020a	DS-11-MU3 - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.8	0	0			%REC	11/10/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	2.7	0.18	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.4	0.29	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.6	0.29	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	2.8	0.33	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.49	0.32	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	0.73	0.38	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.4	0.18	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.2	0.18	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.4	0.28	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-021a	DS-11-HIPU - 1	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.9	0	0			%REC	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	3.0	0.18	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.6	0.29	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	4.2	0.29	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	3.2	0.33	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.59	0.31	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	0.84	0.38	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.8	0.18	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.5	0.17	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.7	0.27	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-022a	DS-11-HIPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.6	0	0			%REC	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.17	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.18	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	2.6	0.18	0	1.9		µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.5	0.28	0	1.9	J	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.28	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.5	0.28	0	1.9		µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	2.7	0.32	0	1.9		µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.45	0.31	0	1.9	J	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	0.58	0.37	0	1.9	J	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.33	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.5	0.18	0	1.9	J	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.1	0.17	0	1.9		µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.4	0.27	0	1.9	J	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.45	0	1.9	U	µg/Kg	11/10/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.38	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-023a	DS-11-HIPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	1.9	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	10	0	0			%REC	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	2.7	0.18	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.4	0.28	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.6	0.29	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	2.8	0.33	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.55	0.31	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	0.81	0.38	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.2	0.17	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.5	0.27	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-024a	DS-11-HIPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.0	0	0			%REC	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.17	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	2.4	0.19	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.4	0.29	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.30	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.4	0.30	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	2.6	0.34	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	0.45	0.32	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	0.64	0.39	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.35	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	1.4	0.19	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.0	0.18	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.3	0.28	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-025a	DS-11-HIPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	13	0	0			%REC	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	1.8	0.18	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	0.87	0.29	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	2.4	0.29	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	2.1	0.33	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	0.77	0.18	0	2.0	J	µg/Kg	11/10/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.7	0.18	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.2	0.28	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-026a	DS-11-MOPU - 2	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.5	0	0			%REC	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	1.4	0.19	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	0.66	0.29	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	1.9	0.29	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	1.7	0.33	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.4	0.18	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.0	0.28	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-027a	DS-11-MOPU - 3	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.6	0	0			%REC	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	1.5	0.18	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	0.66	0.29	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	2.2	0.29	0	2.0		µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	1.7	0.33	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.4	0.18	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.0	0.28	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-028a	DS-11-MOPU - 4	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.2	0	0			%REC	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.17	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	2.0	0.19	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.30	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	1.8	0.30	0	2.0	J	µg/Kg	11/10/2011	SW8082CON

APPENDIX M

Table 14: October Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-73-2	2,2´,4,5,5´-PeCB	1.7	0.34	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	37680-65-2	2,2´,5-TrCB	ND	0.35	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.19	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.3	0.18	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.97	0.28	0	2.0	J	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	34883-43-7	2,4´-DiCB	ND	0.48	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/10/2011	SW8082CON
1110760-029a	DS-11-MOPU - 5	USACOE Lumbriculus Tissue Samples	10/21/2011	10/25/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/10/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-001A	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.9	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-003A	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.1	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-004A	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.4	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-005A	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.7	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-006A	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	4.8	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-007A	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.6	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-008A	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	4.1	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-009A	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.3	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-010A	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.5	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-011A	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	4.0	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-012A	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	4.3	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-013A	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.2	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-014A	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.9	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-015A	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.6	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-016A	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	4.7	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-017A	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.6	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-018A	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.7	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-019A	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.7	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-020A	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	4.6	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-021A	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.9	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-022A	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	5.3	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-023A	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.2	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-024A	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.4	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-025A	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.5	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-026A	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.3	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-027A	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	2.7	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-028A	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.0	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-029A	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.5	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-030A	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011		Total Lipids	3.6	0.0050	0.0050	0.0050	B	%	11/10/2011	LIPIDS
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	7.7	0	0			%REC	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.17	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.19	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.14	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.18	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.27	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.23	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.16	0	1.9	U	µg/Kg	11/26/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.27	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.28	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.28	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.31	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.30	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.37	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.33	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.22	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.44	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.31	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.37	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-001a	Lab Control 1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.20	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.6	0	0			%REC	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/26/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-003a	Lab Control 3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	7.6	0	0			%REC	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.17	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.19	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.18	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.28	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.28	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.28	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.32	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.31	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.37	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.33	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.27	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.45	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.31	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.38	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-004a	Lab Control 4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.20	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.4	0	0			%REC	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.17	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.19	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.14	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.18	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.27	0	1.9	U	µg/Kg	11/26/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.16	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.27	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.28	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.28	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.31	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.30	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.37	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.33	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.22	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.44	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.31	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.37	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-005a	Lab Control 5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.20	0	1.9	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.4	0	0			%REC	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-006a	Day 0 Background	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.0	0	0			%REC	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-007a	DS-11-WOPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.8	0	0			%REC	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/26/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.31	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-008a	DS-11-WOPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.0	0	0			%REC	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/26/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-009a	DS-11-WOPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.6	0	0			%REC	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.21	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.19	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.30	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.30	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.34	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.35	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.19	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.48	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-010a	DS-11-WOPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.2	0	0			%REC	11/26/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.19	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.35	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.19	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-011a	DS-11-WOPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/26/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.6	0	0			%REC	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	1.3	0.18	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	0.95	0.28	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	1.7	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	1.1	0.32	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.31	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.0	0.17	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.58	0.27	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-012a	DS-11-IIPU-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.3	0	0			%REC	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	1.4	0.18	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.0	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	1.8	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	1.2	0.33	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.1	0.17	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.65	0.28	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-013a	DS-11-IIPU-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.3	0	0			%REC	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	1.5	0.19	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.0	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.30	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	2.0	0.30	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	1.3	0.34	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.35	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.2	0.18	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.66	0.28	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-014a	DS-11-IIPU-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.5	0	0			%REC	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.17	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.18	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	1.6	0.18	0	1.9	J	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	1.9	U	µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.2	0.28	0	1.9	J	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.28	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	2.6	0.28	0	1.9		µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	1.5	0.32	0	1.9	J	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.31	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.37	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.33	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.3	0.17	0	1.9	J	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.86	0.27	0	1.9	J	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.45	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.38	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-015a	DS-11-IIPU-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	7.8	0	0			%REC	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	1.4	0.18	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.1	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	2.3	0.29	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	1.3	0.33	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.2	0.17	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.80	0.27	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-016a	DS-11-IIPU-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	7.7	0	0			%REC	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	0.83	0.18	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	0.92	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	1.7	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	0.67	0.33	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	0.44	0.17	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.29	0.28	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-017a	DS-11-MU1-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	7.8	0	0			%REC	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	0.90	0.19	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.0	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.30	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	2.0	0.30	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	0.74	0.34	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.35	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	0.47	0.18	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.43	0.28	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.48	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-018a	DS-11-MU1-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.0	0	0			%REC	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.17	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	0.89	0.18	0	1.9	J	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.0	0.28	0	1.9	J	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.28	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	1.9	0.28	0	1.9	J	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	0.70	0.32	0	1.9	J	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.31	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.37	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.33	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	0.46	0.17	0	1.9	J	µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.38	0.27	0	1.9	J	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.38	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-019a	DS-11-MU1-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.4	0	0			%REC	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	1.2	0.18	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.2	0.28	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	2.3	0.29	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	0.88	0.32	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.31	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	0.57	0.17	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.44	0.27	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-020a	DS-11-MU1-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.9	0	0			%REC	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	0.90	0.18	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.0	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	2.0	0.29	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	0.71	0.33	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	0.45	0.17	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	0.40	0.27	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-021a	DS-11-MU1-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.6	0	0			%REC	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	1.1	0.16	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	2.9	0.18	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.6	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.7	0.29	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	2.9	0.33	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.4	0.17	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.6	0.27	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-022a	DS-11-MU5-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.0	0	0			%REC	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	1.1	0.16	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	2.7	0.18	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.5	0.28	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.5	0.29	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	2.8	0.32	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.31	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.3	0.17	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.5	0.27	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-023a	DS-11-MU5-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.7	0	0			%REC	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	1.0	0.16	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	2.5	0.18	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.4	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.2	0.29	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	2.5	0.33	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	2.0	0.18	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.4	0.28	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-024a	DS-11-MU5-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.8	0	0			%REC	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	0.97	0.16	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	2.4	0.19	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	1.4	0.29	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	3.3	0.29	0	2.0		µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	2.4	0.33	0	2.0		µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	1.9	0.18	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	1.4	0.28	0	2.0	J	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-025a	DS-11-MU5-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.2	0	0			%REC	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-026a	DS-11-MU6-1	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.7	0	0			%REC	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.24	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.40	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-027a	DS-11-MU6-2	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.7	0	0			%REC	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.46	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-028a	DS-11-MU6-3	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	9.4	0	0			%REC	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.20	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.19	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.25	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.29	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.32	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.38	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.34	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.28	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.23	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.15	0	2.0	U	µg/Kg	11/27/2011	SW8082CON

APPENDIX M

Table 15: November Lumbriculus Analysis Results

Sample ID	Client Sample ID	Project Name	Date Collected	Date Received	CAS	Analyte	Result	MDL	LOD	LOQ	Qualifier	Units	Analysis Date	Method
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.47	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.33	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.27	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.39	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-029a	DS-11-MU6-4	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.21	0	2.0	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	877-09-8	Surr: Tetrachloro-m-xylene	8.7	0	0			%REC	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	40186-72-9	2,2',3,3',4,4',5,5',6-NoCB	ND	0.17	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-78-2	2,2´,3,3´,4,4´,5,6-OcCB	ND	0.19	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-30-6	2,2´,3,3´,4,4´,5-HpCB	ND	0.16	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-07-3	2,2´,3,3´,4,4´-HxCB	ND	0.15	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-29-3	2,2´,3,4,4´,5,5´-HpCB	ND	0.18	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-69-1	2,2´,3,4,4´,5´,6-HpCB	ND	0.28	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-28-2	2,2´,3,4,4´,5´-HxCB	ND	0.18	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	74472-48-3	2,2´,3,4,4´,6,6´-HpCB	ND	0.24	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-02-8	2,2´,3,4,5´-PeCB	ND	0.16	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	52663-68-0	2,2´,3,4´,5,5´,6-HpCB	ND	0.28	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-39-5	2,2´,3,5´-TeCB	ND	0.28	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35065-27-1	2,2´,4,4´,5,5´-HxCB	ND	0.28	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-73-2	2,2´,4,5,5´-PeCB	ND	0.32	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	41464-40-8	2,2´,4,5´-TeCB	ND	0.30	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	35693-99-3	2,2´,5,5´-TeCB	ND	0.37	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	37680-65-2	2,2´,5-TrCB	ND	0.33	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-14-4	2,3,3´,4,4´-PeCB	ND	0.18	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	38380-03-9	2,3,3´,4´,6-PeCB	ND	0.17	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	31508-00-6	2,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-10-0	2,3´,4,4´-TeCB	ND	0.22	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	7012-37-5	2,4,4´-TrCB	ND	0.14	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	34883-43-7	2,4´-DiCB	ND	0.45	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32774-16-6	3,3´,4,4´,5,5´-HxCB	ND	0.31	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	57465-28-8	3,3´,4,4´,5-PeCB	ND	0.26	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	32598-13-3	3,3´,4,4´-TeCB	ND	0.38	0	1.9	U	µg/Kg	11/27/2011	SW8082CON
1111275-030a	DS-11-MU6-5	USACOE Lumbriculus Tissue Samples	11/4/2011	11/9/2011	2051-24-3	DeCB	ND	0.20	0	1.9	U	µg/Kg	11/27/2011	SW8082CON

RTI LABORATORIES, INC.

Analytical Report

Level IV Data Package
for RTI WO 1110760

Prepared by:

RTI Laboratories, Inc.
31628 Glendale
Livonia, MI 48150

FutureNet Group, Inc.
Mr. Henry Shah
12801 Auburn St.
Detroit, MI 48223-3413

Project: USACOE Lumbriculus Tissue Samples

Reviewed and Approved By: _____ Date: November 30, 2011
Charles O'Bryan, Director Quality Management

31628 Glendale Street • Livonia, Michigan 48150-1827
Phone (734) 422-8000 • Fax (734) 422-5342
Website www.rtilab.com

TABLE OF CONTENTS
FutureNet Group, Inc.
Project Name: USACOE -Lumbriculus Tissue Samples
RTI Laboratories, Inc. Work Order #: 1110760

I	Case Narrative	1
II	Definitions and Acronyms	2
III	Chain of Custody/Sample Receiving Documents	3-13
IV	Work Order Sample Summary	14
V	Dates Report	15-17
VI	Analytical Report	18-46
VII	QC Summary Report	47-56
VIII	Polychlorinated Biphenyl Congeners (PCBs) Data	
	1. Prep Batch Reports	
	a. 10/31/2011	57
	b. 11/1/2011	58
	2. Analytical Sequence Log 11/8/2011 (Run No. 44386)	59-60
	3. Analytical Run Summary	61-107
	4. Surrogates Report	108-113
	5. Spikes Report	114-125
	6. Method Blank Contamination Reports	
	a. Batch ID. 24238	126
	b. Batch ID. 24246	127
	7. Injection Log/Tune/Raw Data	128-389
	8. Second Column RPD Report	390-400
	9. Injection Log/Calibration Curves/Standards	401-480
IX	Total Lipids Data	
	1. Prep Batch Report 10/27/2011	481-482
	2. Analytical Sequence Log 10/27/2011 (Run No. 43809)	483
	3. Analytical Run Summary	484-488
	4. Method Blank Contamination Report	489-490
	5. Balance Verification Log	491
	6. Raw Data/Temperature Log	492
	7. Prep Batch Report 10/27/2011	493
	8. Analytical Sequence Log 10/27/2011 (Run No. 43811)	494
	9. Analytical Run Summary	495-497
	10. Method Blank Contamination Report	498
	11. Balance Verification Log	499
	12. Raw Data/Temperature Log	500

RTI Laboratories, Inc.

Date: *30-Nov.-11*

CLIENT: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
Lab Order: 1110760

CASE NARRATIVE

SAMPLE RECEIPT:
Samples were received at the RTI Laboratory, Livonia, MI on 10/25/2011. Samples were received on wet ice and sample temperatures are recorded on the chain of custody and sample receiving documents. The sample set consisted of 29 animal tissue samples.

SAMPLE ANALYSIS:
Samples were analyzed at the RTI Livonia Laboratory for:
Total Lipids
Polychlorinated Biphenyl Congeners (PCBs) – EPA Methods 3550C/8082

Analytical sample results are reported to the RL (reporting limit). Data points less than the RL but greater than the MDL (J qualified) have been excluded from the report on client request.

QUALITY CONTROL:

Polychlorinated Biphenyls Congener Analyses:

All sample analyses included a Method Blank, LCS and MS/MSD where applicable. All QC parameters were within established control limits except where noted on the QC summary forms or below. Initial and continuing calibration results were within method specifications.

Surrogate recoveries were within established control limits.

Total Lipids Analyses:

All sample analyses included the method specified quality control samples.

Method Blank: MB-24188 result was greater than ½ the LOQ. Result – 0.01, ½ LOQ – 0.00025..

No other problems were noted during the analytical events associated with this project.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Signed: Charles O'Bryan
Charles O'Bryan, Director, Quality Management

Date: 11/30/2011

RTI Laboratories - Definitions and Acronyms

WO#: 1110760

Date Reported: 11/22/2011
Revision v2

Definitions:

% REC: Percent Recovery; a measure of accuracy expressed as a percentage of a measured (recovered) concentration compared to the known concentration added to the sample.

% RPD: Relative Percent Difference; a measure of precision expressed as a percentage of the difference between two duplicates relative to the average concentration.

DF: Dilution factor; the dilution factor applied to the prepared sample.

DUP: Duplicate; aliquots of a sample taken from the same container under laboratory conditions and processed and analyzed independently, used to calculate Precision (%RPD).

LCS: Laboratory Control Sample; prepared by adding a known mass of target analytes to a specified amount of de-ionized water and prepared with the batch of samples, used to calculate Accuracy (%REC).

LCSD: The duplicate sample of the LCS, used to calculate both Accuracy (%REC) and Precision (%RPD)

MBLK: Method Blank; a sample of similar matrix that is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure, and in which no target analytes or interferences are present at concentrations that impact the analytical results for sample analyses.

MS: Matrix Spike; prepared by adding a known mass of target analytes to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available, used to calculate Accuracy (%REC)

MSD: The duplicate sample of the MS, used to calculate both Accuracy (%REC) and Precision (%RPD)

PL: Permit limit; only applicable to wastewater reports.

Qual: Qualifier that applies to the analyte reported

Result: Analyte concentration reported

RL: Reporting Limit/Limit of Quantitation; the limit to which data is compared for reporting. Analyte concentrations below the reporting limit are reported as ND or with a "J" qualifier.

Units: The units in which the analyte concentration is reported.

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Estimated concentration
M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit
PL	Permit Limit
RL	Reporting Limit
S	Spike Recovery outside accepted recovery limits

GLEC FU01

Great Lakes Environmental Center

1110760

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD

(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 10/24/2011
Witness:
Date: 10/24/2011

GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
Control- Rep 1	Lab control	10/21/2011	16.68	Amber Jar	Lumbriculus	Frozen	26 PCB congener
Control- Rep 2	Lab control	10/21/2011	14.22	Amber Jar	Lumbriculus	Frozen	26 PCB congener
Control- Rep 3	Lab control	10/21/2011	15.93	Amber Jar	Lumbriculus	Frozen	26 PCB congener
Control- Rep 4	Lab control	10/21/2011	14.83	Amber Jar	Lumbriculus	Frozen	26 PCB congener
Day 0, Background	Lab control		30.00	Amber Jar	Lumbriculus	Frozen	26 PCB congener

1
2
3
4
5

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Erica Schneider	10.24.11	Christin Connaughton	10/25/11 12:30 PM
2.				

Condition of Sample Upon Receipt:

☑ Received on Ice

All in tact.
3.2°-8.8°C

Cooler: Ocean Blue

1110760

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD
(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 10/24/2011
Witness:
Date: 10/24/2011

GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
9042-Rep 1	DS-11-MU2	10/21/2011	18.98	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9042-Rep 2	DS-11-MU2	10/21/2011	18.57	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9042-Rep 3	DS-11-MU2	10/21/2011	23.81	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9042-Rep 4	DS-11-MU2	10/21/2011	18.64	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9042-Rep 5	DS-11-MU2	10/21/2011	17.15	Amber Jar	Lumbriculus	Frozen	26 PCB congener

6 1 8 9 10

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Eliza Schmeider	10.24.11	Christa Cowch	10/25/11 12:30 PM
2.				

Condition of Sample Upon Receipt:

All intact.
3.2°-8.8°C

☑ Received on Ice

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD
(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 10/24/2011
Witness:
Date: 10/24/2011

GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
9043-Rep 1	DS-11-MU4	10/21/2011	17.34	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9043-Rep 2	DS-11-MU4	10/21/2011	18.58	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9043-Rep 3	DS-11-MU4	10/21/2011	18.93	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9043-Rep 4	DS-11-MU4	10/21/2011	16.26	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9043-Rep 5	DS-11-MU4	10/21/2011	16.36	Amber Jar	Lumbriculus	Frozen	26 PCB congener

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Erica Schneider	10.24.11	Christin Conrad	10/25/11 12:30 PM
2.				

Condition of Sample Upon Receipt:

All in tact.
3.2°-8.8°C

☑ Received on Ice

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD
(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 10/24/2011
Witness:
Date: 10/24/2011

GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
9047-Rep 1	DS-11-MU3	10/21/2011	19.31	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9047-Rep 2	DS-11-MU3	10/21/2011	18.32	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9047-Rep 3	DS-11-MU3	10/21/2011	19.05	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9047-Rep 4	DS-11-MU3	10/21/2011	20.74	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9047-Rep 5	DS-11-MU4	10/21/2011	17.86	Amber Jar	Lumbriculus	Frozen	26 PCB congener

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Erica Johnson	10.24.11	Chris Conrad	10/25/11 12:30 PM
2.				

Condition of Sample Upon Receipt:
All in tact.
9.2° - 8.8°C

☑ Received on Ice

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD
(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 10/24/2011
Witness:
Date: 10/24/2011

	GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
21	9048-Rep 1	DS-11-HIPU	10/21/2011	18.55	Amber Jar	Lumbriculus	Frozen	26 PCB congener
22	9048-Rep 2	DS-11-HIPU	10/21/2011	15.65	Amber Jar	Lumbriculus	Frozen	26 PCB congener
23	9048-Rep 3	DS-11-HIPU	10/21/2011	19.49	Amber Jar	Lumbriculus	Frozen	26 PCB congener
24	9048-Rep 4	DS-11-HIPU	10/21/2011	21.00	Amber Jar	Lumbriculus	Frozen	26 PCB congener
25	9048-Rep 5	DS-11-HIPU	10/21/2011	21.28	Amber Jar	Lumbriculus	Frozen	26 PCB congener

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Erica Schneider	10.24.11	Christa Comacho	10/25/11 12:30PM
2.				

Condition of Sample Upon Receipt:
All in tact
3.2°-8.8°C

☑ Received on Ice

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD
(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 10/24/2011
Witness:
Date: 10/24/2011

	GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
26	9052-Rep 2	DS-11-MOPU	10/21/2011	19.63	Amber Jar	Lumbriculus	Frozen	26 PCB congener
27	9052-Rep 3	DS-11-MOPU	10/21/2011	19.48	Amber Jar	Lumbriculus	Frozen	26 PCB congener
28	9052-Rep 4	DS-11-MOPU	10/21/2011	18.26	Amber Jar	Lumbriculus	Frozen	26 PCB congener
29	9052-Rep 5	DS-11-MOPU	10/21/2011	16.51	Amber Jar	Lumbriculus	Frozen	26 PCB congener
30 CC								

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Elisa Schneider	10.24.11	Christin Conradie	10/25/11 12:30 PM
2.				

Condition of Sample Upon Receipt:
All in tact.
3.2°-8.8°C

☑ Received on Ice

ORIGIN ID: TVCA (231) 941-2230
KIM BELL
GREAT LAKES ENVIRONMENTAL CTR
739 HASTINGS ST

TRAVERSE CITY, MI 49686
UNITED STATES US

SHIP DATE: 24OCT11
ACTWGT: 20.0 LB MAN
CAD: 0632623/CAFE2509

BILL SENDER

TO FRED HOITASH
RTI LABORATORIES, INC.
31628 GLENDALE STREET

LIVONIA MI 481501827
(734) 422-8000 X 206
REF: 5077-01..

FedEx Express

TRK# 0201 9802 5311 6805

TUE - 25 OCT A1
PRIORITY OVERNIGHT

66 DEOA

48150
MI-US DTW

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD
(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 10/26/2011
Witness:
Date: 10/26/2011

GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
9047-Rep 1	DS-11-MU3	10/21/2011	19.31	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9047-Rep 2	DS-11-MU3	10/21/2011	18.32	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9047-Rep 3	DS-11-MU3	10/21/2011	19.05	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9047-Rep 4	DS-11-MU3	10/21/2011	20.74	Amber Jar	Lumbriculus	Frozen	26 PCB congener
9047-Rep 5	DS-11-MU3	10/21/2011	17.86	Amber Jar	Lumbriculus	Frozen	26 PCB congener

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.				
2.				

Condition of Sample Upon Receipt: ☐ Received on Ice

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Sample Receipt Checklist

Client Name: **FUT01**

Date and Time Received: **10/25/2011 3:20:31 PM**

Work Order Number **1110760** RcptNo: **1**

Received by: **Christine Conradis**

Completed by:

Reviewed by:

Completed Date: 10/25/2011 3:38:25 PM

Reviewed Date: 10/26/2011 9:40:54 AM

Carrier name: FedEx

Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐	Not Present	☐
Are matrices correctly identified on Chain of custody?	Yes ☑	No ☐		
Is it clear what analyses were requested?	Yes ☑	No ☐		
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present	☑
Samples in proper container/bottle?	Yes ☑	No ☐		
Were correct preservatives used and noted?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
Were container lables complete (ID, Pres, Date)?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Was an attempt made to cool the samples?	Yes ☑	No ☐		
All samples received at a temp. of > 0° C to 6.0° C?	Yes ☐	No ☑		
Response when temperature is outside of range:	on ice			
Preservative added to bottles:				
Sample Temp. taken and recorded upon receipt?	Yes ☑	No ☐	3.2 To	8.8 °C
Water - Were bubbles absent in VOC vials?	Yes ☐	No ☐	No Vials	☑
Water - Was there Chlorine Present?	Yes ☐	No ☐	NA	☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	No Water	☑
Are Samples considered acceptable?	Yes ☑	No ☐		
Custody Seals present?	Yes ☐	No ☑		
Traffic Report or Packing Lists present?	Yes ☐	No ☑		
Airbill or Sticker?	Air Bill ☑	Sticker ☐	Not Present	☐
Airbill No:	980253116805			
Sample Tags Present?	Yes ☐	No ☑		
Sample Tags Listed on COC?	Yes ☐	No ☑		
Tag Numbers:				
Sample Condition?	Intact ☑	Broken ☐	Leaking	☐

Case Number: SDG: SAS:

Adjusted? _____ Checked by

Any No and/or NA (not applicable) response must be detailed in the comments section below.

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH
1110760-001A	Container-01 of 01	Bottle				
1110760-002A	Container-01 of 01	Bottle				
1110760-003A	Container-01 of 01	Bottle				
1110760-004A	Container-01 of 01	Bottle				
1110760-005A	Container-01 of 01	Bottle				
1110760-006A	Container-01 of 01	Bottle				
1110760-007A	Container-01 of 01	Bottle				
1110760-008A	Container-01 of 01	Bottle				
1110760-009A	Container-01 of 01	Bottle				
1110760-010A	Container-01 of 01	Bottle				
1110760-011A	Container-01 of 01	Bottle				
1110760-012A	Container-01 of 01	Bottle				
1110760-013A	Container-01 of 01	Bottle				
1110760-014A	Container-01 of 01	Bottle				
1110760-015A	Container-01 of 01	Bottle				
1110760-016A	Container-01 of 01	Bottle				
1110760-017A	Container-01 of 01	Bottle				
1110760-018A	Container-01 of 01	Bottle				
1110760-019A	Container-01 of 01	Bottle				
1110760-020A	Container-01 of 01	Bottle				
1110760-021A	Container-01 of 01	Bottle				
1110760-022A	Container-01 of 01	Bottle				
1110760-023A	Container-01 of 01	Bottle				
1110760-024A	Container-01 of 01	Bottle				
1110760-025A	Container-01 of 01	Bottle				
1110760-026A	Container-01 of 01	Bottle				
1110760-027A	Container-01 of 01	Bottle				
1110760-028A	Container-01 of 01	Bottle				
1110760-029A	Container-01 of 01	Bottle				

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
Ocean Blue	3.2-8.8	Good	Not Present			

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section below.

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH

Client Contacted? ☐ Yes ☑ No ☐ NA Person Contacted: Comments:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

CorrectiveAction:

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Workorder Sample Summary

WO#: 1110760

22-Nov-11

CLIENT: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1110760-001	Lab Control 1		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-002	Lab Control 2		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-003	Lab Control 3		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-004	Lab Control 4		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-005	Lab Control 5 (Day 0, Background)			10/25/2011 12:30:00 PM	Animal Tis
1110760-006	DS-11-MU2 - 1		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-007	DS-11-MU2 - 2		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-008	DS-11-MU2 - 3		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-009	DS-11-MU2 - 4		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-010	DS-11-MU2 - 5		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-011	DS-11-MU4 - 1		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-012	DS-11-MU4 - 2		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-013	DS-11-MU4 - 3		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-014	DS-11-MU4 - 4		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-015	DS-11-MU4 - 5		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-016	DS-11-MU3 - 1		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-017	DS-11-MU3 - 2		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-018	DS-11-MU3 - 3		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-019	DS-11-MU3 - 4		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-020	DS-11-MU3 - 5		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-021	DS-11-HIPU - 1		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-022	DS-11-HIPU - 2		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-023	DS-11-HIPU - 3		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-024	DS-11-HIPU - 4		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-025	DS-11-HIPU - 5		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-026	DS-11-MOPU - 1		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-027	DS-11-MOPU - 2		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-028	DS-11-MOPU - 3		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis
1110760-029	DS-11-MOPU - 4		10/21/2011	10/25/2011 12:30:00 PM	Animal Tis

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

DATES REPORT

WO#: **1110760**

22-Nov-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1110760-001A	Lab Control 1	10/21/2011	Animal Tissue	Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 1:26:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-002A	Lab Control 2			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 2:22:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-003A	Lab Control 3			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 3:17:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-004A	Lab Control 4			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 4:13:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-005A	Lab Control 5 (Day 0, Background)			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 5:08:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-006A	DS-11-MU2 - 1	10/21/2011		Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 6:03:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-007A	DS-11-MU2 - 2			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 6:59:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-008A	DS-11-MU2 - 3			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 7:54:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-009A	DS-11-MU2 - 4			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 8:50:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-010A	DS-11-MU2 - 5			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 9:45:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-011A	DS-11-MU4 - 1			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 3:13:00 PM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-012A	DS-11-MU4 - 2			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 4:21:00 PM

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

DATES REPORT

WO#: **1110760**

22-Nov-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1110760-012A	DS-11-MU4 - 2	10/21/2011	Animal Tissue	Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-013A	DS-11-MU4 - 3			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 5:17:00 PM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-014A	DS-11-MU4 - 4			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 6:08:00 PM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-015A	DS-11-MU4 - 5			Polychlorinated Biphenyl Congeners		10/31/2011 11:24:30 AM	11/9/2011 7:03:00 PM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-016A	DS-11-MU3 - 1			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/9/2011 10:45:00 PM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-017A	DS-11-MU3 - 2			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/9/2011 11:41:00 PM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-018A	DS-11-MU3 - 3			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 12:36:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-019A	DS-11-MU3 - 4			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 1:31:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-020A	DS-11-MU3 - 5			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 6:09:00 AM
				Total Lipids		10/27/2011 6:31:58 AM	10/31/2011 8:59:50 AM
1110760-021A	DS-11-HIPU - 1			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 7:04:00 AM
				Total Lipids		10/27/2011 6:32:43 AM	10/31/2011 9:02:01 AM
1110760-022A	DS-11-HIPU - 2			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 7:59:00 AM
				Total Lipids		10/27/2011 6:32:43 AM	10/31/2011 9:02:01 AM
1110760-023A	DS-11-HIPU - 3			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 8:55:00 AM
				Total Lipids		10/27/2011 6:32:43 AM	10/31/2011 9:02:01 AM

RTI LABORATORIES, INC.

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DATES REPORT

WO#: **1110760**

22-Nov-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1110760-024A	DS-11-HIPU - 4	10/21/2011	Animal Tissue	Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 9:50:00 AM
				Total Lipids		10/27/2011 6:32:43 AM	10/31/2011 9:02:01 AM
1110760-025A	DS-11-HIPU - 5			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 10:46:00 AM
				Total Lipids		10/27/2011 6:32:43 AM	10/31/2011 9:02:01 AM
1110760-026A	DS-11-MOPU - 1			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 11:41:00 AM
				Total Lipids		10/27/2011 6:32:43 AM	10/31/2011 9:02:01 AM
1110760-027A	DS-11-MOPU - 2			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 12:37:00 PM
				Total Lipids		10/27/2011 6:32:43 AM	10/31/2011 9:02:01 AM
1110760-028A	DS-11-MOPU - 3			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 1:32:00 PM
				Total Lipids		10/27/2011 6:32:43 AM	10/31/2011 9:02:01 AM
1110760-029A	DS-11-MOPU - 4			Polychlorinated Biphenyl Congeners		11/1/2011 7:28:39 AM	11/10/2011 2:28:00 PM
				Total Lipids		10/27/2011 6:32:43 AM	10/31/2011 9:02:01 AM

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: **1110760**

Date Reported: **11/30/2011**

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-001 **Matrix:** ANIMAL TISSUE

Client Sample ID Lab Control 1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 1:26:00 AM
Surr: Tetrachloro-m-xylene	112	70-130		%REC	1	11/9/2011 1:26:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.6	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-002 **Matrix:** ANIMAL TISSUE

Client Sample ID Lab Control 2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 2:22:00 AM
Surr: Tetrachloro-m-xylene	105	70-130		%REC	1	11/9/2011 2:22:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.2	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-003 **Matrix:** ANIMAL TISSUE

Client Sample ID Lab Control 3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:17:00 AM
Surr: Tetrachloro-m-xylene	104	70-130		%REC	1	11/9/2011 3:17:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.5	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-004 **Matrix:** ANIMAL TISSUE

Client Sample ID Lab Control 4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',3,3',4,4',5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',3,3',4,4'-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',3,4,4',5,5'-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',3,4,4',5',6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',3,4,4',5'-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',3,4,4',6,6'-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',3,4,5'-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',3,4',5,5',6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',3,5'-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',4,4',5,5'-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',4,5,5'-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',4,5'-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',5,5'-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,2',5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,3,3',4,4'-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,3,3',4',6-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,3',4,4',5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,4,4'-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
2,4'-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
3,3',4,4',5,5'-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
3,3',4,4',5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
3,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:13:00 AM
Surr: Tetrachloro-m-xylene	107	70-130		%REC	1	11/9/2011 4:13:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.8	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report
(consolidated)

WO#: 1110760
Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:**
Project: USACOE Lumbriculus Tissue Samples
Lab ID: 1110760-005 **Matrix:** ANIMAL TISSUE
Client Sample ID Lab Control 5 (Day 0, Background)

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',3,3',4,4',5-HpCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',3,3',4,4'-HxCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',3,4,4',5,5'-HpCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',3,4,4',5',6-HpCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',3,4,4',5'-HxCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',3,4,4',6,6'-HpCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',3,4,5'-PeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',3,4',5,5',6-HpCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',3,5'-TeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',4,4',5,5'-HxCB	1.2	1.9	J	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',4,5,5'-PeCB	1.8	1.9	J	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',4,5'-TeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',5,5'-TeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,2',5-TrCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,3,3',4,4'-PeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,3,3',4',6-PeCB	0.91	1.9	J	µg/Kg	1	11/9/2011 5:08:00 AM
2,3',4,4',5-PeCB	0.97	1.9	J	µg/Kg	1	11/9/2011 5:08:00 AM
2,3',4,4'-TeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,4,4'-TrCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
2,4'-DiCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
3,3',4,4',5,5'-HxCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
3,3',4,4',5-PeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
3,3',4,4'-TeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
DeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:08:00 AM
Surr: Tetrachloro-m-xylene	95.5	70-130		%REC	1	11/9/2011 5:08:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.4	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-006 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU2 - 1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,3,3´,4,4´,5-HpCB	1.1	2.0	J	µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,3,4,4´,5´-HxCB	4.4	2.0		µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,3,4,5´-PeCB	2.2	2.0		µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.5	2.0	J	µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,3,5´-TeCB	0.47	2.0	J	µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,4,4´,5,5´-HxCB	3.7	2.0		µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,4,5,5´-PeCB	3.7	2.0		µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,4,5´-TeCB	0.69	2.0	J	µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,5,5´-TeCB	1.4	2.0	J	µg/Kg	1	11/9/2011 6:03:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
2,3,3´,4,4´-PeCB	1.2	2.0	J	µg/Kg	1	11/9/2011 6:03:00 AM
2,3,3´,4´,6-PeCB	2.9	2.0		µg/Kg	1	11/9/2011 6:03:00 AM
2,3´,4,4´,5-PeCB	2.0	2.0		µg/Kg	1	11/9/2011 6:03:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:03:00 AM
Surr: Tetrachloro-m-xylene	98.3	70-130		%REC	1	11/9/2011 6:03:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.7	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-007 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU2 - 2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,3,4,4´,5´-HxCB	3.9	2.0		µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,3,4,5´-PeCB	1.9	2.0	J	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.4	2.0	J	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,3,5´-TeCB	0.42	2.0	J	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,4,4´,5,5´-HxCB	3.3	2.0		µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,4,5,5´-PeCB	3.3	2.0		µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,4,5´-TeCB	0.60	2.0	J	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,5,5´-TeCB	1.2	2.0	J	µg/Kg	1	11/9/2011 6:59:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
2,3,3´,4,4´-PeCB	1.1	2.0	J	µg/Kg	1	11/9/2011 6:59:00 AM
2,3,3´,4´,6-PeCB	2.7	2.0		µg/Kg	1	11/9/2011 6:59:00 AM
2,3´,4,4´,5-PeCB	1.8	2.0	J	µg/Kg	1	11/9/2011 6:59:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:59:00 AM
Surr: Tetrachloro-m-xylene	96.8	70-130		%REC	1	11/9/2011 6:59:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.3	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-008 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU2 - 3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',3,3',4,4',5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',3,3',4,4'-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',3,4,4',5,5'-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',3,4,4',5',6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',3,4,4',5'-HxCB	3.4	2.0		µg/Kg	1	11/9/2011 7:54:00 AM
2,2',3,4,4',6,6'-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',3,4,5'-PeCB	1.7	2.0	J	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',3,4',5,5',6-HpCB	1.3	2.0	J	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',3,5'-TeCB	0.40	2.0	J	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',4,4',5,5'-HxCB	2.9	2.0		µg/Kg	1	11/9/2011 7:54:00 AM
2,2',4,5,5'-PeCB	2.9	2.0		µg/Kg	1	11/9/2011 7:54:00 AM
2,2',4,5'-TeCB	0.49	2.0	J	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',5,5'-TeCB	1.0	2.0	J	µg/Kg	1	11/9/2011 7:54:00 AM
2,2',5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
2,3,3',4,4'-PeCB	0.99	2.0	J	µg/Kg	1	11/9/2011 7:54:00 AM
2,3,3',4',6-PeCB	2.3	2.0		µg/Kg	1	11/9/2011 7:54:00 AM
2,3',4,4',5-PeCB	1.6	2.0	J	µg/Kg	1	11/9/2011 7:54:00 AM
2,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
2,4,4'-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
2,4'-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
3,3',4,4',5,5'-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
3,3',4,4',5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
3,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:54:00 AM
Surr: Tetrachloro-m-xylene	102	70-130		%REC	1	11/9/2011 7:54:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.5	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-009 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU2 - 4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,3,3´,4,4´,5-HpCB	1.0	2.0	Jm	µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,3,4,4´,5´-HxCB	4.4	2.0		µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,3,4,5´-PeCB	2.2	2.0		µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.5	2.0	J	µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,3,5´-TeCB	0.53	2.0	J	µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,4,4´,5,5´-HxCB	3.7	2.0		µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,4,5,5´-PeCB	3.7	2.0		µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,4,5´-TeCB	0.69	2.0	J	µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,5,5´-TeCB	1.4	2.0	J	µg/Kg	1	11/9/2011 8:50:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
2,3,3´,4,4´-PeCB	1.2	2.0	J	µg/Kg	1	11/9/2011 8:50:00 AM
2,3,3´,4´,6-PeCB	3.0	2.0		µg/Kg	1	11/9/2011 8:50:00 AM
2,3´,4,4´,5-PeCB	2.0	2.0	J	µg/Kg	1	11/9/2011 8:50:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
2,4´-DiCB	6.6	2.0		µg/Kg	1	11/9/2011 8:50:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 8:50:00 AM
Surr: Tetrachloro-m-xylene	99.5	70-130		%REC	1	11/9/2011 8:50:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	4.0	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-010 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU2 - 5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',3,3',4,4',5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',3,3',4,4'-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',3,4,4',5,5'-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',3,4,4',5',6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',3,4,4',5'-HxCB	4.1	2.0		µg/Kg	1	11/9/2011 9:45:00 AM
2,2',3,4,4',6,6'-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',3,4,5'-PeCB	1.9	2.0	J	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',3,4',5,5',6-HpCB	1.4	2.0	J	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',3,5'-TeCB	0.41	2.0	J	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',4,4',5,5'-HxCB	3.5	2.0		µg/Kg	1	11/9/2011 9:45:00 AM
2,2',4,5,5'-PeCB	3.3	2.0		µg/Kg	1	11/9/2011 9:45:00 AM
2,2',4,5'-TeCB	0.56	2.0	J	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',5,5'-TeCB	1.2	2.0	J	µg/Kg	1	11/9/2011 9:45:00 AM
2,2',5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
2,3,3',4,4'-PeCB	1.1	2.0	J	µg/Kg	1	11/9/2011 9:45:00 AM
2,3,3',4',6-PeCB	2.7	2.0		µg/Kg	1	11/9/2011 9:45:00 AM
2,3',4,4',5-PeCB	1.8	2.0	J	µg/Kg	1	11/9/2011 9:45:00 AM
2,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
2,4,4'-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
2,4'-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
3,3',4,4',5,5'-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
3,3',4,4',5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
3,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 9:45:00 AM
Surr: Tetrachloro-m-xylene	103	70-130		%REC	1	11/9/2011 9:45:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.7	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-011 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU4 - 1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,3,4,4´,5´-HxCB	1.6	2.0	Jm	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,3,4´,5,5´,6-HpCB	0.67	2.0	J	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,4,4´,5,5´-HxCB	1.8	2.0	J	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,4,5,5´-PeCB	1.5	2.0	J	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,5,5´-TeCB	0.49	2.0	J	µg/Kg	1	11/9/2011 3:13:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,3,3´,4,4´-PeCB	0.59	2.0	J	µg/Kg	1	11/9/2011 3:13:00 PM
2,3,3´,4´,6-PeCB	1.3	2.0	J	µg/Kg	1	11/9/2011 3:13:00 PM
2,3´,4,4´,5-PeCB	0.85	2.0	J	µg/Kg	1	11/9/2011 3:13:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 3:13:00 PM
Surr: Tetrachloro-m-xylene	100	70-130		%REC	1	11/9/2011 3:13:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	4.0	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

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31628 Glendale St.
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-012 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU4 - 2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,3,4,4´,5´-HxCB	2.3	2.0		µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,3,4´,5,5´,6-HpCB	0.69	2.0	J	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,4,4´,5,5´-HxCB	2.1	2.0		µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,4,5,5´-PeCB	1.8	2.0	J	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,4,5´-TeCB	0.40	2.0	J	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,5,5´-TeCB	0.63	2.0	J	µg/Kg	1	11/9/2011 4:21:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,3,3´,4,4´-PeCB	0.65	2.0	J	µg/Kg	1	11/9/2011 4:21:00 PM
2,3,3´,4´,6-PeCB	1.4	2.0	J	µg/Kg	1	11/9/2011 4:21:00 PM
2,3´,4,4´,5-PeCB	0.98	2.0	J	µg/Kg	1	11/9/2011 4:21:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 4:21:00 PM
Surr: Tetrachloro-m-xylene	107	70-130		%REC	1	11/9/2011 4:21:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	2.8	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
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Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-013 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU4 - 3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,3,3´,4,4´-HxCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,3,4,4´,5´-HxCB	4.2	1.9		µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,3,4,5´-PeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,3,4´,5,5´,6-HpCB	1.3	1.9	J	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,3,5´-TeCB	0.75	1.9	J	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,4,4´,5,5´-HxCB	3.8	1.9		µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,4,5,5´-PeCB	3.6	1.9		µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,4,5´-TeCB	0.85	1.9	J	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,5,5´-TeCB	1.4	1.9	J	µg/Kg	1	11/9/2011 5:17:00 PM
2,2´,5-TrCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
2,3,3´,4,4´-PeCB	1.5	1.9	J	µg/Kg	1	11/9/2011 5:17:00 PM
2,3,3´,4´,6-PeCB	2.7	1.9		µg/Kg	1	11/9/2011 5:17:00 PM
2,3´,4,4´,5-PeCB	2.1	1.9		µg/Kg	1	11/9/2011 5:17:00 PM
2,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
2,4,4´-TrCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
2,4´-DiCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
3,3´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
3,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
3,3´,4,4´-TeCB	1.5	1.9	J	µg/Kg	1	11/9/2011 5:17:00 PM
DeCB	ND	1.9	U	µg/Kg	1	11/9/2011 5:17:00 PM
Surr: Tetrachloro-m-xylene	102	70-130		%REC	1	11/9/2011 5:17:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.9	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-014 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU4 - 4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,3,4,4´,5´-HxCB	4.2	2.0		µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,3,4´,5,5´,6-HpCB	1.3	2.0	J	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,3,5´-TeCB	0.74	2.0	J	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,4,4´,5,5´-HxCB	3.7	2.0		µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,4,5,5´-PeCB	3.5	2.0		µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,4,5´-TeCB	0.80	2.0	J	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,5,5´-TeCB	1.4	2.0	J	µg/Kg	1	11/9/2011 6:08:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
2,3,3´,4,4´-PeCB	1.4	2.0	J	µg/Kg	1	11/9/2011 6:08:00 PM
2,3,3´,4´,6-PeCB	2.6	2.0		µg/Kg	1	11/9/2011 6:08:00 PM
2,3´,4,4´,5-PeCB	2.0	2.0		µg/Kg	1	11/9/2011 6:08:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 6:08:00 PM
Surr: Tetrachloro-m-xylene	101	70-130		%REC	1	11/9/2011 6:08:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.6	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report
(consolidated)

WO#: 1110760
Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011
Project: USACOE Lumbriculus Tissue Samples
Lab ID: 1110760-015 **Matrix:** ANIMAL TISSUE
Client Sample ID DS-11-MU4 - 5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,3,4,4´,5´-HxCB	1.7	2.0	J	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,3,4,5´-PeCB	16	2.0		µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,3,4´,5,5´,6-HpCB	1.5	2.0	J	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,3,5´-TeCB	0.84	2.0	J	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,4,4´,5,5´-HxCB	4.2	2.0		µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,4,5,5´-PeCB	4.0	2.0		µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,4,5´-TeCB	0.97	2.0	J	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,5,5´-TeCB	1.6	2.0	J	µg/Kg	1	11/9/2011 7:03:00 PM
2,2´,5-TrCB	1.6	2.0	J	µg/Kg	1	11/9/2011 7:03:00 PM
2,3,3´,4,4´-PeCB	1.8	2.0	J	µg/Kg	1	11/9/2011 7:03:00 PM
2,3,3´,4´,6-PeCB	2.9	2.0		µg/Kg	1	11/9/2011 7:03:00 PM
2,3´,4,4´,5-PeCB	2.3	2.0		µg/Kg	1	11/9/2011 7:03:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 7:03:00 PM
Surr: Tetrachloro-m-xylene	107	70-130		%REC	1	11/9/2011 7:03:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	4.5	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-016 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU3 - 1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,3,4,4´,5´-HxCB	4.0	2.0		µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,3,4´,5,5´,6-HpCB	1.2	2.0	J	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,3,5´-TeCB	0.55	2.0	J	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,4,4´,5,5´-HxCB	3.6	2.0		µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,4,5,5´-PeCB	3.7	2.0		µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,4,5´-TeCB	0.77	2.0	J	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,5,5´-TeCB	1.3	2.0	J	µg/Kg	1	11/9/2011 10:45:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
2,3,3´,4,4´-PeCB	1.4	2.0	J	µg/Kg	1	11/9/2011 10:45:00 PM
2,3,3´,4´,6-PeCB	2.7	2.0		µg/Kg	1	11/9/2011 10:45:00 PM
2,3´,4,4´,5-PeCB	2.1	2.0		µg/Kg	1	11/9/2011 10:45:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 10:45:00 PM
Surr: Tetrachloro-m-xylene	103	70-130		%REC	1	11/9/2011 10:45:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	2.8	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-017 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU3 - 2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,3,4,4´,5´-HxCB	4.5	2.0		µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,3,4´,5,5´,6-HpCB	1.3	2.0	J	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,3,5´-TeCB	0.59	2.0	J	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,4,4´,5,5´-HxCB	4.1	2.0		µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,4,5,5´-PeCB	4.0	2.0		µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,4,5´-TeCB	0.90	2.0	J	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,5,5´-TeCB	1.4	2.0	J	µg/Kg	1	11/9/2011 11:41:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
2,3,3´,4,4´-PeCB	1.6	2.0	J	µg/Kg	1	11/9/2011 11:41:00 PM
2,3,3´,4´,6-PeCB	3.1	2.0		µg/Kg	1	11/9/2011 11:41:00 PM
2,3´,4,4´,5-PeCB	2.3	2.0		µg/Kg	1	11/9/2011 11:41:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/9/2011 11:41:00 PM
Surr: Tetrachloro-m-xylene	107	70-130		%REC	1	11/9/2011 11:41:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.8	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-018 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU3 - 3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,3,4,4´,5´-HxCB	4.0	2.0		µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.2	2.0	J	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,3,5´-TeCB	0.48	2.0	J	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,4,4´,5,5´-HxCB	3.5	2.0		µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,4,5,5´-PeCB	3.6	2.0		µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,4,5´-TeCB	0.69	2.0	J	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,5,5´-TeCB	1.1	2.0	J	µg/Kg	1	11/10/2011 12:36:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
2,3,3´,4,4´-PeCB	1.1	2.0	J	µg/Kg	1	11/10/2011 12:36:00 AM
2,3,3´,4´,6-PeCB	2.7	2.0		µg/Kg	1	11/10/2011 12:36:00 AM
2,3´,4,4´,5-PeCB	2.0	2.0		µg/Kg	1	11/10/2011 12:36:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:36:00 AM
Surr: Tetrachloro-m-xylene	110	70-130		%REC	1	11/10/2011 12:36:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	4.1	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-019 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU3 - 4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',3,3',4,4',5-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',3,3',4,4'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',3,4,4',5,5'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',3,4,4',5',6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',3,4,4',5'-HxCB	2.6	2.0		µg/Kg	1	11/10/2011 1:31:00 AM
2,2',3,4,4',6,6'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',3,4,5'-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',3,4',5,5',6-HpCB	1.0	2.0	J	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',3,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',4,4',5,5'-HxCB	3.2	2.0		µg/Kg	1	11/10/2011 1:31:00 AM
2,2',4,5,5'-PeCB	3.2	2.0		µg/Kg	1	11/10/2011 1:31:00 AM
2,2',4,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',5,5'-TeCB	0.99	2.0	J	µg/Kg	1	11/10/2011 1:31:00 AM
2,2',5-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,3,3',4,4'-PeCB	1.3	2.0	J	µg/Kg	1	11/10/2011 1:31:00 AM
2,3,3',4',6-PeCB	2.4	2.0		µg/Kg	1	11/10/2011 1:31:00 AM
2,3',4,4',5-PeCB	1.8	2.0	J	µg/Kg	1	11/10/2011 1:31:00 AM
2,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,4,4'-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
2,4'-DiCB	1.4	2.0	J	µg/Kg	1	11/10/2011 1:31:00 AM
3,3',4,4',5,5'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
3,3',4,4',5-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
3,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:31:00 AM
Surr: Tetrachloro-m-xylene	97.8	70-130		%REC	1	11/10/2011 1:31:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.8	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

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31628 Glendale St.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: **1110760**

Date Reported: **11/30/2011**

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-020 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU3 - 5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',3,3',4,4',5-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',3,3',4,4'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',3,4,4',5,5'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',3,4,4',5',6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',3,4,4',5'-HxCB	3.7	2.0		µg/Kg	1	11/10/2011 6:09:00 AM
2,2',3,4,4',6,6'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',3,4,5'-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',3,4',5,5',6-HpCB	1.1	2.0	J	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',3,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',4,4',5,5'-HxCB	3.2	2.0		µg/Kg	1	11/10/2011 6:09:00 AM
2,2',4,5,5'-PeCB	3.3	2.0		µg/Kg	1	11/10/2011 6:09:00 AM
2,2',4,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',5,5'-TeCB	1.2	2.0	J	µg/Kg	1	11/10/2011 6:09:00 AM
2,2',5-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,3,3',4,4'-PeCB	1.0	2.0	J	µg/Kg	1	11/10/2011 6:09:00 AM
2,3,3',4',6-PeCB	2.5	2.0		µg/Kg	1	11/10/2011 6:09:00 AM
2,3',4,4',5-PeCB	1.9	2.0	J	µg/Kg	1	11/10/2011 6:09:00 AM
2,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,4,4'-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
2,4'-DiCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
3,3',4,4',5,5'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
3,3',4,4',5-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
3,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/10/2011 6:09:00 AM
Surr: Tetrachloro-m-xylene	101	70-130		%REC	1	11/10/2011 6:09:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	2.7	0.0050	B	%	1	10/31/2011 8:59:50 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc.

Collection Date: 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-021

Matrix: ANIMAL TISSUE

Client Sample ID DS-11-HIPU - 1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',3,3',4,4',5-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',3,3',4,4'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',3,4,4',5,5'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',3,4,4',5',6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',3,4,4',5'-HxCB	2.7	2.0		µg/Kg	1	11/10/2011 7:04:00 AM
2,2',3,4,4',6,6'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',3,4,5'-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',3,4',5,5',6-HpCB	1.4	2.0	J	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',3,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',4,4',5,5'-HxCB	3.6	2.0		µg/Kg	1	11/10/2011 7:04:00 AM
2,2',4,5,5'-PeCB	2.8	2.0		µg/Kg	1	11/10/2011 7:04:00 AM
2,2',4,5'-TeCB	0.49	2.0	J	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',5,5'-TeCB	0.73	2.0	J	µg/Kg	1	11/10/2011 7:04:00 AM
2,2',5-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,3,3',4,4'-PeCB	1.4	2.0	J	µg/Kg	1	11/10/2011 7:04:00 AM
2,3,3',4',6-PeCB	2.2	2.0		µg/Kg	1	11/10/2011 7:04:00 AM
2,3',4,4',5-PeCB	1.4	2.0	J	µg/Kg	1	11/10/2011 7:04:00 AM
2,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,4,4'-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
2,4'-DiCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
3,3',4,4',5,5'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
3,3',4,4',5-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
3,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:04:00 AM
Surr: Tetrachloro-m-xylene	99.1	70-130		%REC	1	11/10/2011 7:04:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.0	0.0050		%	1	10/31/2011 9:02:01 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc.

Collection Date: 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-022

Matrix: ANIMAL TISSUE

Client Sample ID DS-11-HIPU - 2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',3,3',4,4',5-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',3,3',4,4'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',3,4,4',5,5'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',3,4,4',5',6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',3,4,4',5'-HxCB	3.0	2.0		µg/Kg	1	11/10/2011 7:59:00 AM
2,2',3,4,4',6,6'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',3,4,5'-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',3,4',5,5',6-HpCB	1.6	2.0	J	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',3,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',4,4',5,5'-HxCB	4.2	2.0		µg/Kg	1	11/10/2011 7:59:00 AM
2,2',4,5,5'-PeCB	3.2	2.0		µg/Kg	1	11/10/2011 7:59:00 AM
2,2',4,5'-TeCB	0.59	2.0	J	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',5,5'-TeCB	0.84	2.0	J	µg/Kg	1	11/10/2011 7:59:00 AM
2,2',5-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,3,3',4,4'-PeCB	1.8	2.0	J	µg/Kg	1	11/10/2011 7:59:00 AM
2,3,3',4',6-PeCB	2.5	2.0		µg/Kg	1	11/10/2011 7:59:00 AM
2,3',4,4',5-PeCB	1.7	2.0	J	µg/Kg	1	11/10/2011 7:59:00 AM
2,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,4,4'-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
2,4'-DiCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
3,3',4,4',5,5'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
3,3',4,4',5-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
3,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/10/2011 7:59:00 AM
Surr: Tetrachloro-m-xylene	101	70-130		%REC	1	11/10/2011 7:59:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	2.9	0.0050		%	1	10/31/2011 9:02:01 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-023 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-HIPU - 3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,3,3´,4,4´-HxCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,3,4,4´,5´-HxCB	2.6	1.9		µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,3,4,5´-PeCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.5	1.9	J	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,3,5´-TeCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,4,4´,5,5´-HxCB	3.5	1.9		µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,4,5,5´-PeCB	2.7	1.9		µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,4,5´-TeCB	0.45	1.9	J	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,5,5´-TeCB	0.58	1.9	J	µg/Kg	1	11/10/2011 8:55:00 AM
2,2´,5-TrCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,3,3´,4,4´-PeCB	1.5	1.9	J	µg/Kg	1	11/10/2011 8:55:00 AM
2,3,3´,4´,6-PeCB	2.1	1.9		µg/Kg	1	11/10/2011 8:55:00 AM
2,3´,4,4´,5-PeCB	1.4	1.9	J	µg/Kg	1	11/10/2011 8:55:00 AM
2,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,4,4´-TrCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
2,4´-DiCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
3,3´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
3,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
3,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
DeCB	ND	1.9	U	µg/Kg	1	11/10/2011 8:55:00 AM
Surr: Tetrachloro-m-xylene	100	70-130		%REC	1	11/10/2011 8:55:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	2.6	0.0050		%	1	10/31/2011 9:02:01 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc.

Collection Date: 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-024

Matrix: ANIMAL TISSUE

Client Sample ID DS-11-HIPU - 4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',3,3',4,4',5-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',3,3',4,4'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',3,4,4',5,5'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',3,4,4',5',6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',3,4,4',5'-HxCB	2.7	2.0		µg/Kg	1	11/10/2011 9:50:00 AM
2,2',3,4,4',6,6'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',3,4,5'-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',3,4',5,5',6-HpCB	1.4	2.0	J	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',3,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',4,4',5,5'-HxCB	3.6	2.0		µg/Kg	1	11/10/2011 9:50:00 AM
2,2',4,5,5'-PeCB	2.8	2.0		µg/Kg	1	11/10/2011 9:50:00 AM
2,2',4,5'-TeCB	0.55	2.0	J	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',5,5'-TeCB	0.81	2.0	J	µg/Kg	1	11/10/2011 9:50:00 AM
2,2',5-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,3,3',4,4'-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,3,3',4',6-PeCB	2.2	2.0		µg/Kg	1	11/10/2011 9:50:00 AM
2,3',4,4',5-PeCB	1.5	2.0	J	µg/Kg	1	11/10/2011 9:50:00 AM
2,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,4,4'-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
2,4'-DiCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
3,3',4,4',5,5'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
3,3',4,4',5-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
3,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/10/2011 9:50:00 AM
Surr: Tetrachloro-m-xylene	107	70-130		%REC	1	11/10/2011 9:50:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	2.8	0.0050		%	1	10/31/2011 9:02:01 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc.

Collection Date: 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-025

Matrix: ANIMAL TISSUE

Client Sample ID DS-11-HIPU - 5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,3,4,4´,5´-HxCB	2.4	2.0		µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.4	2.0	J	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,4,4´,5,5´-HxCB	3.4	2.0		µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,4,5,5´-PeCB	2.6	2.0		µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,4,5´-TeCB	0.45	2.0	J	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,5,5´-TeCB	0.64	2.0	J	µg/Kg	1	11/10/2011 10:46:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,3,3´,4,4´-PeCB	1.4	2.0	J	µg/Kg	1	11/10/2011 10:46:00 AM
2,3,3´,4´,6-PeCB	2.0	2.0		µg/Kg	1	11/10/2011 10:46:00 AM
2,3´,4,4´,5-PeCB	1.3	2.0	J	µg/Kg	1	11/10/2011 10:46:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/10/2011 10:46:00 AM
Surr: Tetrachloro-m-xylene	89.8	70-130		%REC	1	11/10/2011 10:46:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	2.8	0.0050		%	1	10/31/2011 9:02:01 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-026 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MOPU - 2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',3,3',4,4',5,6-OcCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',3,3',4,4',5-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',3,3',4,4'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',3,4,4',5,5'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',3,4,4',5',6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',3,4,4',5'-HxCB	1.8	2.0	J	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',3,4,4',6,6'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',3,4,5'-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',3,4',5,5',6-HpCB	0.87	2.0	J	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',3,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',4,4',5,5'-HxCB	2.4	2.0		µg/Kg	1	11/10/2011 11:41:00 AM
2,2',4,5,5'-PeCB	2.1	2.0		µg/Kg	1	11/10/2011 11:41:00 AM
2,2',4,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',5,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,2',5-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,3,3',4,4'-PeCB	0.77	2.0	J	µg/Kg	1	11/10/2011 11:41:00 AM
2,3,3',4',6-PeCB	1.7	2.0	J	µg/Kg	1	11/10/2011 11:41:00 AM
2,3',4,4',5-PeCB	1.2	2.0	J	µg/Kg	1	11/10/2011 11:41:00 AM
2,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,4,4'-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
2,4'-DiCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
3,3',4,4',5,5'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
3,3',4,4',5-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
3,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/10/2011 11:41:00 AM
Surr: Tetrachloro-m-xylene	127	70-130		%REC	1	11/10/2011 11:41:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.2	0.0050		%	1	10/31/2011 9:02:01 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-027 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MOPU - 3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',3,3',4,4',5,6-OcCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',3,3',4,4',5-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',3,3',4,4'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',3,4,4',5,5'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',3,4,4',5',6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',3,4,4',5'-HxCB	1.4	2.0	J	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',3,4,4',6,6'-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',3,4,5'-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',3,4',5,5',6-HpCB	0.66	2.0	J	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',3,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',4,4',5,5'-HxCB	1.9	2.0	J	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',4,5,5'-PeCB	1.7	2.0	J	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',4,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',5,5'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,2',5-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,3,3',4,4'-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,3,3',4',6-PeCB	1.4	2.0	J	µg/Kg	1	11/10/2011 12:37:00 PM
2,3',4,4',5-PeCB	1.0	2.0	J	µg/Kg	1	11/10/2011 12:37:00 PM
2,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,4,4'-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
2,4'-DiCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
3,3',4,4',5,5'-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
3,3',4,4',5-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
3,3',4,4'-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/10/2011 12:37:00 PM
Surr: Tetrachloro-m-xylene	94.9	70-130		%REC	1	11/10/2011 12:37:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.1	0.0050		%	1	10/31/2011 9:02:01 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc.

Collection Date: 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-028

Matrix: ANIMAL TISSUE

Client Sample ID DS-11-MOPU - 4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,3,4,4´,5´-HxCB	1.5	2.0	J	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,3,4´,5,5´,6-HpCB	0.66	2.0	J	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,4,4´,5,5´-HxCB	2.2	2.0		µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,4,5,5´-PeCB	1.7	2.0	J	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,3,3´,4´,6-PeCB	1.4	2.0	J	µg/Kg	1	11/10/2011 1:32:00 PM
2,3´,4,4´,5-PeCB	1.0	2.0	J	µg/Kg	1	11/10/2011 1:32:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/10/2011 1:32:00 PM
Surr: Tetrachloro-m-xylene	97.1	70-130		%REC	1	11/10/2011 1:32:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.6	0.0050		%	1	10/31/2011 9:02:01 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1110760

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 10/21/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1110760-029 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MOPU - 5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,3,4,4´,5´-HxCB	2.0	2.0	J	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,4,4´,5,5´-HxCB	1.8	2.0	J	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,4,5,5´-PeCB	1.7	2.0	J	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,3,3´,4´,6-PeCB	1.3	2.0	J	µg/Kg	1	11/10/2011 2:28:00 PM
2,3´,4,4´,5-PeCB	0.97	2.0	J	µg/Kg	1	11/10/2011 2:28:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/10/2011 2:28:00 PM
Surr: Tetrachloro-m-xylene	81.7	70-130		%REC	1	11/10/2011 2:28:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.9	0.0050		%	1	10/31/2011 9:02:01 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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31628 Glendale St.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

QC SUMMARY REPORT

WO#: **1110760**

30-Nov-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples

BatchID: **24188**

Sample ID: **MB-24188** SampType: **MBLK** TestCode: **LIPIDS_T** Units: **%** Prep Date: **10/27/2011** RunNo: **43809**
Client ID: **PBS** Batch ID: **24188** TestNo: **LIPIDS** Analysis Date: **10/31/2011** SeqNo: **858119**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Lipids	0.010	0.0050									

Sample ID: **1110760-020ADUP** SampType: **DUP** TestCode: **LIPIDS_T** Units: **%** Prep Date: **10/27/2011** RunNo: **43809**
Client ID: **DS-11-MU3 - 5** Batch ID: **24188** TestNo: **LIPIDS** Analysis Date: **10/31/2011** SeqNo: **858140**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Lipids	2.9	0.0050						2.665	6.88	25	B

Qualifiers:

**/X*	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1110760**

30-Nov-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples

BatchID: **24189**

Sample ID: **MB-24189** SampType: **MBLK** TestCode: **LIPIDS_T** Units: **%** Prep Date: **10/27/2011** RunNo: **43811**
Client ID: **PBS** Batch ID: **24189** TestNo: **LIPIDS** Analysis Date: **10/31/2011** SeqNo: **858151**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Lipids	ND	0.0050									

Sample ID: **1110760-029ADUP** SampType: **DUP** TestCode: **LIPIDS_T** Units: **%** Prep Date: **10/27/2011** RunNo: **43811**
Client ID: **DS-11-MOPU - 5** Batch ID: **24189** TestNo: **LIPIDS** Analysis Date: **10/31/2011** SeqNo: **858161**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Lipids	3.5	0.0050						3.920	11.0	25	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1110760**

30-Nov-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

BatchID: **24238**

Sample ID: **lcs-24238** SampType: **LCS** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **10/31/2011** RunNo: **44386**

Client ID: **LCSS** Batch ID: **24238** TestNo: **SW8082CON SW3550C** Analysis Date: **11/8/2011** SeqNo: **871374**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	3.9	0.67	3.332	0	116	70	130				
2,2´,3,3´,4,4´,5,6-OcCB	3.8	0.67	3.332	0	114	70	130				
2,2´,3,3´,4,4´,5-HpCB	3.7	0.67	3.332	0	111	70	130				
2,2´,3,3´,4,4´-HxCB	3.8	0.67	3.332	0	113	70	130				
2,2´,3,4,4´,5,5´-HpCB	3.8	0.67	3.332	0	114	70	130				
2,2´,3,4,4´,5´,6-HpCB	3.8	0.67	3.332	0	113	70	130				
2,2´,3,4,4´,5´-HxCB	3.8	0.67	3.332	0	113	70	130				
2,2´,3,4,4´,6,6´-HpCB	3.5	0.67	3.332	0	106	70	130				
2,2´,3,4,5´-PeCB	3.4	0.67	3.332	0	101	70	130				
2,2´,3,4´,5,5´,6-HpCB	3.8	0.67	3.332	0	113	70	130				
2,2´,3,5´-TeCB	3.6	0.67	3.332	0	109	70	130				
2,2´,4,4´,5,5´-HxCB	3.8	0.67	3.332	0	113	70	130				
2,2´,4,5,5´-PeCB	3.6	0.67	3.332	0	109	70	130				
2,2´,4,5´-TeCB	3.3	0.67	3.332	0	99.8	70	130				
2,2´,5,5´-TeCB	3.6	0.67	3.332	0	108	70	130				
2,2´,5-TrCB	3.6	0.67	3.332	0	107	70	130				
2,3,3´,4,4´-PeCB	3.8	0.67	3.332	0	114	70	130				
2,3,3´,4´,6-PeCB	3.4	0.67	3.332	0	101	70	130				
2,3´,4,4´,5-PeCB	3.7	0.67	3.332	0	112	70	130				
2,3´,4,4´-TeCB	3.7	0.67	3.332	0	110	70	130				
2,4,4´-TrCB	3.6	0.67	3.332	0	109	70	130				
2,4´-DiCB	3.5	0.67	3.332	0	106	70	130				
3,3´,4,4´,5,5´-HxCB	3.5	0.67	3.332	0	106	70	130				
3,3´,4,4´,5-PeCB	3.5	0.67	3.332	0	105	70	130				
3,3´,4,4´-TeCB	3.7	0.67	3.332	0	111	70	130				
DeCB	3.9	0.67	3.332	0	116	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1110760**

30-Nov-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

BatchID: **24238**

Sample ID: **lcs-24238** SampType: **LCS** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **10/31/2011** RunNo: **44386**

Client ID: **LCSS** Batch ID: **24238** TestNo: **SW8082CON SW3550C** Analysis Date: **11/8/2011** SeqNo: **871374**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Tetrachloro-m-xylene	3.4		3.332		101	70	130				

Sample ID: **lcsd-24238** SampType: **LCSD** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **10/31/2011** RunNo: **44386**

Client ID: **LCSS02** Batch ID: **24238** TestNo: **SW8082CON SW3550C** Analysis Date: **11/8/2011** SeqNo: **871375**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	4.1	0.67	3.325	0	123	70	130	3.864	5.36	25	
2,2´,3,3´,4,4´,5,6-OcCB	4.0	0.67	3.325	0	121	70	130	3.803	5.62	25	
2,2´,3,3´,4,4´,5-HpCB	3.9	0.67	3.325	0	118	70	130	3.707	5.78	25	
2,2´,3,3´,4,4´-HxCB	4.0	0.67	3.325	0	120	70	130	3.751	5.78	25	
2,2´,3,4,4´,5,5´-HpCB	4.0	0.67	3.325	0	121	70	130	3.794	5.78	25	
2,2´,3,4,4´,5´,6-HpCB	4.0	0.67	3.325	0	120	70	130	3.773	5.33	25	
2,2´,3,4,4´,5´-HxCB	4.0	0.67	3.325	0	119	70	130	3.756	5.45	25	
2,2´,3,4,4´,6,6´-HpCB	3.7	0.67	3.325	0	113	70	130	3.525	6.04	25	
2,2´,3,4,5´-PeCB	3.6	0.67	3.325	0	107	70	130	3.367	5.62	25	
2,2´,3,4´,5,5´,6-HpCB	4.0	0.67	3.325	0	120	70	130	3.773	5.33	25	
2,2´,3,5´-TeCB	3.8	0.67	3.325	0	114	70	130	3.631	4.58	25	
2,2´,4,4´,5,5´-HxCB	4.1	0.67	3.325	0	123	70	130	3.752	8.25	25	
2,2´,4,5,5´-PeCB	3.8	0.67	3.325	0	115	70	130	3.627	5.66	25	
2,2´,4,5´-TeCB	3.5	0.67	3.325	0	105	70	130	3.326	4.60	25	
2,2´,5,5´-TeCB	3.8	0.67	3.325	0	113	70	130	3.608	4.21	25	
2,2´,5-TrCB	3.7	0.67	3.325	0	112	70	130	3.563	4.29	25	
2,3,3´,4,4´-PeCB	4.0	0.67	3.325	0	121	70	130	3.790	5.59	25	
2,3,3´,4´,6-PeCB	3.6	0.67	3.325	0	107	70	130	3.376	5.52	25	
2,3´,4,4´,5-PeCB	4.0	0.67	3.325	0	119	70	130	3.745	5.46	25	
2,3´,4,4´-TeCB	3.8	0.67	3.325	0	115	70	130	3.674	4.16	25	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1110760
30-Nov-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
BatchID: 24238

Sample ID: **lcsd-24238** SampType: **LCSD** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **10/31/2011** RunNo: **44386**
Client ID: **LCSS02** Batch ID: **24238** TestNo: **SW8082CON SW3550C** Analysis Date: **11/8/2011** SeqNo: **871375**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,4´-TrCB	3.8	0.67	3.325	0	114	70	130	3.630	4.18	25	
2,4´-DiCB	3.7	0.67	3.325	0	112	70	130	3.527	5.00	25	
3,3´,4,4´,5,5´-HxCB	3.7	0.67	3.325	0	111	70	130	3.519	4.97	25	
3,3´,4,4´,5-PeCB	3.7	0.67	3.325	0	111	70	130	3.492	5.59	25	
3,3´,4,4´-TeCB	3.9	0.67	3.325	0	118	70	130	3.701	5.57	25	
DeCB	4.1	0.67	3.325	0	123	70	130	3.867	5.54	25	
Surr: Tetrachloro-m-xylene	3.4		3.325		103	70	130		0		

Sample ID: **mb-24238** SampType: **MBLK** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **10/31/2011** RunNo: **44386**
Client ID: **PBS** Batch ID: **24238** TestNo: **SW8082CON SW3550C** Analysis Date: **11/9/2011** SeqNo: **871376**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	ND	0.67									U
2,2´,3,3´,4,4´,5,6-OcCB	ND	0.67									U
2,2´,3,3´,4,4´,5-HpCB	ND	0.67									U
2,2´,3,3´,4,4´-HxCB	ND	0.67									U
2,2´,3,4,4´,5,5´-HpCB	ND	0.67									U
2,2´,3,4,4´,5´,6-HpCB	ND	0.67									U
2,2´,3,4,4´,5´-HxCB	ND	0.67									U
2,2´,3,4,4´,6,6´-HpCB	ND	0.67									U
2,2´,3,4,5´-PeCB	ND	0.67									U
2,2´,3,4´,5,5´,6-HpCB	ND	0.67									U
2,2´,3,5´-TeCB	ND	0.67									U
2,2´,4,4´,5,5´-HxCB	ND	0.67									U
2,2´,4,5,5´-PeCB	ND	0.67									U
2,2´,4,5´-TeCB	ND	0.67									U

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1110760**

30-Nov-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

BatchID: **24238**

Sample ID: **mb-24238** SampType: **MBLK** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **10/31/2011** RunNo: **44386**

Client ID: **PBS** Batch ID: **24238** TestNo: **SW8082CON SW3550C** Analysis Date: **11/9/2011** SeqNo: **871376**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2´,5,5´-TeCB	ND	0.67									U
2,2´,5-TrCB	ND	0.67									U
2,3,3´,4,4´-PeCB	ND	0.67									U
2,3,3´,4´,6-PeCB	ND	0.67									U
2,3´,4,4´,5-PeCB	ND	0.67									U
2,3´,4,4´-TeCB	ND	0.67									U
2,4,4´-TrCB	ND	0.67									U
2,4´-DiCB	ND	0.67									U
3,3´,4,4´,5,5´-HxCB	ND	0.67									U
3,3´,4,4´,5-PeCB	ND	0.67									U
3,3´,4,4´-TeCB	ND	0.67									U
DeCB	ND	0.67									U
Surr: Tetrachloro-m-xylene	3.4		3.330		101	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: **1110760**

30-Nov-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

BatchID: **24246**

Sample ID: **lcs-24246** SampType: **LCS** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/1/2011** RunNo: **44386**

Client ID: **LCSS** Batch ID: **24246** TestNo: **SW8082CON SW3550C** Analysis Date: **11/9/2011** SeqNo: **871429**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	4.2	0.67	3.331	0	126	70	130				
2,2´,3,3´,4,4´,5,6-OcCB	4.2	0.67	3.331	0	126	70	130				
2,2´,3,3´,4,4´,5-HpCB	4.1	0.67	3.331	0	122	70	130				
2,2´,3,3´,4,4´-HxCB	4.1	0.67	3.331	0	122	70	130				
2,2´,3,4,4´,5,5´-HpCB	4.2	0.67	3.331	0	125	70	130				
2,2´,3,4,4´,5´,6-HpCB	4.1	0.67	3.331	0	123	70	130				
2,2´,3,4,4´,5´-HxCB	4.1	0.67	3.331	0	122	70	130				
2,2´,3,4,4´,6,6´-HpCB	3.8	0.67	3.331	0	115	70	130				
2,2´,3,4,5´-PeCB	3.6	0.67	3.331	0	109	70	130				
2,2´,3,4´,5,5´,6-HpCB	4.1	0.67	3.331	0	123	70	130				
2,2´,3,5´-TeCB	3.9	0.67	3.331	0	117	70	130				
2,2´,4,4´,5,5´-HxCB	4.2	0.67	3.331	0	127	70	130				
2,2´,4,5,5´-PeCB	4.0	0.67	3.331	0	120	70	130				
2,2´,4,5´-TeCB	3.6	0.67	3.331	0	107	70	130				
2,2´,5,5´-TeCB	3.9	0.67	3.331	0	116	70	130				
2,2´,5-TrCB	3.8	0.67	3.331	0	114	70	130				
2,3,3´,4,4´-PeCB	4.1	0.67	3.331	0	122	70	130				
2,3,3´,4´,6-PeCB	3.6	0.67	3.331	0	110	70	130				
2,3´,4,4´,5-PeCB	4.1	0.67	3.331	0	123	70	130				
2,3´,4,4´-TeCB	4.0	0.67	3.331	0	120	70	130				
2,4,4´-TrCB	3.9	0.67	3.331	0	118	70	130				
2,4´-DiCB	3.8	0.67	3.331	0	114	70	130				
3,3´,4,4´,5,5´-HxCB	3.9	0.67	3.331	0	116	70	130				
3,3´,4,4´,5-PeCB	3.8	0.67	3.331	0	115	70	130				
3,3´,4,4´-TeCB	4.0	0.67	3.331	0	120	70	130				
DeCB	4.2	0.67	3.331	0	127	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v3

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

QC SUMMARY REPORT

WO#: **1110760**

30-Nov-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

BatchID: **24246**

Sample ID: **lcs-24246** SampType: **LCS** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/1/2011** RunNo: **44386**

Client ID: **LCSS** Batch ID: **24246** TestNo: **SW8082CON SW3550C** Analysis Date: **11/9/2011** SeqNo: **871429**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Tetrachloro-m-xylene	3.6		3.331		109	70	130				

Sample ID: **lcsd-24246** SampType: **LCSD** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/1/2011** RunNo: **44386**

Client ID: **LCSS02** Batch ID: **24246** TestNo: **SW8082CON SW3550C** Analysis Date: **11/9/2011** SeqNo: **871430**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	3.5	0.67	3.331	0	105	70	130	4.196	18.3	25	
2,2´,3,3´,4,4´,5,6-OcCB	3.5	0.67	3.331	0	106	70	130	4.211	17.6	25	
2,2´,3,3´,4,4´,5-HpCB	3.4	0.67	3.331	0	102	70	130	4.054	17.6	25	
2,2´,3,3´,4,4´-HxCB	3.4	0.67	3.331	0	103	70	130	4.079	17.0	25	
2,2´,3,4,4´,5,5´-HpCB	3.5	0.67	3.331	0	105	70	130	4.166	17.6	25	
2,2´,3,4,4´,5´,6-HpCB	3.4	0.67	3.331	0	104	70	130	4.105	17.4	25	
2,2´,3,4,4´,5´-HxCB	3.4	0.67	3.331	0	103	70	130	4.075	16.8	25	
2,2´,3,4,4´,6,6´-HpCB	3.2	0.67	3.331	0	96.0	70	130	3.845	18.4	25	
2,2´,3,4,5´-PeCB	3.1	0.67	3.331	0	91.9	70	130	3.647	17.5	25	
2,2´,3,4´,5,5´,6-HpCB	3.4	0.67	3.331	0	104	70	130	4.105	17.4	25	
2,2´,3,5´-TeCB	3.3	0.67	3.331	0	99.0	70	130	3.906	16.9	25	
2,2´,4,4´,5,5´-HxCB	3.5	0.67	3.331	0	106	70	130	4.238	18.4	25	
2,2´,4,5,5´-PeCB	3.3	0.67	3.331	0	98.6	70	130	3.988	19.3	25	
2,2´,4,5´-TeCB	3.0	0.67	3.331	0	89.7	70	130	3.574	17.9	25	
2,2´,5,5´-TeCB	3.2	0.67	3.331	0	96.9	70	130	3.857	17.8	25	
2,2´,5-TrCB	3.2	0.67	3.331	0	94.9	70	130	3.782	17.9	25	
2,3,3´,4,4´-PeCB	3.5	0.67	3.331	0	104	70	130	4.076	16.5	25	
2,3,3´,4´,6-PeCB	3.1	0.67	3.331	0	91.9	70	130	3.650	17.6	25	
2,3´,4,4´,5-PeCB	3.4	0.67	3.331	0	102	70	130	4.097	18.3	25	
2,3´,4,4´-TeCB	3.3	0.67	3.331	0	99.6	70	130	3.995	18.5	25	

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

QC SUMMARY REPORT

WO#: **1110760**

30-Nov-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

BatchID: **24246**

Sample ID: **lcsd-24246** SampType: **LCSD** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/1/2011** RunNo: **44386**

Client ID: **LCSS02** Batch ID: **24246** TestNo: **SW8082CON SW3550C** Analysis Date: **11/9/2011** SeqNo: **871430**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,4´-TrCB	3.3	0.67	3.331	0	99.0	70	130	3.924	17.3	25	
2,4´-DiCB	3.2	0.67	3.331	0	95.9	70	130	3.802	17.4	25	
3,3´,4,4´,5,5´-HxCB	3.3	0.67	3.331	0	100	70	130	3.880	15.2	25	
3,3´,4,4´,5-PeCB	3.2	0.67	3.331	0	96.3	70	130	3.843	18.0	25	
3,3´,4,4´-TeCB	3.4	0.67	3.331	0	102	70	130	4.009	16.8	25	
DeCB	3.5	0.67	3.331	0	106	70	130	4.227	18.4	25	
Surr: Tetrachloro-m-xylene	2.5		3.331		75.6	70	130		0		

Sample ID: **mb-24246** SampType: **MBLK** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/1/2011** RunNo: **44386**

Client ID: **PBS** Batch ID: **24246** TestNo: **SW8082CON SW3550C** Analysis Date: **11/9/2011** SeqNo: **871431**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	ND	0.67									U
2,2´,3,3´,4,4´,5,6-OcCB	ND	0.67									U
2,2´,3,3´,4,4´,5-HpCB	ND	0.67									U
2,2´,3,3´,4,4´-HxCB	ND	0.67									U
2,2´,3,4,4´,5,5´-HpCB	ND	0.67									U
2,2´,3,4,4´,5´,6-HpCB	ND	0.67									U
2,2´,3,4,4´,5´-HxCB	ND	0.67									U
2,2´,3,4,4´,6,6´-HpCB	ND	0.67									U
2,2´,3,4,5´-PeCB	ND	0.67									U
2,2´,3,4´,5,5´,6-HpCB	ND	0.67									U
2,2´,3,5´-TeCB	ND	0.67									U
2,2´,4,4´,5,5´-HxCB	ND	0.67									U
2,2´,4,5,5´-PeCB	ND	0.67									U
2,2´,4,5´-TeCB	ND	0.67									U

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

QC SUMMARY REPORT

WO#: **1110760**

30-Nov-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

BatchID: **24246**

Sample ID: **mb-24246** SampType: **MBLK** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/1/2011** RunNo: **44386**

Client ID: **PBS** Batch ID: **24246** TestNo: **SW8082CON** **SW3550C** Analysis Date: **11/9/2011** SeqNo: **871431**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2´,5,5´-TeCB	ND	0.67									U
2,2´,5-TrCB	ND	0.67									U
2,3,3´,4,4´-PeCB	ND	0.67									U
2,3,3´,4´,6-PeCB	ND	0.67									U
2,3´,4,4´,5-PeCB	ND	0.67									U
2,3´,4,4´-TeCB	ND	0.67									U
2,4,4´-TrCB	ND	0.67									U
2,4´-DiCB	ND	0.67									U
3,3´,4,4´,5,5´-HxCB	ND	0.67									U
3,3´,4,4´,5-PeCB	ND	0.67									U
3,3´,4,4´-TeCB	ND	0.67									U
DeCB	ND	0.67									U
Surr: Tetrachloro-m-xylene	3.2										

Qualifiers:

*X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

Analytical Report

Level IV Data Package
for RTI WO 1111275

Prepared by:

RTI Laboratories, Inc.
31628 Glendale
Livonia, MI 48150

FutureNet Group, Inc.
Ms. Mariah Hope
12801 Auburn St.
Detroit, MI 48223-3413

Project: USACOE Lumbriculus Tissue Samples
Location: Duluth, Minnesota

Reviewed and Approved By: _____ Date: December 12, 2011
Charles O'Bryan, Director Quality Management

31628 Glendale Street • Livonia, Michigan 48150-1827
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TABLE OF CONTENTS
FutureNet Group, Inc.
Project Name: USACOE -Lumbriculus Tissue Samples
Location: Duluth, Minnesota
RTI Laboratories, Inc. Work Order #: 1111275

I	Case Narrative	1-2
II	Definitions and Acronyms	3
III	Chain of Custody/Sample Receiving Documents	4-13
IV	Work Order Sample Summary	14
V	Dates Report	15-17
VI	Analytical Report	18-46
VII	QC Summary Report	47-56
VIII	Polychlorinated Biphenyl Congeners (PCBs) Data	
	1. Prep Batch Report (11/10/2011)	57-59
	2. Analytical Sequence Log 11/26/2011 (Run No. 44553)	60-61
	3. Analytical Run Summary	62-108
	4. Surrogates Report	109-114
	5. Spikes Report	115-126
	6. Method Blank Contamination Reports	
	a. Batch ID. 24378	127
	b. Batch ID. 24382	128
	7. Injection Log/Raw Data	129-252
	8. Second Column RPD Report	253-257
	9. Injection Log/Calibration Curves/Standards	258-337
IX	Total Lipids Data	
	1. Prep Batch Report 11/10/2011	338
	2. Analytical Sequence Log 11/10/2011 (Run No. 44204)	339
	3. Analytical Run Summary	340-344
	4. Method Blank Contamination Report	345-346
	5. Balance Verification Log	347
	6. Raw Data/Temperature Log	348
	7. Prep Batch Report 11/10/2011	349
	8. Analytical Sequence Log 11/10/2011 (Run No. 44205)	350
	9. Analytical Run Summary	351-353
	10. Method Blank Contamination Report	354-355
	11. Balance Verification Log	356
	12. Raw Data/Temperature Log	357

RTI Laboratories, Inc.

Date: *02-Dec.-11*

CLIENT: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
Location: Duluth, Minnesota
Work Order: 1111275

CASE NARRATIVE

SAMPLE RECEIPT:

Samples were received at the RTI Laboratory, Livonia, MI on 11/4/2011. Samples were received on wet ice and sample temperatures are recorded on the chain of custody and sample receiving documents. The sample set consisted of 29 animal tissue samples.

SAMPLE ANALYSIS:

Samples were analyzed at the RTI Livonia Laboratory for:

Total Lipids

Polychlorinated Biphenyl Congeners (PCBs) – EPA Methods 3550C/8082

Analytical sample results are reported to the RL (reporting limit). Data points less than the RL but greater than the MDL (J qualified) have been excluded from the report on client request.

QUALITY CONTROL:

Polychlorinated Biphenyls Analyses:

All sample analyses included a Method Blank, LCS and MS/MSD where applicable. All QC parameters were within established control limits except where noted on the QC summary forms or below. Initial and continuing calibration results were within method specifications.

Surrogate recoveries were within established control limits.

Sample ID 1111275-016: Second column RPD >40% for 2,3',4,4',5-Pentachlorobiphenyl.

Sample ID 1111275-017: Second column RPD >40% for 2,2',4,,5, 5'-Pentachlorobiphenyl and 2,3,3'4',6-Pentachlorobiphenyl.

Sample ID 1111275-018: Second column RPD >40% for 2,3,3'4',6-Pentachlorobiphenyl.

Sample ID 1111275-019: Second column RPD >40% for 2,2',4,,5, 5'-Pentachlorobiphenyl and 2,3',4,4',5-Pentachlorobiphenyl.

Sample ID 1111275-020: Second column RPD >40% for 2,3,3'4',6-Pentachlorobiphenyl and 2,3',4,4',5-Pentachlorobiphenyl.

Sample ID 1111275-021: Second column RPD >40% for 2,3,3'4',6-Pentachlorobiphenyl and 2,3',4,4',5-Pentachlorobiphenyl.

Sample ID 1111275-022: Second column RPD >40% for 2,2',3,3',4,4',5-Heptachlorobiphenyl.

RTI Laboratories, Inc.

Date: *02-Dec.-11*

CLIENT: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
Location: Duluth, Minnesota
Work Order: 1111275

CASE NARRATIVE

Sample ID 1111275-023: Second column RPD >40% for 2,2',3,3',4,4',5-Heptachlorobiphenyl.

Sample ID 1111275-024: Second column RPD >40% for 2,2',3,3',4,4',5-Heptachlorobiphenyl.

Sample ID 1111275-025: Second column RPD >40% for 2,2',3,3',4,4',5-Heptachlorobiphenyl.

Wet Chemistry Analyses:

All sample analyses included the method specified quality control samples.

Total Lipids Analyses:

- Method Blank: MB-24373 result was greater than ½ the LOQ. Result – 0.01, ½ LOQ – 0.0025.
- Method Blank: MB-24374 result was greater than ½ the LOQ. Result – 0.015, ½ LOQ – 0.0025.

No other problems were noted during the analytical events associated with this project.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Laboratory Director or his designee, as verified by the following signature.

Signed: Charles O'Bryan
Charles O'Bryan, Director, Quality Management

Date: 12/12/2011

RTI Laboratories - Definitions and Acronyms

WO#: 1111275

Date Reported: 11/30/2011
Revision v1

Definitions:

% REC: Percent Recovery; a measure of accuracy expressed as a percentage of a measured (recovered) concentration compared to the known concentration added to the sample.

% RPD: Relative Percent Difference; a measure of precision expressed as a percentage of the difference between two duplicates relative to the average concentration.

DF: Dilution factor; the dilution factor applied to the prepared sample.

DUP: Duplicate; aliquots of a sample taken from the same container under laboratory conditions and processed and analyzed independently, used to calculate Precision (%RPD).

LCS: Laboratory Control Sample; prepared by adding a known mass of target analytes to a specified amount of de-ionized water and prepared with the batch of samples, used to calculate Accuracy (%REC).

LCSD: The duplicate sample of the LCS, used to calculate both Accuracy (%REC) and Precision (%RPD)

MBLK: Method Blank; a sample of similar matrix that is processed simultaneously with and under the same conditions as samples through all steps of the analytical procedure, and in which no target analytes or interferences are present at concentrations that impact the analytical results for sample analyses.

MS: Matrix Spike; prepared by adding a known mass of target analytes to a specified amount of matrix sample for which an independent estimate of target analyte concentration is available, used to calculate Accuracy (%REC)

MSD: The duplicate sample of the MS, used to calculate both Accuracy (%REC) and Precision (%RPD)

PL: Permit limit; only applicable to wastewater reports.

Qual: Qualifier that applies to the analyte reported

Result: Analyte concentration reported

RL: Reporting Limit/Limit of Quantitation; the limit to which data is compared for reporting. Analyte concentrations below the reporting limit are reported as ND or with a "J" qualifier.

Units: The units in which the analyte concentration is reported.

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
H	Holding times for preparation or analysis exceeded
J	Estimated concentration
M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit
PL	Permit Limit
RL	Reporting Limit
S	Spike Recovery outside accepted recovery limits

1111275

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD

(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 11/8/2011
Witness:
Date: 11/8/2011

	GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
1	Control- Rep 1	Lab control	11/4/2011	17.81	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
3 ~~2~~	Control- Rep 3	Lab control	11/4/2011	17.70	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
4 ~~3~~	Control- Rep 4	Lab control	11/4/2011	16.82	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
5 ~~4~~	Control- Rep 5	Lab control	11/4/2011	17.87	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
6 ~~5~~	Day 0, Background	Lab control		30.00	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Erica Schneider	11/8/11	Kathy Jones	11/9/11 0950
2.	VK			

☒ Received on Ice

Condition of Sample Upon Receipt:

Cooler: Red 110
0.2-1.0°C

Great Lakes Environmental Center

739 Hastings Street
Traverse City, MI 49686
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Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD

(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 11/8/2011
Witness:
Date: 11/8/2011

GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
7 6	9053-Rep 1	DS-11-WOPU	11/4/2011	16.12	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
8 7	9053-Rep 2	DS-11-WOPU	11/4/2011	18.68	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
9 8	9053-Rep 3	DS-11-WOPU	11/4/2011	18.87	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
10 9	9053-Rep 4	DS-11-WOPU	11/4/2011	18.53	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
11 10	9053-Rep 5	DS-11-WOPU	11/4/2011	18.91	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Erica Schneider	11/8/11	Kathy Jones	11/9/11 0950
2.				

Condition of Sample Upon Receipt: ☒ Received on Ice

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD
(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 11/8/2011
Witness:
Date: 11/8/2011

	GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
10 12X	9054-Rep 1	DS-11-IIPU	11/4/2011	21.50	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
3 12	9054-Rep 2	DS-11-IIPU	11/4/2011	17.08	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
4 13	9054-Rep 3	DS-11-IIPU	11/4/2011	18.51	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
5 14	9054-Rep 4	DS-11-IIPU	11/4/2011	17.86	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
6 15	9054-Rep 5	DS-11-IIPU	11/4/2011	16.55	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Erica Schneider	11/8/11	[illegible]	11/9/11 0950
2.				

Condition of Sample Upon Receipt:

☐ Received on Ice

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD
(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 11/8/2011
Witness:
Date: 11/8/2011

	GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
1716	9055-Rep 1	DS-11-MU1	11/4/2011	19.13	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
1817	9055-Rep 2	DS-11-MU1	11/4/2011	22.74	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
1918	9055-Rep 3	DS-11-MU1	11/4/2011	21.06	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
2019	9055-Rep 4	DS-11-MU1	11/4/2011	17.20	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
2120	9055-Rep 5	DS-11-MU1	11/4/2011	20.81	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Erica Johnson	11/8/11	[illegible]	11/9/11 0950
2.				

Condition of Sample Upon Receipt: ☐ Received on Ice

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD
(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 11/8/2011
Witness:
Date: 11/8/2011

GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
9056-Rep 1	DS-11-MU5	11/4/2011	18.46	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
9056-Rep 2	DS-11-MU5	11/4/2011	18.59	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
9056-Rep 4	DS-11-MU5	11/4/2011	17.16	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
9056-Rep 5	DS-11-MU5	11/4/2011	18.98	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Erica Johnson	11/8/11	[illegible]	11/9/11 0950
2.				

Condition of Sample Upon Receipt:

☒ Received on Ice

GLEC
Great Lakes Environmental Center

739 Hastings Street
Traverse City, MI 49686
Phone: (231) 941-2230
Fax: (231) 941-2240

CHAIN OF CUSTODY RECORD
(TO BE COMPLETED ONSITE AND SUBMITTED WITH SAMPLES)

USACOE Duluth, Minnesota- *Lumbriculus* Tissue Samples

Facility: Great Lakes Environmental Center
Location: 739 Hastings St. Traverse City, MI 49686
Contact Person: Mailee Garton
Phone Number: (231) 941-2230

Collector: Mailee Garton
Date: 11/8/2011
Witness:
Date: 11/8/2011

	GLC NUMBER (Lab ID)	SAMPLE ID	DATE/TIME OF SAMPLE	MASS COLLECTED (g)	SAMPLE CONTAINER	DESCRIPTION (Type of sample, source, physical characteristics)	PRESERVATION	ANALYSES REQUIRED
26 25	9057-Rep 1	DS-11-MU6	11/4/2011	17.76	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
26	9057-Rep 2	DS-11-MU6	11/4/2011	23.91	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
27	9057-Rep 3	DS-11-MU6	11/4/2011	21.37	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
28	9057-Rep 4	DS-11-MU6	11/4/2011	19.83	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener
29	9057-Rep 5	DS-11-MU6	11/4/2011	18.82	Amber Jar	Lumbriculus	Frozen	%Lipids 26 PCB congener

TRANSFER OF SAMPLES:
(First signature is sampler, last signature is authorized laboratory representative.)

	SHIPPER	DATE	RECEIVER	DATE/TIME
1.	Erica Johnson	11/8/11	Kathy Jong	11/9/11 0950
2.				

Condition of Sample Upon Receipt:

Received on Ice

ORIGIN ID: TVCA (231) 941-2230
SHIPPING AND RECEIVING
GLEC
739 HASTINGS STREET

TRAVERSE CITY, MI 49686
UNITED STATES US

SHIP DATE: 08NOV11
ACTWGT: 24.0 LB MAN
CAD: 0632623/CAFE2509

BILL SENDER

TO FRED HOITASH
RTI LABORATORIES, INC.
31628 GLENDALE STREET

LIVONIA MI 481501827
(734) 422-8000 X 205
REF: 5077-03..

FedEx
Express

J1113110800126

WED - 09 NOV A1
PRIORITY OVERNIGHT

TRK# 0201 9802 5311 7250

66 DEOA

48150
MI-US DTW

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Sample Receipt Checklist

Client Name: **FUT01**

Date and Time Received: **11/9/2011 9:50:00 AM**

Work Order Number **1111275** RcptNo: **1**

Received by: **Katherine Jones**

Completed by: Kathy Jones

Reviewed by:

Completed Date: 11/9/2011 11:47:59 AM

Reviewed Date: 11/10/2011 4:11:50 PM

Carrier name: FedEx

Chain of custody present?	Yes ☑	No ☐		
Chain of custody signed when relinquished and received?	Yes ☑	No ☐		
Chain of custody agrees with sample labels?	Yes ☑	No ☐	Not Present	☐
Are matrices correctly identified on Chain of custody?	Yes ☑	No ☐		
Is it clear what analyses were requested?	Yes ☑	No ☐		
Custody seals intact on sample bottles?	Yes ☐	No ☐	Not Present	☑
Samples in proper container/bottle?	Yes ☑	No ☐		
Were correct preservatives used and noted?	Yes ☑	No ☐		
Sample containers intact?	Yes ☑	No ☐		
Sufficient sample volume for indicated test?	Yes ☑	No ☐		
Were container lables complete (ID, Pres, Date)?	Yes ☑	No ☐		
All samples received within holding time?	Yes ☑	No ☐		
Was an attempt made to cool the samples?	Yes ☑	No ☐		
All samples received at a temp. of > 0° C to 6.0° C?	Yes ☑	No ☐		
Response when temperature is outside of range:				
Preservative added to bottles:				
Sample Temp. taken and recorded upon receipt?	Yes ☑	No ☐	0.2 To	6 °C
Water - Were bubbles absent in VOC vials?	Yes ☐	No ☐	No Vials	☑
Water - Was there Chlorine Present?	Yes ☐	No ☐	NA	☑
Water - pH acceptable upon receipt?	Yes ☐	No ☐	No Water	☑
Are Samples considered acceptable?	Yes ☑	No ☐		
Custody Seals present?	Yes ☐	No ☑		
Traffic Report or Packing Lists present?	Yes ☐	No ☑		
Airbill or Sticker?	Air Bill ☑	Sticker ☐	Not Present	☐
Airbill No:	980253117250			
Sample Tags Present?	Yes ☐	No ☑		
Sample Tags Listed on COC?	Yes ☐	No ☑		
Tag Numbers:				
Sample Condition?	Intact ☑	Broken ☐	Leaking	☐

Case Number: SDG: SAS:

Adjusted? _____ Checked by

Any No and/or NA (not applicable) response must be detailed in the comments section below.

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH
1111275-001A	Container-01 of 01	Bottle				
1111275-003A	Container-01 of 01	Bottle				
1111275-004A	Container-01 of 01	Bottle				
1111275-005A	Container-01 of 01	Bottle				
1111275-006A	Container-01 of 01	Bottle				
1111275-007A	Container-01 of 01	Bottle				
1111275-008A	Container-01 of 01	Bottle				
1111275-009A	Container-01 of 01	Bottle				
1111275-010A	Container-01 of 01	Bottle				
1111275-011A	Container-01 of 01	Bottle				
1111275-012A	Container-01 of 01	Bottle				
1111275-013A	Container-01 of 01	Bottle				
1111275-014A	Container-01 of 01	Bottle				
1111275-015A	Container-01 of 01	Bottle				
1111275-016A	Container-01 of 01	Bottle				
1111275-017A	Container-01 of 01	Bottle				
1111275-018A	Container-01 of 01	Bottle				
1111275-019A	Container-01 of 01	Bottle				
1111275-020A	Container-01 of 01	Bottle				
1111275-021A	Container-01 of 01	Bottle				
1111275-022A	Container-01 of 01	Bottle				
1111275-023A	Container-01 of 01	Bottle				
1111275-024A	Container-01 of 01	Bottle				
1111275-025A	Container-01 of 01	Bottle				
1111275-026A	Container-01 of 01	Bottle				
1111275-027A	Container-01 of 01	Bottle				
1111275-028A	Container-01 of 01	Bottle				
1111275-029A	Container-01 of 01	Bottle				
1111275-030A	Container-01 of 01	Bottle				

Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
Red110	0.2-6.0	Good	Not Present			

Adjusted? _____ Checked by _____

Any No and/or NA (not applicable) response must be detailed in the comments section below.

SampID	ContainerID	Type	Org pH	Adj pH	Req Min pH	Req Max pH

Client Contacted? ☐ Yes ☑ No ☐ NA Person Contacted:

Contact Mode: ☐ Phone: ☐ Fax: ☐ Email: ☐ In Person:

Client Instructions:

Date Contacted: Contacted By:

Regarding:

CorrectiveAction:

Comments:
no cooler temp blank received

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Workorder Sample Summary

WO#: 1111275

01-Dec-11

CLIENT: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples

Lab SampleID	Client Sample ID	Tag No	Date Collected	Date Received	Matrix
1111275-001	Lab Control 1		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-003	Lab Control 3		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-004	Lab Control 4		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-005	Lab Control 5		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-006	Lab Control Background		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-007	DS-11-WOPU-1		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-008	DS-11-WOPU-2		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-009	DS-11-WOPU-3		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-010	DS-11-WOPU-4		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-011	DS-11-WOPU-5		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-012	DS-11-IIPU-1		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-013	DS-11-IIPU-2		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-014	DS-11-IIPU-3		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-015	DS-11-IIPU-4		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-016	DS-11-IIPU-5		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-017	DS-11-MU1-1		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-018	DS-11-MU1-2		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-019	DS-11-MU1-3		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-020	DS-11-MU1-4		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-021	DS-11-MU1-5		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-022	DS-11-MU5-1		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-023	DS-11-MU5-2		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-024	DS-11-MU5-4		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-025	DS-11-MU5-5		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-026	DS-11-MU6-1		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-027	DS-11-MU6-2		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-028	DS-11-MU6-3		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-029	DS-11-MU6-4		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis
1111275-030	DS-11-MU6-5		11/4/2011	11/9/2011 9:50:00 AM	Animal Tis

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

DATES REPORT

WO#: **1111275**

01-Dec-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1111275-001A	Lab Control 1	11/4/2011	Animal Tissue	Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/26/2011 12:39:00 PM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-003A	Lab Control 3			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/26/2011 1:35:00 PM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-004A	Lab Control 4			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/26/2011 2:30:00 PM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-005A	Lab Control 5			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/26/2011 3:26:00 PM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-006A	Lab Control Background			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/26/2011 4:21:00 PM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-007A	DS-11-WOPU-1			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/26/2011 5:17:00 PM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-008A	DS-11-WOPU-2			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/26/2011 6:12:00 PM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-009A	DS-11-WOPU-3			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/26/2011 7:07:00 PM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-010A	DS-11-WOPU-4			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/26/2011 8:03:00 PM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-011A	DS-11-WOPU-5			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/26/2011 8:58:00 PM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-012A	DS-11-IIPU-1			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/27/2011 12:40:00 AM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-013A	DS-11-IIPU-2			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/27/2011 1:36:00 AM

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

DATES REPORT

WO#: **1111275**

01-Dec-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1111275-013A	DS-11-IIPU-2	11/4/2011	Animal Tissue	Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-014A	DS-11-IIPU-3			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/27/2011 2:31:00 AM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-015A	DS-11-IIPU-4			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/27/2011 3:27:00 AM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-016A	DS-11-IIPU-5			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/27/2011 4:22:00 AM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-017A	DS-11-MU1-1			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/27/2011 5:17:00 AM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-018A	DS-11-MU1-2			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/27/2011 6:13:00 AM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-019A	DS-11-MU1-3			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/27/2011 7:08:00 AM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-020A	DS-11-MU1-4			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/27/2011 8:04:00 AM
				Total Lipids		11/10/2011 6:28:44 AM	11/10/2011 9:00:00 AM
1111275-021A	DS-11-MU1-5			Polychlorinated Biphenyl Congeners		11/10/2011 8:26:06 AM	11/27/2011 8:59:00 AM
				Total Lipids		11/10/2011 6:29:39 AM	11/10/2011 9:00:00 AM
1111275-022A	DS-11-MU5-1			Polychlorinated Biphenyl Congeners		11/10/2011 10:13:44 AM	11/27/2011 3:27:00 PM
				Total Lipids		11/10/2011 6:29:39 AM	11/10/2011 9:00:00 AM
1111275-023A	DS-11-MU5-2			Polychlorinated Biphenyl Congeners		11/10/2011 10:13:44 AM	11/27/2011 4:23:00 PM
				Total Lipids		11/10/2011 6:29:39 AM	11/10/2011 9:00:00 AM
1111275-024A	DS-11-MU5-4			Polychlorinated Biphenyl Congeners		11/10/2011 10:13:44 AM	11/27/2011 5:18:00 PM
				Total Lipids		11/10/2011 6:29:39 AM	11/10/2011 9:00:00 AM

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

DATES REPORT

WO#: **1111275**

01-Dec-11

Client: FutureNet Group, Inc.

Project: USACOE Lumbriculus Tissue Samples

Sample ID	Client Sample ID	Collection Date	Matrix	Test Name	Leachate Date	Prep Date	Analysis Date
1111275-025A	DS-11-MU5-5	11/4/2011	Animal Tissue	Polychlorinated Biphenyl Congeners		11/10/2011 10:13:44 AM	11/27/2011 6:14:00 PM
				Total Lipids		11/10/2011 6:29:39 AM	11/10/2011 9:00:00 AM
1111275-026A	DS-11-MU6-1			Polychlorinated Biphenyl Congeners		11/10/2011 10:13:44 AM	11/27/2011 7:09:00 PM
				Total Lipids		11/10/2011 6:29:39 AM	11/10/2011 9:00:00 AM
1111275-027A	DS-11-MU6-2			Polychlorinated Biphenyl Congeners		11/10/2011 10:13:44 AM	11/27/2011 8:04:00 PM
				Total Lipids		11/10/2011 6:29:39 AM	11/10/2011 9:00:00 AM
1111275-028A	DS-11-MU6-3			Polychlorinated Biphenyl Congeners		11/10/2011 10:13:44 AM	11/27/2011 9:00:00 PM
				Total Lipids		11/10/2011 6:29:39 AM	11/10/2011 9:00:00 AM
1111275-029A	DS-11-MU6-4			Polychlorinated Biphenyl Congeners		11/10/2011 10:13:44 AM	11/27/2011 9:55:00 PM
				Total Lipids		11/10/2011 6:29:39 AM	11/10/2011 9:00:00 AM
1111275-030A	DS-11-MU6-5			Polychlorinated Biphenyl Congeners		11/10/2011 10:13:44 AM	11/27/2011 10:51:00 PM
				Total Lipids		11/10/2011 6:29:39 AM	11/10/2011 9:00:00 AM

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-001 **Matrix:** ANIMAL TISSUE

Client Sample ID Lab Control 1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,3,3´,4,4´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,3,4,4´,5´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,3,4,5´-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,3,5´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,4,5,5´-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,4,5´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,5,5´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,2´,5-TrCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,3,3´,4,4´-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,3,3´,4´,6-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,4,4´-TrCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
2,4´-DiCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
3,3´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
3,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
3,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
DeCB	ND	1.9	U	µg/Kg	1	11/26/2011 12:39:00 PM
Surr: Tetrachloro-m-xylene	82.1	70-130		%REC	1	11/26/2011 12:39:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.9	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-003 **Matrix:** ANIMAL TISSUE

Client Sample ID Lab Control 3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/26/2011 1:35:00 PM
Surr: Tetrachloro-m-xylene	96.5	70-130		%REC	1	11/26/2011 1:35:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.1	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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31628 Glendale St.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-004 **Matrix:** ANIMAL TISSUE

Client Sample ID Lab Control 4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,3,3´,4,4´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,3,4,4´,5´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,3,4,5´-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,3,5´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,4,5,5´-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,4,5´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,5,5´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,2´,5-TrCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,3,3´,4,4´-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,3,3´,4´,6-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,4,4´-TrCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
2,4´-DiCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
3,3´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
3,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
3,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
DeCB	ND	1.9	U	µg/Kg	1	11/26/2011 2:30:00 PM
Surr: Tetrachloro-m-xylene	80.2	70-130		%REC	1	11/26/2011 2:30:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.4	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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31628 Glendale St.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-005 **Matrix:** ANIMAL TISSUE

Client Sample ID Lab Control 5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,3,3´,4,4´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,3,4,4´,5´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,3,4,5´-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,3,5´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,4,5,5´-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,4,5´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,5,5´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,2´,5-TrCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,3,3´,4,4´-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,3,3´,4´,6-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,4,4´-TrCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
2,4´-DiCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
3,3´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
3,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
3,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
DeCB	ND	1.9	U	µg/Kg	1	11/26/2011 3:26:00 PM
Surr: Tetrachloro-m-xylene	89.4	70-130		%REC	1	11/26/2011 3:26:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.7	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

**/X*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-006 **Matrix:** ANIMAL TISSUE

Client Sample ID Lab Control Background

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/26/2011 4:21:00 PM
Surr: Tetrachloro-m-xylene	95.4	70-130		%REC	1	11/26/2011 4:21:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	4.8	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-007 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-WOPU-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/26/2011 5:17:00 PM
Surr: Tetrachloro-m-xylene	91.7	70-130		%REC	1	11/26/2011 5:17:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.6	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc.

Collection Date: 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-008

Matrix: ANIMAL TISSUE

Client Sample ID DS-11-WOPU-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/26/2011 6:12:00 PM
Surr: Tetrachloro-m-xylene	90.2	70-130		%REC	1	11/26/2011 6:12:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	4.1	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-009 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-WOPU-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/26/2011 7:07:00 PM
Surr: Tetrachloro-m-xylene	91.2	70-130		%REC	1	11/26/2011 7:07:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.3	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-010 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-WOPU-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:03:00 PM
Surr: Tetrachloro-m-xylene	94.8	70-130		%REC	1	11/26/2011 8:03:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.5	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-011 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-WOPU-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/26/2011 8:58:00 PM
Surr: Tetrachloro-m-xylene	81.7	70-130		%REC	1	11/26/2011 8:58:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	4.0	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-012 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-IIPU-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,3,4,4´,5´-HxCB	1.3	2.0	J	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,3,4´,5,5´,6-HpCB	0.95	2.0	J	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,4,4´,5,5´-HxCB	1.7	2.0	J	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,4,5,5´-PeCB	1.1	2.0	J	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,3,3´,4´,6-PeCB	1.0	2.0	J	µg/Kg	1	11/27/2011 12:40:00 AM
2,3´,4,4´,5-PeCB	0.58	2.0	J	µg/Kg	1	11/27/2011 12:40:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 12:40:00 AM
Surr: Tetrachloro-m-xylene	87.9	70-130		%REC	1	11/27/2011 12:40:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	4.3	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
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Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-013 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-IIPU-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,3,4,4´,5´-HxCB	1.4	2.0	J	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.0	2.0	J	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,4,4´,5,5´-HxCB	1.8	2.0	J	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,4,5,5´-PeCB	1.2	2.0	J	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,3,3´,4´,6-PeCB	1.1	2.0	J	µg/Kg	1	11/27/2011 1:36:00 AM
2,3´,4,4´,5-PeCB	0.65	2.0	J	µg/Kg	1	11/27/2011 1:36:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 1:36:00 AM
Surr: Tetrachloro-m-xylene	84.2	70-130		%REC	1	11/27/2011 1:36:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.2	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report
(consolidated)

WO#: 1111275
Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011
Project: USACOE Lumbriculus Tissue Samples
Lab ID: 1111275-014 **Matrix:** ANIMAL TISSUE
Client Sample ID DS-11-IIPU-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,3,4,4´,5´-HxCB	1.5	2.0	J	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.0	2.0	J	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,4,4´,5,5´-HxCB	2.0	2.0		µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,4,5,5´-PeCB	1.3	2.0	J	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,3,3´,4´,6-PeCB	1.2	2.0	J	µg/Kg	1	11/27/2011 2:31:00 AM
2,3´,4,4´,5-PeCB	0.66	2.0	J	µg/Kg	1	11/27/2011 2:31:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 2:31:00 AM
Surr: Tetrachloro-m-xylene	92.0	70-130		%REC	1	11/27/2011 2:31:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.9	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-015 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-IIPU-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,3,3´,4,4´-HxCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,3,4,4´,5´-HxCB	1.6	1.9	J	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,3,4,5´-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.2	1.9	J	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,3,5´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,4,4´,5,5´-HxCB	2.6	1.9		µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,4,5,5´-PeCB	1.5	1.9	J	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,4,5´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,5,5´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,2´,5-TrCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,3,3´,4,4´-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,3,3´,4´,6-PeCB	1.3	1.9	J	µg/Kg	1	11/27/2011 3:27:00 AM
2,3´,4,4´,5-PeCB	0.86	1.9	J	µg/Kg	1	11/27/2011 3:27:00 AM
2,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,4,4´-TrCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
2,4´-DiCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
3,3´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
3,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
3,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
DeCB	ND	1.9	U	µg/Kg	1	11/27/2011 3:27:00 AM
Surr: Tetrachloro-m-xylene	88.6	70-130		%REC	1	11/27/2011 3:27:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.6	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

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Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc.

Collection Date: 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-016

Matrix: ANIMAL TISSUE

Client Sample ID DS-11-IIPU-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,3,4,4´,5´-HxCB	1.4	2.0	J	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.1	2.0	J	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,4,4´,5,5´-HxCB	2.3	2.0		µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,4,5,5´-PeCB	1.3	2.0	J	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,3,3´,4´,6-PeCB	1.2	2.0	J	µg/Kg	1	11/27/2011 4:22:00 AM
2,3´,4,4´,5-PeCB	0.80	2.0	J	µg/Kg	1	11/27/2011 4:22:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:22:00 AM
Surr: Tetrachloro-m-xylene	79.1	70-130		%REC	1	11/27/2011 4:22:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	4.7	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-017 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU1-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,3,4,4´,5´-HxCB	0.83	2.0	J	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,3,4´,5,5´,6-HpCB	0.92	2.0	J	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,4,4´,5,5´-HxCB	1.7	2.0	J	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,4,5,5´-PeCB	0.67	2.0	J	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,3,3´,4´,6-PeCB	0.44	2.0	J	µg/Kg	1	11/27/2011 5:17:00 AM
2,3´,4,4´,5-PeCB	0.29	2.0	J	µg/Kg	1	11/27/2011 5:17:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:17:00 AM
Surr: Tetrachloro-m-xylene	78.4	70-130		%REC	1	11/27/2011 5:17:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.6	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-018 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU1-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,3,4,4´,5´-HxCB	0.90	2.0	J	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.0	2.0	J	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,4,4´,5,5´-HxCB	2.0	2.0	J	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,4,5,5´-PeCB	0.74	2.0	J	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,3,3´,4´,6-PeCB	0.47	2.0	J	µg/Kg	1	11/27/2011 6:13:00 AM
2,3´,4,4´,5-PeCB	0.43	2.0	J	µg/Kg	1	11/27/2011 6:13:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:13:00 AM
Surr: Tetrachloro-m-xylene	77.8	70-130		%REC	1	11/27/2011 6:13:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.7	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-019 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU1-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,3,3´,4,4´-HxCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,3,4,4´,5´-HxCB	0.89	1.9	J	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,3,4,5´-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.0	1.9	J	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,3,5´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,4,4´,5,5´-HxCB	1.9	1.9	J	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,4,5,5´-PeCB	0.70	1.9	J	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,4,5´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,5,5´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,2´,5-TrCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,3,3´,4,4´-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,3,3´,4´,6-PeCB	0.46	1.9	J	µg/Kg	1	11/27/2011 7:08:00 AM
2,3´,4,4´,5-PeCB	0.38	1.9	J	µg/Kg	1	11/27/2011 7:08:00 AM
2,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,4,4´-TrCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
2,4´-DiCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
3,3´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
3,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
3,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
DeCB	ND	1.9	U	µg/Kg	1	11/27/2011 7:08:00 AM
Surr: Tetrachloro-m-xylene	82.7	70-130		%REC	1	11/27/2011 7:08:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.7	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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31628 Glendale St.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-020 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU1-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,3,4,4´,5´-HxCB	1.2	2.0	J	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.2	2.0	J	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,4,4´,5,5´-HxCB	2.3	2.0		µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,4,5,5´-PeCB	0.88	2.0	J	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,3,3´,4´,6-PeCB	0.57	2.0	J	µg/Kg	1	11/27/2011 8:04:00 AM
2,3´,4,4´,5-PeCB	0.44	2.0	J	µg/Kg	1	11/27/2011 8:04:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 AM
Surr: Tetrachloro-m-xylene	86.2	70-130		%REC	1	11/27/2011 8:04:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	4.6	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report
(consolidated)

WO#: 1111275
Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011
Project: USACOE Lumbriculus Tissue Samples
Lab ID: 1111275-021 **Matrix:** ANIMAL TISSUE
Client Sample ID DS-11-MU1-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,3,4,4´,5´-HxCB	0.90	2.0	J	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,3,4´,5,5´,6-HpCB	1.0	2.0	J	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,4,4´,5,5´-HxCB	2.0	2.0		µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,4,5,5´-PeCB	0.71	2.0	J	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,3,3´,4´,6-PeCB	0.45	2.0	J	µg/Kg	1	11/27/2011 8:59:00 AM
2,3´,4,4´,5-PeCB	0.40	2.0	J	µg/Kg	1	11/27/2011 8:59:00 AM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:59:00 AM
Surr: Tetrachloro-m-xylene	90.9	70-130		%REC	1	11/27/2011 8:59:00 AM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.9	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-022 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU5-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,3,3´,4,4´,5-HpCB	1.1	2.0	J	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,3,4,4´,5´-HxCB	2.9	2.0		µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,3,4´,5,5´,6-HpCB	1.6	2.0	J	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,4,4´,5,5´-HxCB	3.7	2.0		µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,4,5,5´-PeCB	2.9	2.0		µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,3,3´,4´,6-PeCB	2.4	2.0		µg/Kg	1	11/27/2011 3:27:00 PM
2,3´,4,4´,5-PeCB	1.6	2.0	J	µg/Kg	1	11/27/2011 3:27:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 3:27:00 PM
Surr: Tetrachloro-m-xylene	97.3	70-130		%REC	1	11/27/2011 3:27:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	5.3	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

RTI
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Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-023 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU5-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,3,3´,4,4´,5-HpCB	1.1	2.0	J	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,3,4,4´,5´-HxCB	2.7	2.0		µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,3,4´,5,5´,6-HpCB	1.5	2.0	J	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,4,4´,5,5´-HxCB	3.5	2.0		µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,4,5,5´-PeCB	2.8	2.0		µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,3,3´,4´,6-PeCB	2.3	2.0		µg/Kg	1	11/27/2011 4:23:00 PM
2,3´,4,4´,5-PeCB	1.5	2.0	J	µg/Kg	1	11/27/2011 4:23:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 4:23:00 PM
Surr: Tetrachloro-m-xylene	93.0	70-130		%REC	1	11/27/2011 4:23:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.2	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

RTI
31628 Glendale St.
Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-024 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU5-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,3,3´,4,4´,5-HpCB	1.0	2.0	J	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,3,4,4´,5´-HxCB	2.5	2.0		µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,3,4´,5,5´,6-HpCB	1.4	2.0	J	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,4,4´,5,5´-HxCB	3.2	2.0		µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,4,5,5´-PeCB	2.5	2.0		µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,3,3´,4´,6-PeCB	2.0	2.0		µg/Kg	1	11/27/2011 5:18:00 PM
2,3´,4,4´,5-PeCB	1.4	2.0	J	µg/Kg	1	11/27/2011 5:18:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 5:18:00 PM
Surr: Tetrachloro-m-xylene	98.4	70-130		%REC	1	11/27/2011 5:18:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.4	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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31628 Glendale St.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-025 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU5-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,3,3´,4,4´,5-HpCB	0.97	2.0	J	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,3,4,4´,5´-HxCB	2.4	2.0		µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,3,4´,5,5´,6-HpCB	1.4	2.0	J	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,4,4´,5,5´-HxCB	3.3	2.0		µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,4,5,5´-PeCB	2.4	2.0		µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,3,3´,4´,6-PeCB	1.9	2.0	J	µg/Kg	1	11/27/2011 6:14:00 PM
2,3´,4,4´,5-PeCB	1.4	2.0	J	µg/Kg	1	11/27/2011 6:14:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 6:14:00 PM
Surr: Tetrachloro-m-xylene	88.2	70-130		%REC	1	11/27/2011 6:14:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.5	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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31628 Glendale St.
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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-026 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU6-1

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 7:09:00 PM
Surr: Tetrachloro-m-xylene	94.0	70-130		%REC	1	11/27/2011 7:09:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.3	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

**/X*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc.

Collection Date: 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-027

Matrix: ANIMAL TISSUE

Client Sample ID DS-11-MU6-2

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 8:04:00 PM
Surr: Tetrachloro-m-xylene	97.2	70-130		%REC	1	11/27/2011 8:04:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	2.7	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-028 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU6-3

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:00:00 PM
Surr: Tetrachloro-m-xylene	99.0	70-130		%REC	1	11/27/2011 9:00:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.0	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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Livonia, MI 48150
TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-029 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU6-4

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,3,3´,4,4´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,3,4,4´,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,3,4,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,3,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,4,5,5´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,4,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,5,5´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,2´,5-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,3,3´,4,4´-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,3,3´,4´,6-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,4,4´-TrCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
2,4´-DiCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
3,3´,4,4´,5,5´-HxCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
3,3´,4,4´,5-PeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
3,3´,4,4´-TeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
DeCB	ND	2.0	U	µg/Kg	1	11/27/2011 9:55:00 PM
Surr: Tetrachloro-m-xylene	94.7	70-130		%REC	1	11/27/2011 9:55:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.5	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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TEL: 7344228000 FAX: 7344225342
Website: www.rtilabs.com

Analytical Report

(consolidated)

WO#: 1111275

Date Reported: 11/30/2011

CLIENT: FutureNet Group, Inc. **Collection Date:** 11/4/2011

Project: USACOE Lumbriculus Tissue Samples

Lab ID: 1111275-030 **Matrix:** ANIMAL TISSUE

Client Sample ID DS-11-MU6-5

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
POLYCHLORINATED BIPHENYL CONGENERS				**SW8082CON**	**SW3550C**	Analyst: **MB**
2,2',3,3',4,4',5,5',6-NoCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,3,3´,4,4´,5,6-OcCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,3,3´,4,4´,5-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,3,3´,4,4´-HxCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,3,4,4´,5,5´-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,3,4,4´,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,3,4,4´,5´-HxCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,3,4,4´,6,6´-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,3,4,5´-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,3,4´,5,5´,6-HpCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,3,5´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,4,5,5´-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,4,5´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,5,5´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,2´,5-TrCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,3,3´,4,4´-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,3,3´,4´,6-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,4,4´-TrCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
2,4´-DiCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
3,3´,4,4´,5,5´-HxCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
3,3´,4,4´,5-PeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
3,3´,4,4´-TeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
DeCB	ND	1.9	U	µg/Kg	1	11/27/2011 10:51:00 PM
Surr: Tetrachloro-m-xylene	91.8	70-130		%REC	1	11/27/2011 10:51:00 PM
TOTAL LIPIDS				**LIPIDS**		Analyst: **JE**
Total Lipids	3.6	0.0050	B	%	1	11/10/2011 9:00:00 AM

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response
ND	Not Detected at the Reporting Limit	PL	Permit Limit
RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

Revision v1

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: 1111275
01-Dec-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
BatchID: 24373

Sample ID: **MB-24373** SampType: **MBLK** TestCode: **LIPIDS_T** Units: **%** Prep Date: **11/10/2011** RunNo: **44204**
Client ID: **PBS** Batch ID: **24373** TestNo: **LIPIDS** Analysis Date: **11/10/2011** SeqNo: **867367**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Lipids	0.010	0.0050									

Sample ID: **1111275-020ADUP** SampType: **DUP** TestCode: **LIPIDS_T** Units: **%** Prep Date: **11/10/2011** RunNo: **44204**
Client ID: **DS-11-MU1-4** Batch ID: **24373** TestNo: **LIPIDS** Analysis Date: **11/10/2011** SeqNo: **867387**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Lipids	4.7	0.0050						4.595	1.83	25	B

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1111275
01-Dec-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
BatchID: 24374

Sample ID: **MB-24374** SampType: **MBLK** TestCode: **LIPIDS_T** Units: **%** Prep Date: **11/10/2011** RunNo: **44205**
Client ID: **PBS** Batch ID: **24374** TestNo: **LIPIDS** Analysis Date: **11/10/2011** SeqNo: **867390**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Lipids	0.015	0.0050									

Sample ID: **1111275-030ADUP** SampType: **DUP** TestCode: **LIPIDS_T** Units: **%** Prep Date: **11/10/2011** RunNo: **44205**
Client ID: **DS-11-MU6-5** Batch ID: **24374** TestNo: **LIPIDS** Analysis Date: **11/10/2011** SeqNo: **867401**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Total Lipids	3.6	0.0050						3.600	1.12	25	B

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: 1111275
01-Dec-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
BatchID: 24378

Sample ID: **lcs-24378** SampType: **LCS** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **LCSS** Batch ID: **24378** TestNo: **SW8082CON SW3550C** Analysis Date: **11/26/2011** SeqNo: **875158**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	3.3	0.67	3.321	0	99.0	70	130				
2,2´,3,3´,4,4´,5,6-OcCB	3.4	0.67	3.321	0	104	70	130				
2,2´,3,3´,4,4´,5-HpCB	3.4	0.67	3.321	0	101	70	130				
2,2´,3,3´,4,4´-HxCB	3.4	0.67	3.321	0	101	70	130				
2,2´,3,4,4´,5,5´-HpCB	3.4	0.67	3.321	0	104	70	130				
2,2´,3,4,4´,5´,6-HpCB	3.2	0.67	3.321	0	97.7	70	130				
2,2´,3,4,4´,5´-HxCB	3.4	0.67	3.321	0	102	70	130				
2,2´,3,4,4´,6,6´-HpCB	3.3	0.67	3.321	0	100	70	130				
2,2´,3,4,5´-PeCB	3.2	0.67	3.321	0	96.7	70	130				
2,2´,3,4´,5,5´,6-HpCB	3.2	0.67	3.321	0	97.7	70	130				
2,2´,3,5´-TeCB	3.3	0.67	3.321	0	97.9	70	130				
2,2´,4,4´,5,5´-HxCB	3.6	0.67	3.321	0	109	70	130				
2,2´,4,5,5´-PeCB	3.3	0.67	3.321	0	99.1	70	130				
2,2´,4,5´-TeCB	3.2	0.67	3.321	0	95.8	70	130				
2,2´,5,5´-TeCB	3.2	0.67	3.321	0	97.7	70	130				
2,2´,5-TrCB	3.3	0.67	3.321	0	98.1	70	130				
2,3,3´,4,4´-PeCB	3.5	0.67	3.321	0	106	70	130				
2,3,3´,4´,6-PeCB	3.2	0.67	3.321	0	96.1	70	130				
2,3´,4,4´,5-PeCB	3.3	0.67	3.321	0	101	70	130				
2,3´,4,4´-TeCB	3.3	0.67	3.321	0	99.0	70	130				
2,4,4´-TrCB	3.3	0.67	3.321	0	98.6	70	130				
2,4´-DiCB	3.3	0.67	3.321	0	97.9	70	130				
3,3´,4,4´,5,5´-HxCB	3.0	0.67	3.321	0	89.7	70	130				
3,3´,4,4´,5-PeCB	3.4	0.67	3.321	0	102	70	130				
3,3´,4,4´-TeCB	3.2	0.67	3.321	0	97.6	70	130				
DeCB	3.3	0.67	3.321	0	99.6	70	130				

Qualifiers:
*/X Value exceeds Maximum Contaminant Level
J Estimated concentration
R RPD outside accepted recovery limits
E Value above quantitation range
M Manual Integration used to determine area response
RL Reporting Limit
H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: 1111275
01-Dec-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
BatchID: 24378

Sample ID: **lcs-24378** SampType: **LCS** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **LCSS** Batch ID: **24378** TestNo: **SW8082CON SW3550C** Analysis Date: **11/26/2011** SeqNo: **875158**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Tetrachloro-m-xylene	3.2		3.321		97.2	70	130				

Sample ID: **lcsd-24378** SampType: **LCSD** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **LCSS02** Batch ID: **24378** TestNo: **SW8082CON SW3550C** Analysis Date: **11/26/2011** SeqNo: **875159**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	3.4	0.67	3.324	0	101	70	130	3.286	2.33	25	
2,2´,3,3´,4,4´,5,6-OcCB	3.5	0.67	3.324	0	106	70	130	3.446	1.87	25	
2,2´,3,3´,4,4´,5-HpCB	3.4	0.67	3.324	0	103	70	130	3.360	2.13	25	
2,2´,3,3´,4,4´-HxCB	3.4	0.67	3.324	0	103	70	130	3.358	1.97	25	
2,2´,3,4,4´,5,5´-HpCB	3.5	0.67	3.324	0	105	70	130	3.443	1.76	25	
2,2´,3,4,4´,5´,6-HpCB	3.3	0.67	3.324	0	100	70	130	3.245	2.49	25	
2,2´,3,4,4´,5´-HxCB	3.4	0.67	3.324	0	103	70	130	3.382	1.72	25	
2,2´,3,4,4´,6,6´-HpCB	3.4	0.67	3.324	0	102	70	130	3.327	1.51	25	
2,2´,3,4,5´-PeCB	3.2	0.67	3.324	0	97.7	70	130	3.211	1.10	25	
2,2´,3,4´,5,5´,6-HpCB	3.3	0.67	3.324	0	100	70	130	3.245	2.49	25	
2,2´,3,5´-TeCB	3.3	0.67	3.324	0	99.1	70	130	3.251	1.36	25	
2,2´,4,4´,5,5´-HxCB	3.7	0.67	3.324	0	112	70	130	3.607	2.76	25	
2,2´,4,5,5´-PeCB	3.3	0.67	3.324	0	101	70	130	3.292	1.52	25	
2,2´,4,5´-TeCB	3.2	0.67	3.324	0	96.7	70	130	3.183	1.02	25	
2,2´,5,5´-TeCB	3.3	0.67	3.324	0	98.9	70	130	3.245	1.33	25	
2,2´,5-TrCB	3.3	0.67	3.324	0	99.2	70	130	3.256	1.25	25	
2,3,3´,4,4´-PeCB	3.6	0.67	3.324	0	109	70	130	3.517	2.99	25	
2,3,3´,4´,6-PeCB	3.2	0.67	3.324	0	97.2	70	130	3.191	1.26	25	
2,3´,4,4´,5-PeCB	3.4	0.67	3.324	0	102	70	130	3.342	1.58	25	
2,3´,4,4´-TeCB	3.3	0.67	3.324	0	100	70	130	3.287	1.18	25	

Qualifiers:
*/X Value exceeds Maximum Contaminant Level
J Estimated concentration
R RPD outside accepted recovery limits
E Value above quantitation range
M Manual Integration used to determine area response
RL Reporting Limit
H Holding times for preparation or analysis exceede
ND Not Detected at the Reporting Limit
S Spike Recovery outside accepted recovery limits

RTI LABORATORIES, INC.

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QC SUMMARY REPORT

WO#: 1111275
01-Dec-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
BatchID: 24378

Sample ID: **lcsd-24378** SampType: **LCSD** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **LCSS02** Batch ID: **24378** TestNo: **SW8082CON SW3550C** Analysis Date: **11/26/2011** SeqNo: **875159**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,4´-TrCB	3.3	0.67	3.324	0	99.8	70	130	3.275	1.28	25	
2,4´-DiCB	3.3	0.67	3.324	0	99.0	70	130	3.252	1.24	25	
3,3´,4,4´,5,5´-HxCB	3.1	0.67	3.324	0	93.8	70	130	2.978	4.58	25	
3,3´,4,4´,5-PeCB	3.4	0.67	3.324	0	103	70	130	3.379	1.31	25	
3,3´,4,4´-TeCB	3.3	0.67	3.324	0	99.9	70	130	3.242	2.39	25	
DeCB	3.4	0.67	3.324	0	102	70	130	3.309	2.22	25	
Surr: Tetrachloro-m-xylene	3.3		3.324		97.8	70	130		0	25	

Sample ID: **mb-24378** SampType: **MBLK** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **PBS** Batch ID: **24378** TestNo: **SW8082CON SW3550C** Analysis Date: **11/26/2011** SeqNo: **875160**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	ND	0.67									U
2,2´,3,3´,4,4´,5,6-OcCB	ND	0.67									U
2,2´,3,3´,4,4´,5-HpCB	ND	0.67									U
2,2´,3,3´,4,4´-HxCB	ND	0.67									U
2,2´,3,4,4´,5,5´-HpCB	ND	0.67									U
2,2´,3,4,4´,5´,6-HpCB	ND	0.67									U
2,2´,3,4,4´,5´-HxCB	ND	0.67									U
2,2´,3,4,4´,6,6´-HpCB	ND	0.67									U
2,2´,3,4,5´-PeCB	ND	0.67									U
2,2´,3,4´,5,5´,6-HpCB	ND	0.67									U
2,2´,3,5´-TeCB	ND	0.67									U
2,2´,4,4´,5,5´-HxCB	ND	0.67									U
2,2´,4,5,5´-PeCB	ND	0.67									U
2,2´,4,5´-TeCB	ND	0.67									U

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1111275
01-Dec-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
BatchID: 24378

Sample ID: **mb-24378** SampType: **MBLK** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **PBS** Batch ID: **24378** TestNo: **SW8082CON SW3550C** Analysis Date: **11/26/2011** SeqNo: **875160**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2´,5,5´-TeCB	ND	0.67									U
2,2´,5-TrCB	ND	0.67									U
2,3,3´,4,4´-PeCB	ND	0.67									U
2,3,3´,4´,6-PeCB	ND	0.67									U
2,3´,4,4´,5-PeCB	ND	0.67									U
2,3´,4,4´-TeCB	ND	0.67									U
2,4,4´-TrCB	ND	0.67									U
2,4´-DiCB	ND	0.67									U
3,3´,4,4´,5,5´-HxCB	ND	0.67									U
3,3´,4,4´,5-PeCB	ND	0.67									U
3,3´,4,4´-TeCB	ND	0.67									U
DeCB	ND	0.67									U
Surr: Tetrachloro-m-xylene	3.1		3.332		93.0	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1111275
01-Dec-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
BatchID: 24382

Sample ID: **lcs-24382** SampType: **LCS** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **LCSS** Batch ID: **24382** TestNo: **SW8082CON SW3550C** Analysis Date: **11/27/2011** SeqNo: **875224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	3.7	0.67	3.330	0	112	70	130				
2,2´,3,3´,4,4´,5,6-OcCB	3.7	0.67	3.330	0	113	70	130				
2,2´,3,3´,4,4´,5-HpCB	3.8	0.67	3.330	0	114	70	130				
2,2´,3,3´,4,4´-HxCB	3.6	0.67	3.330	0	109	70	130				
2,2´,3,4,4´,5,5´-HpCB	3.8	0.67	3.330	0	113	70	130				
2,2´,3,4,4´,5´,6-HpCB	3.5	0.67	3.330	0	106	70	130				
2,2´,3,4,4´,5´-HxCB	3.7	0.67	3.330	0	111	70	130				
2,2´,3,4,4´,6,6´-HpCB	3.6	0.67	3.330	0	109	70	130				
2,2´,3,4,5´-PeCB	3.5	0.67	3.330	0	105	70	130				
2,2´,3,4´,5,5´,6-HpCB	3.5	0.67	3.330	0	106	70	130				
2,2´,3,5´-TeCB	3.6	0.67	3.330	0	107	70	130				
2,2´,4,4´,5,5´-HxCB	3.9	0.67	3.330	0	118	70	130				
2,2´,4,5,5´-PeCB	3.6	0.67	3.330	0	109	70	130				
2,2´,4,5´-TeCB	3.5	0.67	3.330	0	104	70	130				
2,2´,5,5´-TeCB	3.5	0.67	3.330	0	106	70	130				
2,2´,5-TrCB	3.5	0.67	3.330	0	106	70	130				
2,3,3´,4,4´-PeCB	3.9	0.67	3.330	0	117	70	130				
2,3,3´,4´,6-PeCB	3.5	0.67	3.330	0	105	70	130				
2,3´,4,4´,5-PeCB	3.7	0.67	3.330	0	110	70	130				
2,3´,4,4´-TeCB	3.6	0.67	3.330	0	108	70	130				
2,4,4´-TrCB	3.6	0.67	3.330	0	107	70	130				
2,4´-DiCB	3.5	0.67	3.330	0	105	70	130				
3,3´,4,4´,5,5´-HxCB	3.6	0.67	3.330	0	108	70	130				
3,3´,4,4´,5-PeCB	3.6	0.67	3.330	0	107	70	130				
3,3´,4,4´-TeCB	3.6	0.67	3.330	0	108	70	130				
DeCB	3.7	0.67	3.330	0	112	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceed
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1111275
01-Dec-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
BatchID: 24382

Sample ID: **lcs-24382** SampType: **LCS** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **LCSS** Batch ID: **24382** TestNo: **SW8082CON SW3550C** Analysis Date: **11/27/2011** SeqNo: **875224**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Surr: Tetrachloro-m-xylene	3.4		3.330		103	70	130				

Sample ID: **lcsd-24382** SampType: **LCSD** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **LCSS02** Batch ID: **24382** TestNo: **SW8082CON SW3550C** Analysis Date: **11/27/2011** SeqNo: **875225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	3.7	0.67	3.332	0	112	70	130	3.733	0.221	25	
2,2´,3,3´,4,4´,5,6-OcCB	3.7	0.67	3.332	0	112	70	130	3.746	0.461	25	
2,2´,3,3´,4,4´,5-HpCB	3.8	0.67	3.332	0	113	70	130	3.786	0.694	25	
2,2´,3,3´,4,4´-HxCB	3.6	0.67	3.332	0	108	70	130	3.636	0.887	25	
2,2´,3,4,4´,5,5´-HpCB	3.7	0.67	3.332	0	112	70	130	3.755	0.207	25	
2,2´,3,4,4´,5´,6-HpCB	3.5	0.67	3.332	0	105	70	130	3.533	1.15	25	
2,2´,3,4,4´,5´-HxCB	3.7	0.67	3.332	0	110	70	130	3.681	0.441	25	
2,2´,3,4,4´,6,6´-HpCB	3.6	0.67	3.332	0	108	70	130	3.624	0.484	25	
2,2´,3,4,5´-PeCB	3.5	0.67	3.332	0	105	70	130	3.502	0.496	25	
2,2´,3,4´,5,5´,6-HpCB	3.5	0.67	3.332	0	105	70	130	3.533	1.15	25	
2,2´,3,5´-TeCB	3.6	0.67	3.332	0	107	70	130	3.570	0.528	25	
2,2´,4,4´,5,5´-HxCB	3.9	0.67	3.332	0	116	70	130	3.945	1.63	25	
2,2´,4,5,5´-PeCB	3.6	0.67	3.332	0	109	70	130	3.636	0.126	25	
2,2´,4,5´-TeCB	3.5	0.67	3.332	0	104	70	130	3.469	0.409	25	
2,2´,5,5´-TeCB	3.5	0.67	3.332	0	106	70	130	3.545	0.174	25	
2,2´,5-TrCB	3.5	0.67	3.332	0	106	70	130	3.545	0.306	25	
2,3,3´,4,4´-PeCB	3.8	0.67	3.332	0	114	70	130	3.884	1.95	25	
2,3,3´,4´,6-PeCB	3.5	0.67	3.332	0	104	70	130	3.483	0.438	25	
2,3´,4,4´,5-PeCB	3.6	0.67	3.332	0	109	70	130	3.656	0.461	25	
2,3´,4,4´-TeCB	3.6	0.67	3.332	0	108	70	130	3.598	0.401	25	

Qualifiers:
- */X Value exceeds Maximum Contaminant Level
- J Estimated concentration
- R RPD outside accepted recovery limits
- E Value above quantitation range
- M Manual Integration used to determine area response
- RL Reporting Limit
- H Holding times for preparation or analysis exceede
- ND Not Detected at the Reporting Limit
- S Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1111275
01-Dec-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
BatchID: 24382

Sample ID: **lcsd-24382** SampType: **LCSD** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **LCSS02** Batch ID: **24382** TestNo: **SW8082CON SW3550C** Analysis Date: **11/27/2011** SeqNo: **875225**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,4,4´-TrCB	3.6	0.67	3.332	0	107	70	130	3.570	0.253	25	
2,4´-DiCB	3.5	0.67	3.332	0	105	70	130	3.495	0.239	25	
3,3´,4,4´,5,5´-HxCB	3.5	0.67	3.332	0	105	70	130	3.590	2.76	25	
3,3´,4,4´,5-PeCB	3.6	0.67	3.332	0	107	70	130	3.562	0.235	25	
3,3´,4,4´-TeCB	3.5	0.67	3.332	0	106	70	130	3.610	1.92	25	
DeCB	3.7	0.67	3.332	0	112	70	130	3.724	0.148	25	
Surr: Tetrachloro-m-xylene	3.5		3.332		105	70	130		0	25	

Sample ID: **mb-24382** SampType: **MBLK** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **PBS** Batch ID: **24382** TestNo: **SW8082CON SW3550C** Analysis Date: **11/27/2011** SeqNo: **875226**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2',3,3',4,4',5,5',6-NoCB	ND	0.67									U
2,2´,3,3´,4,4´,5,6-OcCB	ND	0.67									U
2,2´,3,3´,4,4´,5-HpCB	ND	0.67									U
2,2´,3,3´,4,4´-HxCB	ND	0.67									U
2,2´,3,4,4´,5,5´-HpCB	ND	0.67									U
2,2´,3,4,4´,5´,6-HpCB	ND	0.67									U
2,2´,3,4,4´,5´-HxCB	ND	0.67									U
2,2´,3,4,4´,6,6´-HpCB	ND	0.67									U
2,2´,3,4,5´-PeCB	ND	0.67									U
2,2´,3,4´,5,5´,6-HpCB	ND	0.67									U
2,2´,3,5´-TeCB	ND	0.67									U
2,2´,4,4´,5,5´-HxCB	ND	0.67									U
2,2´,4,5,5´-PeCB	ND	0.67									U
2,2´,4,5´-TeCB	ND	0.67									U

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceede
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

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QC SUMMARY REPORT

WO#: 1111275
01-Dec-11

Client: FutureNet Group, Inc.
Project: USACOE Lumbriculus Tissue Samples
BatchID: 24382

Sample ID: **mb-24382** SampType: **MBLK** TestCode: **SW_8082T-C** Units: **µg/Kg** Prep Date: **11/10/2011** RunNo: **44553**
Client ID: **PBS** Batch ID: **24382** TestNo: **SW8082CON SW3550C** Analysis Date: **11/27/2011** SeqNo: **875226**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
2,2´,5,5´-TeCB	ND	0.67									U
2,2´,5-TrCB	ND	0.67									U
2,3,3´,4,4´-PeCB	ND	0.67									U
2,3,3´,4´,6-PeCB	ND	0.67									U
2,3´,4,4´,5-PeCB	ND	0.67									U
2,3´,4,4´-TeCB	ND	0.67									U
2,4,4´-TrCB	ND	0.67									U
2,4´-DiCB	ND	0.67									U
3,3´,4,4´,5,5´-HxCB	ND	0.67									U
3,3´,4,4´,5-PeCB	ND	0.67									U
3,3´,4,4´-TeCB	ND	0.67									U
DeCB	ND	0.67									U
Surr: Tetrachloro-m-xylene	3.1		3.324		94.0	70	130				

Qualifiers:

*/X	Value exceeds Maximum Contaminant Level	E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Estimated concentration	M	Manual Integration used to determine area response	ND	Not Detected at the Reporting Limit
R	RPD outside accepted recovery limits	RL	Reporting Limit	S	Spike Recovery outside accepted recovery limits

APPENDIX N

Test America 209 Congeners PCB Lumbriculus Laboratory Report

Table 16: TA Laboratory Analytical Results Table for October Samples

Table 17: TA Laboratory Analytical Results Table for November Samples

TA Analytical Reports and Chain-of Custodies

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	10/27/2011	11/10/2011	8290	Percent Lipids	Q847	BIOLOGICAL	2.3			%	0.1		1300103	1300103	1
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 1	234432850	BIOLOGICAL	42			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 28	208263767	BIOLOGICAL	76			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 178	232919674	BIOLOGICAL	83			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 3	208263778	BIOLOGICAL	55			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 111	235416292	BIOLOGICAL	88			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 4	234432861	BIOLOGICAL	46			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 19	234432872	BIOLOGICAL	54			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 37	208263790	BIOLOGICAL	92			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 54	234432883	BIOLOGICAL	56			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 77	105600235	BIOLOGICAL	106			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 81	208461249	BIOLOGICAL	105			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 104	234432894	BIOLOGICAL	70			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 105	208263621	BIOLOGICAL	99			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 114	208263632	BIOLOGICAL	100			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 118	104130407	BIOLOGICAL	102			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 123	208263643	BIOLOGICAL	101			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 126	208263654	BIOLOGICAL	97			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 155	234432907	BIOLOGICAL	82			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 156	208263687	BIOLOGICAL	112		C	%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 157	235416305	BIOLOGICAL	112		C	%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 167	208263698	BIOLOGICAL	110			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 169	208263701	BIOLOGICAL	103			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 188	234432918	BIOLOGICAL	104			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 189	208263734	BIOLOGICAL	113			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 202	105600268	BIOLOGICAL	107			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 205	234446641	BIOLOGICAL	95			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 206	208263756	BIOLOGICAL	95			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 208	234432929	BIOLOGICAL	106			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	13C12-PCB 209	105600279	BIOLOGICAL	92			%REC			2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 1 (BZ)	2051607	BIOLOGICAL	4.1		J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 2 (BZ)	2051618	BIOLOGICAL	1.1		J Q	pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 3 (BZ)	2051629	BIOLOGICAL	3		J Q	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 4 (BZ)	13029088	BIOLOGICAL	25		J	pg/g	34	4.4	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 5 (BZ)	16605917	BIOLOGICAL	ND			pg/g	34	2.6	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 6 (BZ)	25569806	BIOLOGICAL	13		J Q	pg/g	34	2.7	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 7 (BZ)	33284503	BIOLOGICAL	ND			pg/g	34	2.5	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 8 (BZ)	34883437	BIOLOGICAL	66			pg/g	34	2.6	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 9 (BZ)	34883391	BIOLOGICAL	ND			pg/g	34	2.8	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 10 (BZ)	33146451	BIOLOGICAL	ND			pg/g	34	3.1	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 11 (BZ)	2050671	BIOLOGICAL	31		J Q	pg/g	34	2.7	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 12 (BZ)	2974927	BIOLOGICAL	ND			pg/g	34	2.7	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 13 (BZ)	2974905	BIOLOGICAL	ND			pg/g	34	2.7	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 14 (BZ)	34883415	BIOLOGICAL	ND			pg/g	34	2.3	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 15 (BZ)	2050682	BIOLOGICAL	15		J Q	pg/g	34	2.4	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 16 (BZ)	38444789	BIOLOGICAL	16		J	pg/g	34	0.22	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 17 (BZ)	37680663	BIOLOGICAL	16		J	pg/g	34	0.18	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 18 (BZ)	37680652	BIOLOGICAL	25		C J B	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 19 (BZ)	38444734	BIOLOGICAL	4.6		J	pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 20 (BZ)	38444847	BIOLOGICAL	42		C B	pg/g	34	0.25	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 21 (BZ)	55702460	BIOLOGICAL	21		C J B	pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 22 (BZ)	38444858	BIOLOGICAL	16		J B	pg/g	34	0.26	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 23 (BZ)	55720440	BIOLOGICAL	ND			pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 24 (BZ)	55702459	BIOLOGICAL	0.33		J	pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 25 (BZ)	55712373	BIOLOGICAL	3.3		J	pg/g	34	0.25	2003108	2003108	1.67

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 26 (BZ)	38444814	BIOLOGICAL	7.5		C J	pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 27 (BZ)	38444767	BIOLOGICAL	2.3		J	pg/g	34	0.13	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 28 (BZ)	7012375	BIOLOGICAL	42		C B	pg/g	34	0.25	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 29 (BZ)	15862074	BIOLOGICAL	7.5		C J	pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 30 (BZ)	35693926	BIOLOGICAL	25		C J B	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 31 (BZ)	16606023	BIOLOGICAL	33		J B	pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 32 (BZ)	38444778	BIOLOGICAL	9.1		J B	pg/g	34	0.13	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 33 (BZ)	38444869	BIOLOGICAL	21		C J B	pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 34 (BZ)	37680685	BIOLOGICAL	ND			pg/g	34	0.25	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 35 (BZ)	37680696	BIOLOGICAL	0.37		J	pg/g	34	0.26	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 36 (BZ)	38444870	BIOLOGICAL	ND			pg/g	34	0.23	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 37 (BZ)	38444905	BIOLOGICAL	3.8		J	pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 38 (BZ)	53555661	BIOLOGICAL	ND			pg/g	34	0.26	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 39 (BZ)	38444881	BIOLOGICAL	ND			pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 40 (BZ)	38444938	BIOLOGICAL	6		C J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 41 (BZ)	52663599	BIOLOGICAL	2.2		J	pg/g	34	0.27	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 42 (BZ)	36559225	BIOLOGICAL	4		J	pg/g	34	0.22	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 43 (BZ)	70362468	BIOLOGICAL	0.71		J	pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 44 (BZ)	41464395	BIOLOGICAL	19		C J B	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 45 (BZ)	70362457	BIOLOGICAL	3.1		J	pg/g	34	0.25	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 46 (BZ)	41464475	BIOLOGICAL	1.5		J	pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 47 (BZ)	2437798	BIOLOGICAL	19		C J B	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 48 (BZ)	70362479	BIOLOGICAL	3.9		J	pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 49 (BZ)	41464408	BIOLOGICAL	9.4		C J B	pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 50 (BZ)	62796650	BIOLOGICAL	2.7		C J	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 51 (BZ)	68194047	BIOLOGICAL	1		J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 52 (BZ)	35693993	BIOLOGICAL	26		J B	pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 53 (BZ)	41464419	BIOLOGICAL	2.7		C J	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 54 (BZ)	15968055	BIOLOGICAL	ND			pg/g	34	0.11	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 55 (BZ)	74338242	BIOLOGICAL	ND			pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 56 (BZ)	41464431	BIOLOGICAL	5.1		J	pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 57 (BZ)	70424678	BIOLOGICAL	ND			pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 58 (BZ)	41464497	BIOLOGICAL	ND			pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 59 (BZ)	74472336	BIOLOGICAL	1.5		C J	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 60 (BZ)	33025411	BIOLOGICAL	3.7		J	pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 61 (BZ)	33284536	BIOLOGICAL	28		C J B	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 62 (BZ)	54230227	BIOLOGICAL	1.5		C J	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 63 (BZ)	74472347	BIOLOGICAL	0.54		J Q	pg/g	34	0.18	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 64 (BZ)	52663588	BIOLOGICAL	7.2		J B	pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 65 (BZ)	33284547	BIOLOGICAL	19		C J B	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 66 (BZ)	32598100	BIOLOGICAL	13		J B	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 67 (BZ)	73575538	BIOLOGICAL	0.58		J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 68 (BZ)	73575527	BIOLOGICAL	0.38		J Q	pg/g	34	0.18	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 69 (BZ)	60233241	BIOLOGICAL	9.4		C J B	pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 70 (BZ)	32598111	BIOLOGICAL	28		C J B	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 71 (BZ)	41464464	BIOLOGICAL	6		C J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 72 (BZ)	41464420	BIOLOGICAL	ND			pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 73 (BZ)	74338231	BIOLOGICAL	ND			pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 74 (BZ)	32690930	BIOLOGICAL	28		C J B	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 75 (BZ)	32598122	BIOLOGICAL	1.5		C J	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 76 (BZ)	70362480	BIOLOGICAL	28		C J B	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 77 (BZ)	32598133	BIOLOGICAL	1.5		J Q	pg/g	3.4	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 78 (BZ)	70362491	BIOLOGICAL	ND			pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 79 (BZ)	41464486	BIOLOGICAL	ND			pg/g	34	0.18	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 80 (BZ)	33284525	BIOLOGICAL	ND			pg/g	34	0.18	2003108	2003108	1.67

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 81 (BZ)	70362504	BIOLOGICAL	ND			pg/g	3.4	0.18	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 82 (BZ)	52663624	BIOLOGICAL	2.4		J Q	pg/g	34	0.27	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 83 (BZ)	60145202	BIOLOGICAL	2.1		J Q	pg/g	34	0.22	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 84 (BZ)	52663602	BIOLOGICAL	5.1		J	pg/g	34	0.25	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 85 (BZ)	65510454	BIOLOGICAL	4.9		C J	pg/g	34	0.18	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 86 (BZ)	55312691	BIOLOGICAL	17		C J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 87 (BZ)	38380028	BIOLOGICAL	17		C J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 88 (BZ)	55215173	BIOLOGICAL	2.7		C J	pg/g	34	0.22	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 89 (BZ)	73575572	BIOLOGICAL	ND			pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 90 (BZ)	68194070	BIOLOGICAL	28		C J B	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 91 (BZ)	68194058	BIOLOGICAL	2.7		C J	pg/g	34	0.22	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 92 (BZ)	52663613	BIOLOGICAL	5.1		J	pg/g	34	0.23	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 93 (BZ)	73575561	BIOLOGICAL	ND			pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 94 (BZ)	73575550	BIOLOGICAL	ND			pg/g	34	0.24	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 95 (BZ)	38379996	BIOLOGICAL	18		J B	pg/g	34	0.22	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 96 (BZ)	73575549	BIOLOGICAL	ND			pg/g	34	0.074	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 97 (BZ)	41464511	BIOLOGICAL	17		C J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 98 (BZ)	60233252	BIOLOGICAL	0.42		C J	pg/g	34	0.22	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 99 (BZ)	38380017	BIOLOGICAL	13		J	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 100 (BZ)	39485831	BIOLOGICAL	ND			pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 101 (BZ)	37680732	BIOLOGICAL	28		C J B	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 102 (BZ)	68194069	BIOLOGICAL	0.42		C J	pg/g	34	0.22	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 103 (BZ)	60145213	BIOLOGICAL	ND			pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 104 (BZ)	56558168	BIOLOGICAL	ND			pg/g	34	0.075	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 105 (BZ)	32598144	BIOLOGICAL	13			pg/g	3.4	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 106 (BZ)	70424690	BIOLOGICAL	ND			pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 107 (BZ) /109 (IUPAC)	70424689	BIOLOGICAL	1.8		J Q	pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 108 (BZ) /107 (IUPAC)	70362413	BIOLOGICAL	1.1		C J Q	pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 109 (BZ) /108 (IUPAC)	74472358	BIOLOGICAL	17		C J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 110 (BZ)	38380039	BIOLOGICAL	35		C B	pg/g	34	0.18	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 111 (BZ)	39635320	BIOLOGICAL	ND			pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 112 (BZ)	74472369	BIOLOGICAL	ND			pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 113 (BZ)	68194105	BIOLOGICAL	28		C J B	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 114 (BZ)	74472370	BIOLOGICAL	0.5		J	pg/g	3.4	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 115 (BZ)	74472381	BIOLOGICAL	35		C B	pg/g	34	0.18	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 116 (BZ)	18259057	BIOLOGICAL	4.9		C J	pg/g	34	0.18	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 117 (BZ)	68194116	BIOLOGICAL	4.9		C J	pg/g	34	0.18	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 118 (BZ)	31508006	BIOLOGICAL	28		B	pg/g	3.4	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 119 (BZ)	56558179	BIOLOGICAL	17		C J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 120 (BZ)	68194127	BIOLOGICAL	ND			pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 121 (BZ)	56558180	BIOLOGICAL	ND			pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 122 (BZ)	76842074	BIOLOGICAL	ND			pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 123 (BZ)	65510443	BIOLOGICAL	0.55		J Q	pg/g	3.4	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 124 (BZ)	70424703	BIOLOGICAL	1.1		C J Q	pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 125 (BZ)	74472392	BIOLOGICAL	17		C J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 126 (BZ)	57465288	BIOLOGICAL	ND			pg/g	3.4	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 127 (BZ)	39635331	BIOLOGICAL	ND			pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 128 (BZ)	38380073	BIOLOGICAL	5.6		C J	pg/g	34	0.13	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 129 (BZ)	55215184	BIOLOGICAL	37		C B	pg/g	34	0.13	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 130 (BZ)	52663668	BIOLOGICAL	2.3		J	pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 131 (BZ)	61798707	BIOLOGICAL	ND			pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 132 (BZ)	38380051	BIOLOGICAL	6.5		J	pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 133 (BZ)	35694043	BIOLOGICAL	0.82		J Q	pg/g	34	0.16	2003108	2003108	1.67

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 134 (BZ)	52704708	BIOLOGICAL	0.63		C J Q	pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 135 (BZ)	52744135	BIOLOGICAL	9.5		C J	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 136 (BZ)	38411222	BIOLOGICAL	2.2		J	pg/g	34	0.11	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 137 (BZ)	35694065	BIOLOGICAL	0.24		J Q	pg/g	34	0.12	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 138 (BZ)	35065282	BIOLOGICAL	37		C B	pg/g	34	0.13	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 139 (BZ)	56030569	BIOLOGICAL	0.52		C J	pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 140 (BZ)	59291644	BIOLOGICAL	0.52		C J	pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 141 (BZ)	52712046	BIOLOGICAL	1.4		J	pg/g	34	0.18	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 142 (BZ)	41411614	BIOLOGICAL	ND			pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 143 (BZ)	68194150	BIOLOGICAL	0.63		C J Q	pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 144 (BZ)	68194149	BIOLOGICAL	0.4		J Q	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 145 (BZ)	74472405	BIOLOGICAL	ND			pg/g	34	0.11	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 146 (BZ)	51908168	BIOLOGICAL	5.6		J	pg/g	34	0.12	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 147 (BZ)	68194138	BIOLOGICAL	22		C J B	pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 148 (BZ)	74472416	BIOLOGICAL	ND			pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 149 (BZ)	38380040	BIOLOGICAL	22		C J B	pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 150 (BZ)	68194081	BIOLOGICAL	ND			pg/g	34	0.11	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 151 (BZ)	52663635	BIOLOGICAL	9.5		C J	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 152 (BZ)	68194092	BIOLOGICAL	ND			pg/g	34	0.1	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 153 (BZ)	35065271	BIOLOGICAL	33		C J B	pg/g	34	0.11	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 154 (BZ)	60145224	BIOLOGICAL	0.55		J	pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 155 (BZ)	33979032	BIOLOGICAL	ND			pg/g	34	0.11	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 156 (BZ)	38380084	BIOLOGICAL	3.8		C J Q	pg/g	6.7	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 157 (BZ)	69782907	BIOLOGICAL	3.8		C J Q	pg/g	6.7	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 158 (BZ)	74472427	BIOLOGICAL	2		J Q	pg/g	34	0.11	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 159 (BZ)	39635353	BIOLOGICAL	ND			pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 160 (BZ)	41411625	BIOLOGICAL	ND			pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 161 (BZ)	74472438	BIOLOGICAL	ND			pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 162 (BZ)	39635342	BIOLOGICAL	0.35		J Q	pg/g	34	0.17	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 163 (BZ)	74472449	BIOLOGICAL	37		C B	pg/g	34	0.13	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 164 (BZ)	74472450	BIOLOGICAL	2.9		J	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 165 (BZ)	74472461	BIOLOGICAL	ND			pg/g	34	0.12	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 166 (BZ)	41411636	BIOLOGICAL	5.6		C J	pg/g	34	0.13	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 167 (BZ)	52663726	BIOLOGICAL	1.3		J Q	pg/g	3.4	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 168 (BZ)	59291655	BIOLOGICAL	33		C J B	pg/g	34	0.11	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 169 (BZ)	32774166	BIOLOGICAL	ND			pg/g	3.4	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 170 (BZ)	35065306	BIOLOGICAL	6.4		J	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 171 (BZ)	52663715	BIOLOGICAL	1.8		C J Q	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 172 (BZ)	52663748	BIOLOGICAL	0.94		J	pg/g	34	0.19	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 173 (BZ)	68194161	BIOLOGICAL	1.8		C J Q	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 174 (BZ)	38411255	BIOLOGICAL	6.2		J	pg/g	34	0.23	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 175 (BZ)	40186707	BIOLOGICAL	ND			pg/g	34	0.13	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 176 (BZ)	52663657	BIOLOGICAL	0.75		J	pg/g	34	0.098	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 177 (BZ)	52663704	BIOLOGICAL	5.1		J Q	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 178 (BZ)	52663679	BIOLOGICAL	2.8		J	pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 179 (BZ)	52663646	BIOLOGICAL	3		J Q	pg/g	34	0.1	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 180 (BZ)	35065293	BIOLOGICAL	3.6		C J	pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 181 (BZ)	74472472	BIOLOGICAL	ND			pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 182 (BZ)	60145235	BIOLOGICAL	ND			pg/g	34	0.13	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 183 (BZ)	52663691	BIOLOGICAL	2.4		J	pg/g	34	0.12	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 184 (BZ)	74472483	BIOLOGICAL	ND			pg/g	34	0.11	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 185 (BZ)	52712057	BIOLOGICAL	0.92		J Q	pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 186 (BZ)	74472494	BIOLOGICAL	ND			pg/g	34	0.1	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 187 (BZ)	52663680	BIOLOGICAL	19		J	pg/g	34	0.12	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 188 (BZ)	74487857	BIOLOGICAL	ND			pg/g	34	0.12	2003108	2003108	1.67

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 189 (BZ)	39635319	BIOLOGICAL	0.36		J Q	pg/g	3.4	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 190 (BZ)	41411647	BIOLOGICAL	1.6		J	pg/g	34	0.13	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 191 (BZ)	74472507	BIOLOGICAL	ND			pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 192 (BZ)	74472518	BIOLOGICAL	ND			pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 193 (BZ)	69782918	BIOLOGICAL	3.6		C J	pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 194 (BZ)	35694087	BIOLOGICAL	1.5		J	pg/g	34	0.2	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 195 (BZ)	52663782	BIOLOGICAL	1.6		J	pg/g	34	0.21	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 196 (BZ)	42740501	BIOLOGICAL	0.48		J Q	pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 197 (BZ)	33091177	BIOLOGICAL	0.46		J Q	pg/g	34	0.095	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 198 (BZ)	68194172	BIOLOGICAL	10		C J	pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 199 (BZ) /200 (IUPAC)	52663737	BIOLOGICAL	0.84		J	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 200 (BZ) /201 (IUPAC)	40186718	BIOLOGICAL	0.82		J	pg/g	34	0.11	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 201 (BZ) /199 (IUPAC)	52663759	BIOLOGICAL	10		C J	pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 202 (BZ)	2136994	BIOLOGICAL	2.9		J	pg/g	34	0.12	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 203 (BZ)	52663760	BIOLOGICAL	5.8		J	pg/g	34	0.16	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 204 (BZ)	74472529	BIOLOGICAL	ND			pg/g	34	0.12	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 205 (BZ)	74472530	BIOLOGICAL	0.52		J Q	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 206 (BZ)	40186729	BIOLOGICAL	5.8		J	pg/g	34	0.23	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 207 (BZ)	52663793	BIOLOGICAL	1.2		J	pg/g	34	0.15	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 208 (BZ)	52663771	BIOLOGICAL	3.8		J	pg/g	34	0.14	2003108	2003108	1.67
SAC	G1J250505	1	SA	Control-Rep 5	10/21/2011	10/25/2011	1/3/2012	1/17/2012	1668A	PCB 209 (BZ)	2051243	BIOLOGICAL	7.1		J	pg/g	34	0.13	2003108	2003108	1.67
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	10/27/2011	11/10/2011	8290	Percent Lipids	Q847	BIOLOGICAL	1.7			%	0.1		1300103	1300103	1
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 1	234432850	BIOLOGICAL	57			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 28	208263767	BIOLOGICAL	89			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 178	232919674	BIOLOGICAL	81			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 3	208263778	BIOLOGICAL	65			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 111	235416292	BIOLOGICAL	88			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 4	234432861	BIOLOGICAL	57			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 19	234432872	BIOLOGICAL	70			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 37	208263790	BIOLOGICAL	107			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 54	234432883	BIOLOGICAL	65			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 77	105600235	BIOLOGICAL	110			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 81	208461249	BIOLOGICAL	108			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 104	234432894	BIOLOGICAL	80			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 105	208263621	BIOLOGICAL	97			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 114	208263632	BIOLOGICAL	95			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 118	104130407	BIOLOGICAL	99			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 123	208263643	BIOLOGICAL	102			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 126	208263654	BIOLOGICAL	103			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 155	234432907	BIOLOGICAL	87			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 156	208263687	BIOLOGICAL	110		C	%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 157	235416305	BIOLOGICAL	110		C	%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 167	208263698	BIOLOGICAL	105			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 169	208263701	BIOLOGICAL	110			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 188	234432918	BIOLOGICAL	83			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 189	208263734	BIOLOGICAL	103			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 202	105600268	BIOLOGICAL	82			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 205	234446641	BIOLOGICAL	97			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 206	208263756	BIOLOGICAL	103			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 208	234432929	BIOLOGICAL	91			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	13C12-PCB 209	105600279	BIOLOGICAL	95			%REC			2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 1 (BZ)	2051607	BIOLOGICAL	10		J	pg/g	100	0.49	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 2 (BZ)	2051618	BIOLOGICAL	ND			pg/g	100	0.53	2003108	2003108	5.05

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 3 (BZ)	2051629	BIOLOGICAL	5.5		J Q	pg/g	100	0.57	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 4 (BZ)	13029088	BIOLOGICAL	62		J	pg/g	100	6.6	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 5 (BZ)	16605917	BIOLOGICAL	ND			pg/g	100	5.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 6 (BZ)	25569806	BIOLOGICAL	33		J	pg/g	100	5.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 7 (BZ)	33284503	BIOLOGICAL	11		J	pg/g	100	5.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 8 (BZ)	34883437	BIOLOGICAL	180			pg/g	100	5.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 9 (BZ)	34883391	BIOLOGICAL	6.5		J Q	pg/g	100	5.7	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 10 (BZ)	33146451	BIOLOGICAL	ND			pg/g	100	5	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 11 (BZ)	2050671	BIOLOGICAL	70		J	pg/g	100	5.5	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 12 (BZ)	2974927	BIOLOGICAL	8.8		C J Q	pg/g	100	5.5	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 13 (BZ)	2974905	BIOLOGICAL	8.8		C J Q	pg/g	100	5.5	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 14 (BZ)	34883415	BIOLOGICAL	ND			pg/g	100	4.6	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 15 (BZ)	2050682	BIOLOGICAL	48		J	pg/g	100	5.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 16 (BZ)	38444789	BIOLOGICAL	44		J	pg/g	100	0.66	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 17 (BZ)	37680663	BIOLOGICAL	50		J	pg/g	100	0.54	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 18 (BZ)	37680652	BIOLOGICAL	93		C J B	pg/g	100	0.46	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 19 (BZ)	38444734	BIOLOGICAL	15		J	pg/g	100	0.56	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 20 (BZ)	38444847	BIOLOGICAL	170		C B	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 21 (BZ)	55702460	BIOLOGICAL	71		C J B	pg/g	100	1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 22 (BZ)	38444858	BIOLOGICAL	56		J B	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 23 (BZ)	55720440	BIOLOGICAL	ND			pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 24 (BZ)	55702459	BIOLOGICAL	0.42		J Q	pg/g	100	0.42	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 25 (BZ)	55712373	BIOLOGICAL	15		J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 26 (BZ)	38444814	BIOLOGICAL	32		C J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 27 (BZ)	38444767	BIOLOGICAL	7.8		J	pg/g	100	0.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 28 (BZ)	7012375	BIOLOGICAL	170		C B	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 29 (BZ)	15862074	BIOLOGICAL	32		C J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 30 (BZ)	35693926	BIOLOGICAL	93		C J B	pg/g	100	0.46	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 31 (BZ)	16606023	BIOLOGICAL	140		B	pg/g	100	1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 32 (BZ)	38444778	BIOLOGICAL	34		J B	pg/g	100	0.39	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 33 (BZ)	38444869	BIOLOGICAL	71		C J B	pg/g	100	1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 34 (BZ)	37680685	BIOLOGICAL	ND			pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 35 (BZ)	37680696	BIOLOGICAL	ND			pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 36 (BZ)	38444870	BIOLOGICAL	5.1		J Q	pg/g	100	1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 37 (BZ)	38444905	BIOLOGICAL	15		J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 38 (BZ)	53555661	BIOLOGICAL	ND			pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 39 (BZ)	38444881	BIOLOGICAL	ND			pg/g	100	1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 40 (BZ)	38444938	BIOLOGICAL	94		C J	pg/g	100	0.76	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 41 (BZ)	52663599	BIOLOGICAL	16		J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 42 (BZ)	36559225	BIOLOGICAL	68		J	pg/g	100	0.86	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 43 (BZ)	70362468	BIOLOGICAL	8.8		J	pg/g	100	0.95	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 44 (BZ)	41464395	BIOLOGICAL	350		C B	pg/g	100	0.77	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 45 (BZ)	70362457	BIOLOGICAL	31		J Q	pg/g	100	0.97	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 46 (BZ)	41464475	BIOLOGICAL	13		J	pg/g	100	0.96	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 47 (BZ)	2437798	BIOLOGICAL	350		C B	pg/g	100	0.77	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 48 (BZ)	70362479	BIOLOGICAL	39		J	pg/g	100	0.82	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 49 (BZ)	41464408	BIOLOGICAL	240		C B	pg/g	100	0.67	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 50 (BZ)	62796650	BIOLOGICAL	39		C J	pg/g	100	0.78	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 51 (BZ)	68194047	BIOLOGICAL	13		J	pg/g	100	0.74	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 52 (BZ)	35693993	BIOLOGICAL	600		B	pg/g	100	0.84	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 53 (BZ)	41464419	BIOLOGICAL	39		C J	pg/g	100	0.78	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 54 (BZ)	15968055	BIOLOGICAL	ND			pg/g	100	0.32	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 55 (BZ)	74338242	BIOLOGICAL	ND			pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 56 (BZ)	41464431	BIOLOGICAL	120			pg/g	100	1.5	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 57 (BZ)	70424678	BIOLOGICAL	ND			pg/g	100	1.4	2003108	2003108	5.05

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 58 (BZ)	41464497	BIOLOGICAL	ND			pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 59 (BZ)	74472336	BIOLOGICAL	27		C J	pg/g	100	0.6	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 60 (BZ)	33025411	BIOLOGICAL	70		J	pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 61 (BZ)	33284536	BIOLOGICAL	670		C B	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 62 (BZ)	54230227	BIOLOGICAL	27		C J	pg/g	100	0.6	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 63 (BZ)	74472347	BIOLOGICAL	15		J Q	pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 64 (BZ)	52663588	BIOLOGICAL	140		B	pg/g	100	0.56	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 65 (BZ)	33284547	BIOLOGICAL	350		C B	pg/g	100	0.77	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 66 (BZ)	32598100	BIOLOGICAL	350		B	pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 67 (BZ)	73575538	BIOLOGICAL	9.3		J	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 68 (BZ)	73575527	BIOLOGICAL	12		J	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 69 (BZ)	60233241	BIOLOGICAL	240		C B	pg/g	100	0.67	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 70 (BZ)	32598111	BIOLOGICAL	670		C B	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 71 (BZ)	41464464	BIOLOGICAL	94		C J	pg/g	100	0.76	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 72 (BZ)	41464420	BIOLOGICAL	11		J	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 73 (BZ)	74338231	BIOLOGICAL	ND			pg/g	100	0.61	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 74 (BZ)	32690930	BIOLOGICAL	670		C B	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 75 (BZ)	32598122	BIOLOGICAL	27		C J	pg/g	100	0.6	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 76 (BZ)	70362480	BIOLOGICAL	670		C B	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 77 (BZ)	32598133	BIOLOGICAL	20			pg/g	10	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 78 (BZ)	70362491	BIOLOGICAL	ND			pg/g	100	1.5	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 79 (BZ)	41464486	BIOLOGICAL	9.8		J Q	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 80 (BZ)	33284525	BIOLOGICAL	ND			pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 81 (BZ)	70362504	BIOLOGICAL	ND			pg/g	10	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 82 (BZ)	52663624	BIOLOGICAL	140			pg/g	100	1.8	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 83 (BZ)	60145202	BIOLOGICAL	130			pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 84 (BZ)	52663602	BIOLOGICAL	300			pg/g	100	1.7	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 85 (BZ)	65510454	BIOLOGICAL	240		C	pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 86 (BZ)	55312691	BIOLOGICAL	770		C	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 87 (BZ)	38380028	BIOLOGICAL	770		C	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 88 (BZ)	55215173	BIOLOGICAL	200		C	pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 89 (BZ)	73575572	BIOLOGICAL	10		J	pg/g	100	1.6	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 90 (BZ)	68194070	BIOLOGICAL	1500		C B	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 91 (BZ)	68194058	BIOLOGICAL	200		C	pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 92 (BZ)	52663613	BIOLOGICAL	340			pg/g	100	1.5	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 93 (BZ)	73575561	BIOLOGICAL	16		C J	pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 94 (BZ)	73575550	BIOLOGICAL	6.1		J	pg/g	100	1.5	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 95 (BZ)	38379996	BIOLOGICAL	1200		B	pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 96 (BZ)	73575549	BIOLOGICAL	5.6		J	pg/g	100	0.32	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 97 (BZ)	41464511	BIOLOGICAL	770		C	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 98 (BZ)	60233252	BIOLOGICAL	37		C J	pg/g	100	1.5	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 99 (BZ)	38380017	BIOLOGICAL	710			pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 100 (BZ)	39485831	BIOLOGICAL	16		C J	pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 101 (BZ)	37680732	BIOLOGICAL	1500		C B	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 102 (BZ)	68194069	BIOLOGICAL	37		C J	pg/g	100	1.5	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 103 (BZ)	60145213	BIOLOGICAL	20		J	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 104 (BZ)	56558168	BIOLOGICAL	ND			pg/g	100	0.27	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 105 (BZ)	32598144	BIOLOGICAL	360			pg/g	10	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 106 (BZ)	70424690	BIOLOGICAL	ND			pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 107 (BZ) /109 (IUPAC)	70424689	BIOLOGICAL	96		J	pg/g	100	0.9	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 108 (BZ) /107 (IUPAC)	70362413	BIOLOGICAL	39		C J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 109 (BZ) /108 (IUPAC)	74472358	BIOLOGICAL	770		C	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 110 (BZ)	38380039	BIOLOGICAL	1900		C B	pg/g	100	1.2	2003108	2003108	5.05

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 111 (BZ)	39635320	BIOLOGICAL	3.7		J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 112 (BZ)	74472369	BIOLOGICAL	ND			pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 113 (BZ)	68194105	BIOLOGICAL	1500		C B	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 114 (BZ)	74472370	BIOLOGICAL	22			pg/g	10	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 115 (BZ)	74472381	BIOLOGICAL	1900		C B	pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 116 (BZ)	18259057	BIOLOGICAL	240		C	pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 117 (BZ)	68194116	BIOLOGICAL	240		C	pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 118 (BZ)	31508006	BIOLOGICAL	1100		B	pg/g	10	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 119 (BZ)	56558179	BIOLOGICAL	770		C	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 120 (BZ)	68194127	BIOLOGICAL	11		J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 121 (BZ)	56558180	BIOLOGICAL	ND			pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 122 (BZ)	76842074	BIOLOGICAL	15		J Q	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 123 (BZ)	65510443	BIOLOGICAL	15			pg/g	10	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 124 (BZ)	70424703	BIOLOGICAL	39		C J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 125 (BZ)	74472392	BIOLOGICAL	770		C	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 126 (BZ)	57465288	BIOLOGICAL	4.9		J	pg/g	10	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 127 (BZ)	39635331	BIOLOGICAL	ND			pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 128 (BZ)	38380073	BIOLOGICAL	290		C	pg/g	100	0.99	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 129 (BZ)	55215184	BIOLOGICAL	1900		C B	pg/g	100	1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 130 (BZ)	52663668	BIOLOGICAL	120			pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 131 (BZ)	61798707	BIOLOGICAL	16		J	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 132 (BZ)	38380051	BIOLOGICAL	530			pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 133 (BZ)	35694043	BIOLOGICAL	44		J	pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 134 (BZ)	52704708	BIOLOGICAL	68		C J	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 135 (BZ)	52744135	BIOLOGICAL	780		C	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 136 (BZ)	38411222	BIOLOGICAL	230			pg/g	100	0.88	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 137 (BZ)	35694065	BIOLOGICAL	19		J	pg/g	100	0.9	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 138 (BZ)	35065282	BIOLOGICAL	1900		C B	pg/g	100	1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 139 (BZ)	56030569	BIOLOGICAL	31		C J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 140 (BZ)	59291644	BIOLOGICAL	31		C J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 141 (BZ)	52712046	BIOLOGICAL	36		J	pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 142 (BZ)	41411614	BIOLOGICAL	ND			pg/g	100	1.5	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 143 (BZ)	68194150	BIOLOGICAL	68		C J	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 144 (BZ)	68194149	BIOLOGICAL	52		J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 145 (BZ)	74472405	BIOLOGICAL	ND			pg/g	100	0.86	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 146 (BZ)	51908168	BIOLOGICAL	310			pg/g	100	0.9	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 147 (BZ)	68194138	BIOLOGICAL	1700		C B	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 148 (BZ)	74472416	BIOLOGICAL	5.6		J Q	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 149 (BZ)	38380040	BIOLOGICAL	1700		C B	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 150 (BZ)	68194081	BIOLOGICAL	4.4		J Q	pg/g	100	0.84	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 151 (BZ)	52663635	BIOLOGICAL	780		C	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 152 (BZ)	68194092	BIOLOGICAL	ND			pg/g	100	0.8	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 153 (BZ)	35065271	BIOLOGICAL	1600		C B	pg/g	100	0.87	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 154 (BZ)	60145224	BIOLOGICAL	45		J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 155 (BZ)	33979032	BIOLOGICAL	2.1		J Q	pg/g	100	0.85	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 156 (BZ)	38380084	BIOLOGICAL	140		C	pg/g	20	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 157 (BZ)	69782907	BIOLOGICAL	140		C	pg/g	20	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 158 (BZ)	74472427	BIOLOGICAL	79		J	pg/g	100	0.88	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 159 (BZ)	39635353	BIOLOGICAL	5.7		J Q	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 160 (BZ)	41411625	BIOLOGICAL	ND			pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 161 (BZ)	74472438	BIOLOGICAL	ND			pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 162 (BZ)	39635342	BIOLOGICAL	5.4		J Q	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 163 (BZ)	74472449	BIOLOGICAL	1900		C B	pg/g	100	1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 164 (BZ)	74472450	BIOLOGICAL	140			pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 165 (BZ)	74472461	BIOLOGICAL	1.2		J Q	pg/g	100	0.95	2003108	2003108	5.05

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 166 (BZ)	41411636	BIOLOGICAL	290		C	pg/g	100	0.99	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 167 (BZ)	52663726	BIOLOGICAL	46			pg/g	10	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 168 (BZ)	59291655	BIOLOGICAL	1600		C B	pg/g	100	0.87	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 169 (BZ)	32774166	BIOLOGICAL	ND			pg/g	10	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 170 (BZ)	35065306	BIOLOGICAL	230			pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 171 (BZ)	52663715	BIOLOGICAL	120		C	pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 172 (BZ)	52663748	BIOLOGICAL	32		J	pg/g	100	1.1	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 173 (BZ)	68194161	BIOLOGICAL	120		C	pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 174 (BZ)	38411255	BIOLOGICAL	290			pg/g	100	1.4	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 175 (BZ)	40186707	BIOLOGICAL	4		J Q	pg/g	100	0.44	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 176 (BZ)	52663657	BIOLOGICAL	59		J	pg/g	100	0.32	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 177 (BZ)	52663704	BIOLOGICAL	340			pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 178 (BZ)	52663679	BIOLOGICAL	140			pg/g	100	0.46	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 179 (BZ)	52663646	BIOLOGICAL	240			pg/g	100	0.35	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 180 (BZ)	35065293	BIOLOGICAL	140		C	pg/g	100	0.95	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 181 (BZ)	74472472	BIOLOGICAL	2.7		J	pg/g	100	0.97	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 182 (BZ)	60145235	BIOLOGICAL	ND			pg/g	100	0.45	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 183 (BZ)	52663691	BIOLOGICAL	120			pg/g	100	0.73	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 184 (BZ)	74472483	BIOLOGICAL	ND			pg/g	100	0.36	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 185 (BZ)	52712057	BIOLOGICAL	59		J	pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 186 (BZ)	74472494	BIOLOGICAL	ND			pg/g	100	0.33	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 187 (BZ)	52663680	BIOLOGICAL	990			pg/g	100	0.38	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 188 (BZ)	74487857	BIOLOGICAL	1.9		J Q	pg/g	100	0.41	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 189 (BZ)	39635319	BIOLOGICAL	14			pg/g	10	0.55	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 190 (BZ)	41411647	BIOLOGICAL	86		J	pg/g	100	0.79	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 191 (BZ)	74472507	BIOLOGICAL	3		J Q	pg/g	100	0.86	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 192 (BZ)	74472518	BIOLOGICAL	ND			pg/g	100	0.9	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 193 (BZ)	69782918	BIOLOGICAL	140		C	pg/g	100	0.95	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 194 (BZ)	35694087	BIOLOGICAL	50		J	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 195 (BZ)	52663782	BIOLOGICAL	72		J	pg/g	100	1.3	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 196 (BZ)	42740501	BIOLOGICAL	32		J	pg/g	100	0.43	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 197 (BZ)	33091177	BIOLOGICAL	7.6		J	pg/g	100	0.28	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 198 (BZ)	68194172	BIOLOGICAL	250		C	pg/g	100	0.49	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 199 (BZ) /200 (IUPAC)	52663737	BIOLOGICAL	37		J	pg/g	100	0.46	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 200 (BZ) /201 (IUPAC)	40186718	BIOLOGICAL	40		J	pg/g	100	0.34	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 201 (BZ) /199 (IUPAC)	52663759	BIOLOGICAL	250		C	pg/g	100	0.49	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 202 (BZ)	2136994	BIOLOGICAL	76		J	pg/g	100	0.41	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 203 (BZ)	52663760	BIOLOGICAL	160			pg/g	100	0.48	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 204 (BZ)	74472529	BIOLOGICAL	ND			pg/g	100	0.34	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 205 (BZ)	74472530	BIOLOGICAL	10		J Q	pg/g	100	0.82	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 206 (BZ)	40186729	BIOLOGICAL	81		J Q	pg/g	100	1.2	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 207 (BZ)	52663793	BIOLOGICAL	14		J	pg/g	100	0.85	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 208 (BZ)	52663771	BIOLOGICAL	54		J	pg/g	100	0.88	2003108	2003108	5.05
SAC	G1J250505	2	SA	9052-Rep 1	10/21/2011	10/25/2011	1/3/2012	1/20/2012	1668A	PCB 209 (BZ)	2051243	BIOLOGICAL	74		J	pg/g	100	0.33	2003108	2003108	5.05
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 1	234432850	BIOLOGICAL	41			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 28	208263767	BIOLOGICAL	60			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 178	232919674	BIOLOGICAL	71			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 3	208263778	BIOLOGICAL	43			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 111	235416292	BIOLOGICAL	80			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 4	234432861	BIOLOGICAL	39			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 19	234432872	BIOLOGICAL	46			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 37	208263790	BIOLOGICAL	76			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 54	234432883	BIOLOGICAL	46			%REC			2003108	2003108	1

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 77	105600235	BIOLOGICAL	84			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 81	208461249	BIOLOGICAL	87			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 104	234432894	BIOLOGICAL	47			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 105	208263621	BIOLOGICAL	85			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 114	208263632	BIOLOGICAL	88			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 118	104130407	BIOLOGICAL	82			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 123	208263643	BIOLOGICAL	92			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 126	208263654	BIOLOGICAL	80			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 155	234432907	BIOLOGICAL	65			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 156	208263687	BIOLOGICAL	112		C	%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 157	235416305	BIOLOGICAL	112		C	%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 167	208263698	BIOLOGICAL	114			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 169	208263701	BIOLOGICAL	102			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 188	234432918	BIOLOGICAL	77			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 189	208263734	BIOLOGICAL	95			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 202	105600268	BIOLOGICAL	88			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 205	234446641	BIOLOGICAL	83			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 206	208263756	BIOLOGICAL	78			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 208	234432929	BIOLOGICAL	91			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 209	105600279	BIOLOGICAL	76			%REC			2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 1 (BZ)	2051607	BIOLOGICAL	208	200		pg/g	20	0.42	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 3 (BZ)	2051629	BIOLOGICAL	216	200		pg/g	20	0.27	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 4 (BZ)	13029088	BIOLOGICAL	206	200		pg/g	20	5.2	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 15 (BZ)	2050682	BIOLOGICAL	190	200		pg/g	20	2.3	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 19 (BZ)	38444734	BIOLOGICAL	195	200		pg/g	20	0.3	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 37 (BZ)	38444905	BIOLOGICAL	177	200		pg/g	20	0.39	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 54 (BZ)	15968055	BIOLOGICAL	189	200		pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 77 (BZ)	32598133	BIOLOGICAL	192	200		pg/g	2	0.49	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 81 (BZ)	70362504	BIOLOGICAL	178	200		pg/g	2	0.42	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 104 (BZ)	56558168	BIOLOGICAL	188	200		pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 105 (BZ)	32598144	BIOLOGICAL	185	200		pg/g	2	0.37	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 114 (BZ)	74472370	BIOLOGICAL	183	200		pg/g	2	0.37	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 118 (BZ)	31508006	BIOLOGICAL	178	200		pg/g	2	0.36	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 123 (BZ)	65510443	BIOLOGICAL	182	200		pg/g	2	0.34	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 126 (BZ)	57465288	BIOLOGICAL	180	200		pg/g	2	0.46	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 155 (BZ)	33979032	BIOLOGICAL	181	200		pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 156 (BZ)	38380084	BIOLOGICAL	380	400	C	pg/g	4	0.64	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 157 (BZ)	69782907	BIOLOGICAL	380	400	C	pg/g	4	0.64	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 167 (BZ)	52663726	BIOLOGICAL	189	200		pg/g	2	0.48	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 169 (BZ)	32774166	BIOLOGICAL	202	200		pg/g	2	0.65	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 188 (BZ)	74487857	BIOLOGICAL	183	200		pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 189 (BZ)	39635319	BIOLOGICAL	195	200		pg/g	2	0.3	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 202 (BZ)	2136994	BIOLOGICAL	195	200		pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 205 (BZ)	74472530	BIOLOGICAL	185	200		pg/g	20	0.26	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 206 (BZ)	40186729	BIOLOGICAL	179	200		pg/g	20	0.41	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 208 (BZ)	52663771	BIOLOGICAL	186	200		pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	LCS	CHECK SAMPLE	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 209 (BZ)	2051243	BIOLOGICAL	183	200		pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 1	234432850	BIOLOGICAL	46			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 28	208263767	BIOLOGICAL	68			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 178	232919674	BIOLOGICAL	76			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 3	208263778	BIOLOGICAL	49			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 111	235416292	BIOLOGICAL	87			%REC			2003108	2003108	1

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 4	234432861	BIOLOGICAL	45			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 19	234432872	BIOLOGICAL	51			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 37	208263790	BIOLOGICAL	88			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 54	234432883	BIOLOGICAL	55			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 77	105600235	BIOLOGICAL	99			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 81	208461249	BIOLOGICAL	97			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 104	234432894	BIOLOGICAL	55			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 105	208263621	BIOLOGICAL	97			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 114	208263632	BIOLOGICAL	99			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 118	104130407	BIOLOGICAL	97			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 123	208263643	BIOLOGICAL	106			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 126	208263654	BIOLOGICAL	92			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 155	234432907	BIOLOGICAL	77			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 156	208263687	BIOLOGICAL	127		C	%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 157	235416305	BIOLOGICAL	127		C	%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 167	208263698	BIOLOGICAL	129			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 169	208263701	BIOLOGICAL	115			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 188	234432918	BIOLOGICAL	91			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 189	208263734	BIOLOGICAL	112			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 202	105600268	BIOLOGICAL	107			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 205	234446641	BIOLOGICAL	91			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 206	208263756	BIOLOGICAL	85			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 208	234432929	BIOLOGICAL	105			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	13C12-PCB 209	105600279	BIOLOGICAL	84			%REC			2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 1 (BZ)	2051607	BIOLOGICAL	ND			pg/g	20	0.3	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 2 (BZ)	2051618	BIOLOGICAL	ND			pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 3 (BZ)	2051629	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 4 (BZ)	13029088	BIOLOGICAL	ND			pg/g	20	2.1	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 5 (BZ)	16605917	BIOLOGICAL	ND			pg/g	20	1.6	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 6 (BZ)	25569806	BIOLOGICAL	ND			pg/g	20	1.6	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 7 (BZ)	33284503	BIOLOGICAL	ND			pg/g	20	1.6	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 8 (BZ)	34883437	BIOLOGICAL	ND			pg/g	20	1.6	2003108	2003108	1

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 9 (BZ)	34883391	BIOLOGICAL	ND			pg/g	20	1.8	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 10 (BZ)	33146451	BIOLOGICAL	ND			pg/g	20	1.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 11 (BZ)	2050671	BIOLOGICAL	ND			pg/g	20	1.7	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 12 (BZ)	2974927	BIOLOGICAL	ND			pg/g	20	1.7	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 13 (BZ)	2974905	BIOLOGICAL	ND			pg/g	20	1.7	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 14 (BZ)	34883415	BIOLOGICAL	ND			pg/g	20	1.4	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 15 (BZ)	2050682	BIOLOGICAL	ND			pg/g	20	1.3	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 16 (BZ)	38444789	BIOLOGICAL	ND			pg/g	20	0.26	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 17 (BZ)	37680663	BIOLOGICAL	ND			pg/g	20	0.21	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 18 (BZ)	37680652	BIOLOGICAL	0.82		C J Q	pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 19 (BZ)	38444734	BIOLOGICAL	ND			pg/g	20	0.26	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 20 (BZ)	38444847	BIOLOGICAL	2.1		C J	pg/g	20	0.25	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 21 (BZ)	55702460	BIOLOGICAL	0.68		C J Q	pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 22 (BZ)	38444858	BIOLOGICAL	0.61		J	pg/g	20	0.26	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 23 (BZ)	55720440	BIOLOGICAL	ND			pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 24 (BZ)	55702459	BIOLOGICAL	ND			pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 25 (BZ)	55712373	BIOLOGICAL	ND			pg/g	20	0.25	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 26 (BZ)	38444814	BIOLOGICAL	ND			pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 27 (BZ)	38444767	BIOLOGICAL	ND			pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 28 (BZ)	7012375	BIOLOGICAL	2.1		C J	pg/g	20	0.25	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 29 (BZ)	15862074	BIOLOGICAL	ND			pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 30 (BZ)	35693926	BIOLOGICAL	0.82		C J Q	pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 31 (BZ)	16606023	BIOLOGICAL	1.6		J Q	pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 32 (BZ)	38444778	BIOLOGICAL	0.51		J	pg/g	20	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 33 (BZ)	38444869	BIOLOGICAL	0.68		C J Q	pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 34 (BZ)	37680685	BIOLOGICAL	ND			pg/g	20	0.25	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 35 (BZ)	37680696	BIOLOGICAL	ND			pg/g	20	0.26	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 36 (BZ)	38444870	BIOLOGICAL	ND			pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 37 (BZ)	38444905	BIOLOGICAL	ND			pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 38 (BZ)	53555661	BIOLOGICAL	ND			pg/g	20	0.26	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 39 (BZ)	38444881	BIOLOGICAL	ND			pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 40 (BZ)	38444938	BIOLOGICAL	ND			pg/g	20	0.23	2003108	2003108	1

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Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 41 (BZ)	52663599	BIOLOGICAL	ND			pg/g	20	0.33	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 42 (BZ)	36559225	BIOLOGICAL	ND			pg/g	20	0.26	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 43 (BZ)	70362468	BIOLOGICAL	ND			pg/g	20	0.29	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 44 (BZ)	41464395	BIOLOGICAL	2.5		C J	pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 45 (BZ)	70362457	BIOLOGICAL	ND			pg/g	20	0.3	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 46 (BZ)	41464475	BIOLOGICAL	ND			pg/g	20	0.29	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 47 (BZ)	2437798	BIOLOGICAL	2.5		C J	pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 48 (BZ)	70362479	BIOLOGICAL	ND			pg/g	20	0.25	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 49 (BZ)	41464408	BIOLOGICAL	0.65		C J Q	pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 50 (BZ)	62796650	BIOLOGICAL	ND			pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 51 (BZ)	68194047	BIOLOGICAL	ND			pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 52 (BZ)	35693993	BIOLOGICAL	1.8		J Q	pg/g	20	0.26	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 53 (BZ)	41464419	BIOLOGICAL	ND			pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 54 (BZ)	15968055	BIOLOGICAL	ND			pg/g	20	0.097	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 55 (BZ)	74338242	BIOLOGICAL	ND			pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 56 (BZ)	41464431	BIOLOGICAL	ND			pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 57 (BZ)	70424678	BIOLOGICAL	ND			pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 58 (BZ)	41464497	BIOLOGICAL	ND			pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 59 (BZ)	74472336	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 60 (BZ)	33025411	BIOLOGICAL	ND			pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 61 (BZ)	33284536	BIOLOGICAL	1.6		C J	pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 62 (BZ)	54230227	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 63 (BZ)	74472347	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 64 (BZ)	52663588	BIOLOGICAL	0.44		J	pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 65 (BZ)	33284547	BIOLOGICAL	2.5		C J	pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 66 (BZ)	32598100	BIOLOGICAL	0.77		J	pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 67 (BZ)	73575538	BIOLOGICAL	ND			pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 68 (BZ)	73575527	BIOLOGICAL	ND			pg/g	20	0.21	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 69 (BZ)	60233241	BIOLOGICAL	0.65		C J Q	pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 70 (BZ)	32598111	BIOLOGICAL	1.6		C J	pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 71 (BZ)	41464464	BIOLOGICAL	ND			pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 72 (BZ)	41464420	BIOLOGICAL	ND			pg/g	20	0.22	2003108	2003108	1

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Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 73 (BZ)	74338231	BIOLOGICAL	ND			pg/g	20	0.19	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 74 (BZ)	32690930	BIOLOGICAL	1.6		C J	pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 75 (BZ)	32598122	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 76 (BZ)	70362480	BIOLOGICAL	1.6		C J	pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 77 (BZ)	32598133	BIOLOGICAL	ND			pg/g	2	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 78 (BZ)	70362491	BIOLOGICAL	ND			pg/g	20	0.25	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 79 (BZ)	41464486	BIOLOGICAL	ND			pg/g	20	0.21	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 80 (BZ)	33284525	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 81 (BZ)	70362504	BIOLOGICAL	ND			pg/g	2	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 82 (BZ)	52663624	BIOLOGICAL	ND			pg/g	20	0.25	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 83 (BZ)	60145202	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 84 (BZ)	52663602	BIOLOGICAL	ND			pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 85 (BZ)	65510454	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 86 (BZ)	55312691	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 87 (BZ)	38380028	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 88 (BZ)	55215173	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 89 (BZ)	73575572	BIOLOGICAL	ND			pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 90 (BZ)	68194070	BIOLOGICAL	0.92		C J	pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 91 (BZ)	68194058	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 92 (BZ)	52663613	BIOLOGICAL	ND			pg/g	20	0.21	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 93 (BZ)	73575561	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 94 (BZ)	73575550	BIOLOGICAL	ND			pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 95 (BZ)	38379996	BIOLOGICAL	1.1		J	pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 96 (BZ)	73575549	BIOLOGICAL	ND			pg/g	20	0.11	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 97 (BZ)	41464511	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 98 (BZ)	60233252	BIOLOGICAL	ND			pg/g	20	0.21	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 99 (BZ)	38380017	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 100 (BZ)	39485831	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 101 (BZ)	37680732	BIOLOGICAL	0.92		C J	pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 102 (BZ)	68194069	BIOLOGICAL	ND			pg/g	20	0.21	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 103 (BZ)	60145213	BIOLOGICAL	ND			pg/g	20	0.19	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 104 (BZ)	56558168	BIOLOGICAL	ND			pg/g	20	0.14	2003108	2003108	1

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 105 (BZ)	32598144	BIOLOGICAL	ND			pg/g	2	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 106 (BZ)	70424690	BIOLOGICAL	ND			pg/g	20	0.19	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 107 (BZ) /109 (IUPAC)	70424689	BIOLOGICAL	ND			pg/g	20	0.13	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 108 (BZ) /107 (IUPAC)	70362413	BIOLOGICAL	ND			pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 109 (BZ) /108 (IUPAC)	74472358	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 110 (BZ)	38380039	BIOLOGICAL	0.93		C J	pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 111 (BZ)	39635320	BIOLOGICAL	ND			pg/g	20	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 112 (BZ)	74472369	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 113 (BZ)	68194105	BIOLOGICAL	0.92		C J	pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 114 (BZ)	74472370	BIOLOGICAL	ND			pg/g	2	0.14	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 115 (BZ)	74472381	BIOLOGICAL	0.93		C J	pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 116 (BZ)	18259057	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 117 (BZ)	68194116	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 118 (BZ)	31508006	BIOLOGICAL	0.51		J	pg/g	2	0.14	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 119 (BZ)	56558179	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 120 (BZ)	68194127	BIOLOGICAL	ND			pg/g	20	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 121 (BZ)	56558180	BIOLOGICAL	ND			pg/g	20	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 122 (BZ)	76842074	BIOLOGICAL	ND			pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 123 (BZ)	65510443	BIOLOGICAL	ND			pg/g	2	0.14	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 124 (BZ)	70424703	BIOLOGICAL	ND			pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 125 (BZ)	74472392	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 126 (BZ)	57465288	BIOLOGICAL	ND			pg/g	2	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 127 (BZ)	39635331	BIOLOGICAL	ND			pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 128 (BZ)	38380073	BIOLOGICAL	ND			pg/g	20	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 129 (BZ)	55215184	BIOLOGICAL	0.48		C J Q	pg/g	20	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 130 (BZ)	52663668	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 131 (BZ)	61798707	BIOLOGICAL	ND			pg/g	20	0.19	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 132 (BZ)	38380051	BIOLOGICAL	ND			pg/g	20	0.19	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 133 (BZ)	35694043	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 134 (BZ)	52704708	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 135 (BZ)	52744135	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 136 (BZ)	38411222	BIOLOGICAL	ND			pg/g	20	0.13	2003108	2003108	1

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Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 137 (BZ)	35694065	BIOLOGICAL	ND			pg/g	20	0.14	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 138 (BZ)	35065282	BIOLOGICAL	0.48		C J Q	pg/g	20	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 139 (BZ)	56030569	BIOLOGICAL	ND			pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 140 (BZ)	59291644	BIOLOGICAL	ND			pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 141 (BZ)	52712046	BIOLOGICAL	ND			pg/g	20	0.21	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 142 (BZ)	41411614	BIOLOGICAL	ND			pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 143 (BZ)	68194150	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 144 (BZ)	68194149	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 145 (BZ)	74472405	BIOLOGICAL	ND			pg/g	20	0.13	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 146 (BZ)	51908168	BIOLOGICAL	ND			pg/g	20	0.14	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 147 (BZ)	68194138	BIOLOGICAL	0.54		C J Q	pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 148 (BZ)	74472416	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 149 (BZ)	38380040	BIOLOGICAL	0.54		C J Q	pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 150 (BZ)	68194081	BIOLOGICAL	ND			pg/g	20	0.13	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 151 (BZ)	52663635	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 152 (BZ)	68194092	BIOLOGICAL	ND			pg/g	20	0.12	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 153 (BZ)	35065271	BIOLOGICAL	0.39		C J Q	pg/g	20	0.13	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 154 (BZ)	60145224	BIOLOGICAL	ND			pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 155 (BZ)	33979032	BIOLOGICAL	ND			pg/g	20	0.16	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 156 (BZ)	38380084	BIOLOGICAL	ND			pg/g	4	0.19	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 157 (BZ)	69782907	BIOLOGICAL	ND			pg/g	4	0.19	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 158 (BZ)	74472427	BIOLOGICAL	ND			pg/g	20	0.13	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 159 (BZ)	39635353	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 160 (BZ)	41411625	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 161 (BZ)	74472438	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 162 (BZ)	39635342	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 163 (BZ)	74472449	BIOLOGICAL	0.48		C J Q	pg/g	20	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 164 (BZ)	74472450	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 165 (BZ)	74472461	BIOLOGICAL	ND			pg/g	20	0.14	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 166 (BZ)	41411636	BIOLOGICAL	ND			pg/g	20	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 167 (BZ)	52663726	BIOLOGICAL	ND			pg/g	2	0.14	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 168 (BZ)	59291655	BIOLOGICAL	0.39		C J Q	pg/g	20	0.13	2003108	2003108	1

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SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 169 (BZ)	32774166	BIOLOGICAL	ND			pg/g	2	0.19	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 170 (BZ)	35065306	BIOLOGICAL	ND			pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 171 (BZ)	52663715	BIOLOGICAL	ND			pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 172 (BZ)	52663748	BIOLOGICAL	ND			pg/g	20	0.22	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 173 (BZ)	68194161	BIOLOGICAL	ND			pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 174 (BZ)	38411255	BIOLOGICAL	ND			pg/g	20	0.27	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 175 (BZ)	40186707	BIOLOGICAL	ND			pg/g	20	0.12	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 176 (BZ)	52663657	BIOLOGICAL	ND			pg/g	20	0.09	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 177 (BZ)	52663704	BIOLOGICAL	ND			pg/g	20	0.23	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 178 (BZ)	52663679	BIOLOGICAL	ND			pg/g	20	0.13	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 179 (BZ)	52663646	BIOLOGICAL	ND			pg/g	20	0.096	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 180 (BZ)	35065293	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 181 (BZ)	74472472	BIOLOGICAL	ND			pg/g	20	0.19	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 182 (BZ)	60145235	BIOLOGICAL	ND			pg/g	20	0.12	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 183 (BZ)	52663691	BIOLOGICAL	ND			pg/g	20	0.14	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 184 (BZ)	74472483	BIOLOGICAL	ND			pg/g	20	0.1	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 185 (BZ)	52712057	BIOLOGICAL	ND			pg/g	20	0.24	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 186 (BZ)	74472494	BIOLOGICAL	ND			pg/g	20	0.093	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 187 (BZ)	52663680	BIOLOGICAL	ND			pg/g	20	0.11	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 188 (BZ)	74487857	BIOLOGICAL	ND			pg/g	20	0.12	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 189 (BZ)	39635319	BIOLOGICAL	ND			pg/g	2	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 190 (BZ)	41411647	BIOLOGICAL	ND			pg/g	20	0.15	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 191 (BZ)	74472507	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 192 (BZ)	74472518	BIOLOGICAL	ND			pg/g	20	0.17	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 193 (BZ)	69782918	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 194 (BZ)	35694087	BIOLOGICAL	ND			pg/g	20	0.18	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 195 (BZ)	52663782	BIOLOGICAL	ND			pg/g	20	0.19	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 196 (BZ)	42740501	BIOLOGICAL	ND			pg/g	20	0.12	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 197 (BZ)	33091177	BIOLOGICAL	ND			pg/g	20	0.076	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 198 (BZ)	68194172	BIOLOGICAL	ND			pg/g	20	0.13	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 199 (BZ) /200 (IUPAC)	52663737	BIOLOGICAL	ND			pg/g	20	0.12	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 200 (BZ) /201 (IUPAC)	40186718	BIOLOGICAL	ND			pg/g	20	0.091	2003108	2003108	1

Table 16: October Lumbriculus Analysis Results

Lab Name	Lo tID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 201 (BZ) /199 (IUPAC)	52663759	BIOLOGICAL	ND			pg/g	20	0.13	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 202 (BZ)	2136994	BIOLOGICAL	ND			pg/g	20	0.1	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 203 (BZ)	52663760	BIOLOGICAL	ND			pg/g	20	0.13	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 204 (BZ)	74472529	BIOLOGICAL	ND			pg/g	20	0.092	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 205 (BZ)	74472530	BIOLOGICAL	ND			pg/g	20	0.14	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 206 (BZ)	40186729	BIOLOGICAL	ND			pg/g	20	0.2	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 207 (BZ)	52663793	BIOLOGICAL	ND			pg/g	20	0.12	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 208 (BZ)	52663771	BIOLOGICAL	ND			pg/g	20	0.11	2003108	2003108	1
SAC	G2A030000	108	MB	INTRA-LAB BLANK	10/21/2011	10/25/2011	1/3/2012	1/16/2012	1668A	PCB 209 (BZ)	2051243	BIOLOGICAL	ND			pg/g	20	0.14	2003108	2003108	1

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	8290	Percent Lipids	Q847	BIOLOGICAL	1.6			%	0.1		1319170	1319170	1
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 1	234432850	BIOLOGICAL	58			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 28	208263767	BIOLOGICAL	88			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 178	232919674	BIOLOGICAL	92			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 3	208263778	BIOLOGICAL	57			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 111	235416292	BIOLOGICAL	87			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 4	234432861	BIOLOGICAL	61			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 19	234432872	BIOLOGICAL	65			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 37	208263790	BIOLOGICAL	89			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 54	234432883	BIOLOGICAL	67			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 77	105600235	BIOLOGICAL	95			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 81	208461249	BIOLOGICAL	97			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 104	234432894	BIOLOGICAL	74			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 105	208263621	BIOLOGICAL	94			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 114	208263632	BIOLOGICAL	90			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 118	104130407	BIOLOGICAL	93			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 123	208263643	BIOLOGICAL	93			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 126	208263654	BIOLOGICAL	98			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 155	234432907	BIOLOGICAL	85			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 156	208263687	BIOLOGICAL	95		C	%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 157	235416305	BIOLOGICAL	95		C	%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 167	208263698	BIOLOGICAL	95			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 169	208263701	BIOLOGICAL	87			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 188	234432918	BIOLOGICAL	152		*	%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 189	208263734	BIOLOGICAL	131			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 202	105600268	BIOLOGICAL	153		*	%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 205	234446641	BIOLOGICAL	94			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 206	208263756	BIOLOGICAL	106			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 208	234432929	BIOLOGICAL	140			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 209	105600279	BIOLOGICAL	118			%REC			1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 1 (BZ)	2051607	BIOLOGICAL	2.7		J	pg/g	19	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 2 (BZ)	2051618	BIOLOGICAL	1.2		J Q	pg/g	19	0.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 3 (BZ)	2051629	BIOLOGICAL	4.5		J	pg/g	19	0.15	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 4 (BZ)	13029088	BIOLOGICAL	32			pg/g	19	1.5	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 5 (BZ)	16605917	BIOLOGICAL	ND			pg/g	19	1.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 6 (BZ)	25569806	BIOLOGICAL	20			pg/g	19	1.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 7 (BZ)	33284503	BIOLOGICAL	ND			pg/g	19	1.8	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 8 (BZ)	34883437	BIOLOGICAL	110			pg/g	19	1.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 9 (BZ)	34883391	BIOLOGICAL	6.8		J Q	pg/g	19	1.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 10 (BZ)	33146451	BIOLOGICAL	ND			pg/g	19	1.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 11 (BZ)	2050671	BIOLOGICAL	44		B	pg/g	19	1.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 12 (BZ)	2974927	BIOLOGICAL	3.9		C J	pg/g	19	1.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 13 (BZ)	2974905	BIOLOGICAL	3.9		C J	pg/g	19	1.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 14 (BZ)	34883415	BIOLOGICAL	ND			pg/g	19	1.1	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 15 (BZ)	2050682	BIOLOGICAL	24			pg/g	19	1.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 16 (BZ)	38444789	BIOLOGICAL	25			pg/g	19	0.32	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 17 (BZ)	37680663	BIOLOGICAL	25			pg/g	19	0.26	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 18 (BZ)	37680652	BIOLOGICAL	49		C B	pg/g	19	0.22	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 19 (BZ)	38444734	BIOLOGICAL	6.3		J	pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 20 (BZ)	38444847	BIOLOGICAL	65		C B	pg/g	19	0.31	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 21 (BZ)	55702460	BIOLOGICAL	35		C B	pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 22 (BZ)	38444858	BIOLOGICAL	25		B	pg/g	19	0.32	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 23 (BZ)	55720440	BIOLOGICAL	ND			pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 24 (BZ)	55702459	BIOLOGICAL	0.68		J	pg/g	19	0.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 25 (BZ)	55712373	BIOLOGICAL	5.5		J	pg/g	19	0.31	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 26 (BZ)	38444814	BIOLOGICAL	12		C J	pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 27 (BZ)	38444767	BIOLOGICAL	3.8		J	pg/g	19	0.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 28 (BZ)	7012375	BIOLOGICAL	65		C B	pg/g	19	0.31	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 29 (BZ)	15862074	BIOLOGICAL	12		C J	pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 30 (BZ)	35693926	BIOLOGICAL	49		C B	pg/g	19	0.22	1319160	1319160	1.86

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 31 (BZ)	16606023	BIOLOGICAL	56		B	pg/g	19	0.29	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 32 (BZ)	38444778	BIOLOGICAL	15		J	pg/g	19	0.19	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 33 (BZ)	38444869	BIOLOGICAL	35		C B	pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 34 (BZ)	37680685	BIOLOGICAL	ND			pg/g	19	0.33	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 35 (BZ)	37680696	BIOLOGICAL	ND			pg/g	19	0.41	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 36 (BZ)	38444870	BIOLOGICAL	ND			pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 37 (BZ)	38444905	BIOLOGICAL	5.2		J B	pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 38 (BZ)	53555661	BIOLOGICAL	ND			pg/g	19	0.43	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 39 (BZ)	38444881	BIOLOGICAL	ND			pg/g	19	0.29	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 40 (BZ)	38444938	BIOLOGICAL	9.5		C J B	pg/g	19	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 41 (BZ)	52663599	BIOLOGICAL	2.8		J	pg/g	19	0.25	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 42 (BZ)	36559225	BIOLOGICAL	6.2		J B	pg/g	19	0.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 43 (BZ)	70362468	BIOLOGICAL	1.1		J Q	pg/g	19	0.23	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 44 (BZ)	41464395	BIOLOGICAL	36		C B	pg/g	19	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 45 (BZ)	70362457	BIOLOGICAL	5.1		J	pg/g	19	0.23	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 46 (BZ)	41464475	BIOLOGICAL	2.1		J	pg/g	19	0.23	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 47 (BZ)	2437798	BIOLOGICAL	36		C B	pg/g	19	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 48 (BZ)	70362479	BIOLOGICAL	5		J Q B	pg/g	19	0.19	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 49 (BZ)	41464408	BIOLOGICAL	15		C J B	pg/g	19	0.16	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 50 (BZ)	62796650	BIOLOGICAL	4.6		C J B	pg/g	19	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 51 (BZ)	68194047	BIOLOGICAL	2.9		J B	pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 52 (BZ)	35693993	BIOLOGICAL	41		B	pg/g	19	0.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 53 (BZ)	41464419	BIOLOGICAL	4.6		C J B	pg/g	19	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 54 (BZ)	15968055	BIOLOGICAL	0.28		J	pg/g	19	0.11	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 55 (BZ)	74338242	BIOLOGICAL	ND			pg/g	19	0.26	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 56 (BZ)	41464431	BIOLOGICAL	7.1		J B	pg/g	19	0.27	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 57 (BZ)	70424678	BIOLOGICAL	ND			pg/g	19	0.25	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 58 (BZ)	41464497	BIOLOGICAL	ND			pg/g	19	0.25	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 59 (BZ)	74472336	BIOLOGICAL	2.1		C J	pg/g	19	0.14	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 60 (BZ)	33025411	BIOLOGICAL	4.9		J	pg/g	19	0.26	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 61 (BZ)	33284536	BIOLOGICAL	39		C B	pg/g	19	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 62 (BZ)	54230227	BIOLOGICAL	2.1		C J	pg/g	19	0.14	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 63 (BZ)	74472347	BIOLOGICAL	0.89		J Q	pg/g	19	0.23	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 64 (BZ)	52663588	BIOLOGICAL	11		J B	pg/g	19	0.13	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 65 (BZ)	33284547	BIOLOGICAL	36		C B	pg/g	19	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 66 (BZ)	32598100	BIOLOGICAL	18		J B	pg/g	19	0.26	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 67 (BZ)	73575538	BIOLOGICAL	0.31		J Q	pg/g	19	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 68 (BZ)	73575527	BIOLOGICAL	1.5		J B	pg/g	19	0.23	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 69 (BZ)	60233241	BIOLOGICAL	15		C J B	pg/g	19	0.16	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 70 (BZ)	32598111	BIOLOGICAL	39		C B	pg/g	19	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 71 (BZ)	41464464	BIOLOGICAL	9.5		C J B	pg/g	19	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 72 (BZ)	41464420	BIOLOGICAL	ND			pg/g	19	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 73 (BZ)	74338231	BIOLOGICAL	ND			pg/g	19	0.15	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 74 (BZ)	32690930	BIOLOGICAL	39		C B	pg/g	19	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 75 (BZ)	32598122	BIOLOGICAL	2.1		C J	pg/g	19	0.14	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 76 (BZ)	70362480	BIOLOGICAL	39		C B	pg/g	19	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 77 (BZ)	32598133	BIOLOGICAL	2.4			pg/g	1.9	0.26	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 78 (BZ)	70362491	BIOLOGICAL	ND			pg/g	19	0.27	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 79 (BZ)	41464486	BIOLOGICAL	ND			pg/g	19	0.23	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 80 (BZ)	33284525	BIOLOGICAL	ND			pg/g	19	0.22	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 81 (BZ)	70362504	BIOLOGICAL	ND			pg/g	1.9	0.25	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 82 (BZ)	52663624	BIOLOGICAL	2.5		J	pg/g	19	0.37	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 83 (BZ)	60145202	BIOLOGICAL	2.7		J	pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 84 (BZ)	52663602	BIOLOGICAL	7.2		J	pg/g	19	0.35	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 85 (BZ)	65510454	BIOLOGICAL	9.4		C J Q	pg/g	19	0.25	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 86 (BZ)	55312691	BIOLOGICAL	23		C B	pg/g	19	0.27	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 87 (BZ)	38380028	BIOLOGICAL	23		C B	pg/g	19	0.27	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 88 (BZ)	55215173	BIOLOGICAL	4.1		C J	pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 89 (BZ)	73575572	BIOLOGICAL	ND			pg/g	19	0.33	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 90 (BZ)	68194070	BIOLOGICAL	39		C B	pg/g	19	0.27	1319160	1319160	1.86

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 91 (BZ)	68194058	BIOLOGICAL	4.1		C J	pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 92 (BZ)	52663613	BIOLOGICAL	7.7		J	pg/g	19	0.32	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 93 (BZ)	73575561	BIOLOGICAL	ND			pg/g	19	0.29	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 94 (BZ)	73575550	BIOLOGICAL	ND			pg/g	19	0.32	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 95 (BZ)	38379996	BIOLOGICAL	24		B	pg/g	19	0.3	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 96 (BZ)	73575549	BIOLOGICAL	0.2		J	pg/g	19	0.11	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 97 (BZ)	41464511	BIOLOGICAL	23		C B	pg/g	19	0.27	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 98 (BZ)	60233252	BIOLOGICAL	ND			pg/g	19	0.31	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 99 (BZ)	38380017	BIOLOGICAL	20		B	pg/g	19	0.27	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 100 (BZ)	39485831	BIOLOGICAL	ND			pg/g	19	0.29	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 101 (BZ)	37680732	BIOLOGICAL	39		C B	pg/g	19	0.27	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 102 (BZ)	68194069	BIOLOGICAL	ND			pg/g	19	0.31	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 103 (BZ)	60145213	BIOLOGICAL	ND			pg/g	19	0.28	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 104 (BZ)	56558168	BIOLOGICAL	0.2		J Q	pg/g	19	0.11	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 105 (BZ)	32598144	BIOLOGICAL	17		B	pg/g	1.9	0.22	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 106 (BZ)	70424690	BIOLOGICAL	ND			pg/g	19	0.29	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 107 (BZ) /109 (IUPAC)	70424689	BIOLOGICAL	3.2		J	pg/g	19	0.19	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 108 (BZ) /107 (IUPAC)	70362413	BIOLOGICAL	1.7		C J	pg/g	19	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 109 (BZ) /108 (IUPAC)	74472358	BIOLOGICAL	23		C B	pg/g	19	0.27	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 110 (BZ)	38380039	BIOLOGICAL	45		C B	pg/g	19	0.25	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 111 (BZ)	39635320	BIOLOGICAL	ND			pg/g	19	0.23	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 112 (BZ)	74472369	BIOLOGICAL	ND			pg/g	19	0.29	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 113 (BZ)	68194105	BIOLOGICAL	39		C B	pg/g	19	0.27	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 114 (BZ)	74472370	BIOLOGICAL	0.7		J	pg/g	1.9	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 115 (BZ)	74472381	BIOLOGICAL	45		C B	pg/g	19	0.25	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 116 (BZ)	18259057	BIOLOGICAL	9.4		C J Q	pg/g	19	0.25	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 117 (BZ)	68194116	BIOLOGICAL	9.4		C J Q	pg/g	19	0.25	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 118 (BZ)	31508006	BIOLOGICAL	38		B	pg/g	1.9	0.22	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 119 (BZ)	56558179	BIOLOGICAL	23		C B	pg/g	19	0.27	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 120 (BZ)	68194127	BIOLOGICAL	ND			pg/g	19	0.23	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 121 (BZ)	56558180	BIOLOGICAL	ND			pg/g	19	0.22	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 122 (BZ)	76842074	BIOLOGICAL	ND			pg/g	19	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 123 (BZ)	65510443	BIOLOGICAL	0.65		J	pg/g	1.9	0.23	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 124 (BZ)	70424703	BIOLOGICAL	1.7		C J	pg/g	19	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 125 (BZ)	74472392	BIOLOGICAL	23		C B	pg/g	19	0.27	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 126 (BZ)	57465288	BIOLOGICAL	0.44		J	pg/g	1.9	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 127 (BZ)	39635331	BIOLOGICAL	ND			pg/g	19	0.24	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 128 (BZ)	38380073	BIOLOGICAL	8.7		C J B	pg/g	19	0.16	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 129 (BZ)	55215184	BIOLOGICAL	59		C B	pg/g	19	0.16	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 130 (BZ)	52663668	BIOLOGICAL	3.4		J	pg/g	19	0.21	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 131 (BZ)	61798707	BIOLOGICAL	ND			pg/g	19	0.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 132 (BZ)	38380051	BIOLOGICAL	8.6		J B	pg/g	19	0.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 133 (BZ)	35694043	BIOLOGICAL	0.94		J Q	pg/g	19	0.19	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 134 (BZ)	52704708	BIOLOGICAL	1.3		C J	pg/g	19	0.21	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 135 (BZ)	52744135	BIOLOGICAL	13		C J B	pg/g	19	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 136 (BZ)	38411222	BIOLOGICAL	3.5		J	pg/g	19	0.14	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 137 (BZ)	35694065	BIOLOGICAL	0.5		J	pg/g	19	0.14	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 138 (BZ)	35065282	BIOLOGICAL	59		C B	pg/g	19	0.16	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 139 (BZ)	56030569	BIOLOGICAL	ND			pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 140 (BZ)	59291644	BIOLOGICAL	ND			pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 141 (BZ)	52712046	BIOLOGICAL	1.4		J Q B	pg/g	19	0.22	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 142 (BZ)	41411614	BIOLOGICAL	ND			pg/g	19	0.23	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 143 (BZ)	68194150	BIOLOGICAL	1.3		C J	pg/g	19	0.21	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 144 (BZ)	68194149	BIOLOGICAL	0.73		J Q	pg/g	19	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 145 (BZ)	74472405	BIOLOGICAL	ND			pg/g	19	0.14	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 146 (BZ)	51908168	BIOLOGICAL	8.2		J	pg/g	19	0.14	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 147 (BZ)	68194138	BIOLOGICAL	32		C B	pg/g	19	0.17	1319160	1319160	1.86

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 148 (BZ)	74472416	BIOLOGICAL	ND			pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 149 (BZ)	38380040	BIOLOGICAL	32		C B	pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 150 (BZ)	68194081	BIOLOGICAL	ND			pg/g	19	0.13	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 151 (BZ)	52663635	BIOLOGICAL	13		C J B	pg/g	19	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 152 (BZ)	68194092	BIOLOGICAL	ND			pg/g	19	0.13	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 153 (BZ)	35065271	BIOLOGICAL	51		C B	pg/g	19	0.14	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 154 (BZ)	60145224	BIOLOGICAL	0.56		J	pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 155 (BZ)	33979032	BIOLOGICAL	ND			pg/g	19	0.12	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 156 (BZ)	38380084	BIOLOGICAL	5.4		C B	pg/g	3.7	0.22	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 157 (BZ)	69782907	BIOLOGICAL	5.4		C B	pg/g	3.7	0.22	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 158 (BZ)	74472427	BIOLOGICAL	3		J Q	pg/g	19	0.14	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 159 (BZ)	39635353	BIOLOGICAL	ND			pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 160 (BZ)	41411625	BIOLOGICAL	ND			pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 161 (BZ)	74472438	BIOLOGICAL	ND			pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 162 (BZ)	39635342	BIOLOGICAL	ND			pg/g	19	0.55	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 163 (BZ)	74472449	BIOLOGICAL	59		C B	pg/g	19	0.16	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 164 (BZ)	74472450	BIOLOGICAL	4.6		J	pg/g	19	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 165 (BZ)	74472461	BIOLOGICAL	ND			pg/g	19	0.15	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 166 (BZ)	41411636	BIOLOGICAL	8.7		C J B	pg/g	19	0.16	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 167 (BZ)	52663726	BIOLOGICAL	2.3			pg/g	1.9	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 168 (BZ)	59291655	BIOLOGICAL	51		C B	pg/g	19	0.14	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 169 (BZ)	32774166	BIOLOGICAL	0.45		J	pg/g	1.9	0.18	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 170 (BZ)	35065306	BIOLOGICAL	6.6		J Q B	pg/g	19	0.21	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 171 (BZ)	52663715	BIOLOGICAL	2.6		C J Q	pg/g	19	0.22	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 172 (BZ)	52663748	BIOLOGICAL	1.6		J	pg/g	19	0.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 173 (BZ)	68194161	BIOLOGICAL	2.6		C J Q	pg/g	19	0.22	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 174 (BZ)	38411255	BIOLOGICAL	7.9		J	pg/g	19	0.25	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 175 (BZ)	40186707	BIOLOGICAL	ND			pg/g	19	0.11	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 176 (BZ)	52663657	BIOLOGICAL	1.3		J	pg/g	19	0.081	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 177 (BZ)	52663704	BIOLOGICAL	7.4		J	pg/g	19	0.21	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 178 (BZ)	52663679	BIOLOGICAL	4.1		J	pg/g	19	0.11	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 179 (BZ)	52663646	BIOLOGICAL	5.2		J	pg/g	19	0.086	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 180 (BZ)	35065293	BIOLOGICAL	4		C J B	pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 181 (BZ)	74472472	BIOLOGICAL	ND			pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 182 (BZ)	60145235	BIOLOGICAL	ND			pg/g	19	0.11	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 183 (BZ)	52663691	BIOLOGICAL	3.3		J	pg/g	19	0.13	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 184 (BZ)	74472483	BIOLOGICAL	ND			pg/g	19	0.09	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 185 (BZ)	52712057	BIOLOGICAL	1.5		J	pg/g	19	0.22	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 186 (BZ)	74472494	BIOLOGICAL	ND			pg/g	19	0.083	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 187 (BZ)	52663680	BIOLOGICAL	29		B J D	pg/g	190	1.2	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 188 (BZ)	74487857	BIOLOGICAL	ND			pg/g	19	0.085	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 189 (BZ)	39635319	BIOLOGICAL	0.84		J	pg/g	1.9	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 190 (BZ)	41411647	BIOLOGICAL	1.8		J Q	pg/g	19	0.14	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 191 (BZ)	74472507	BIOLOGICAL	ND			pg/g	19	0.16	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 192 (BZ)	74472518	BIOLOGICAL	ND			pg/g	19	0.16	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 193 (BZ)	69782918	BIOLOGICAL	4		C J B	pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 194 (BZ)	35694087	BIOLOGICAL	1.6		J Q	pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 195 (BZ)	52663782	BIOLOGICAL	2.3		J	pg/g	19	0.17	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 196 (BZ)	42740501	BIOLOGICAL	1.4		J	pg/g	19	0.11	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 197 (BZ)	33091177	BIOLOGICAL	0.46		J	pg/g	19	0.073	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 198 (BZ)	68194172	BIOLOGICAL	17		C J	pg/g	19	0.13	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 199 (BZ) /200 (IUPAC)	52663737	BIOLOGICAL	1.6		J	pg/g	19	0.12	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 200 (BZ) /201 (IUPAC)	40186718	BIOLOGICAL	1.9		J	pg/g	19	0.088	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 201 (BZ) /199 (IUPAC)	52663759	BIOLOGICAL	17		C J	pg/g	19	0.13	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 202 (BZ)	2136994	BIOLOGICAL	4.1		J	pg/g	19	0.081	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 203 (BZ)	52663760	BIOLOGICAL	10		J	pg/g	19	0.12	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 204 (BZ)	74472529	BIOLOGICAL	ND			pg/g	19	0.089	1319160	1319160	1.86

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 205 (BZ)	74472530	BIOLOGICAL	0.98		J	pg/g	19	0.16	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 206 (BZ)	40186729	BIOLOGICAL	8.5		J	pg/g	19	0.23	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 207 (BZ)	52663793	BIOLOGICAL	1.7		J Q	pg/g	19	0.13	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 208 (BZ)	52663771	BIOLOGICAL	4.7		J	pg/g	19	0.11	1319160	1319160	1.86
SAC	G1K090434	1	SA	LAB CONTROL	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 209 (BZ)	2051243	BIOLOGICAL	9.3		J B	pg/g	19	0.095	1319160	1319160	1.86
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	8290	Percent Lipids	Q847	BIOLOGICAL	1.5			%	0.1		1319170	1319170	1
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 1	234432850	BIOLOGICAL	37			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 28	208263767	BIOLOGICAL	60			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 178	232919674	BIOLOGICAL	66			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 3	208263778	BIOLOGICAL	44			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 111	235416292	BIOLOGICAL	65			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 4	234432861	BIOLOGICAL	41			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 19	234432872	BIOLOGICAL	47			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 37	208263790	BIOLOGICAL	68			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 54	234432883	BIOLOGICAL	48			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 77	105600235	BIOLOGICAL	73			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 81	208461249	BIOLOGICAL	76			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 104	234432894	BIOLOGICAL	55			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 105	208263621	BIOLOGICAL	66			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 114	208263632	BIOLOGICAL	69			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 118	104130407	BIOLOGICAL	71			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 123	208263643	BIOLOGICAL	71			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 126	208263654	BIOLOGICAL	70			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 155	234432907	BIOLOGICAL	66			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 156	208263687	BIOLOGICAL	77		C	%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 157	235416305	BIOLOGICAL	77		C	%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 167	208263698	BIOLOGICAL	78			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 169	208263701	BIOLOGICAL	76			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 188	234432918	BIOLOGICAL	86			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 189	208263734	BIOLOGICAL	84			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 202	105600268	BIOLOGICAL	89			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 205	234446641	BIOLOGICAL	76			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 206	208263756	BIOLOGICAL	85			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 208	234432929	BIOLOGICAL	84			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 209	105600279	BIOLOGICAL	79			%REC			1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 1 (BZ)	2051607	BIOLOGICAL	3.8		J	pg/g	20	0.39	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 2 (BZ)	2051618	BIOLOGICAL	1.1		J	pg/g	20	0.31	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 3 (BZ)	2051629	BIOLOGICAL	3.6		J	pg/g	20	0.25	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 4 (BZ)	13029088	BIOLOGICAL	30			pg/g	20	2.4	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 5 (BZ)	16605917	BIOLOGICAL	ND			pg/g	20	2	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 6 (BZ)	25569806	BIOLOGICAL	20		J	pg/g	20	2	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 7 (BZ)	33284503	BIOLOGICAL	ND			pg/g	20	3.3	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 8 (BZ)	34883437	BIOLOGICAL	100			pg/g	20	2	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 9 (BZ)	34883391	BIOLOGICAL	ND			pg/g	20	3.2	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 10 (BZ)	33146451	BIOLOGICAL	ND			pg/g	20	1.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 11 (BZ)	2050671	BIOLOGICAL	44		B	pg/g	20	2.1	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 12 (BZ)	2974927	BIOLOGICAL	ND			pg/g	20	3.6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 13 (BZ)	2974905	BIOLOGICAL	ND			pg/g	20	3.6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 14 (BZ)	34883415	BIOLOGICAL	ND			pg/g	20	1.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 15 (BZ)	2050682	BIOLOGICAL	25			pg/g	20	1.8	1319160	1319160	1.98

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 16 (BZ)	38444789	BIOLOGICAL	40			pg/g	20	0.61	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 17 (BZ)	37680663	BIOLOGICAL	46			pg/g	20	0.5	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 18 (BZ)	37680652	BIOLOGICAL	88		C B	pg/g	20	0.42	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 19 (BZ)	38444734	BIOLOGICAL	11		J	pg/g	20	0.57	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 20 (BZ)	38444847	BIOLOGICAL	160		C B	pg/g	20	0.63	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 21 (BZ)	55702460	BIOLOGICAL	63		C B	pg/g	20	0.6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 22 (BZ)	38444858	BIOLOGICAL	48		B	pg/g	20	0.66	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 23 (BZ)	55720440	BIOLOGICAL	ND			pg/g	20	0.6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 24 (BZ)	55702459	BIOLOGICAL	0.65		J Q	pg/g	20	0.38	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 25 (BZ)	55712373	BIOLOGICAL	16		J	pg/g	20	0.62	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 26 (BZ)	38444814	BIOLOGICAL	30		C	pg/g	20	0.61	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 27 (BZ)	38444767	BIOLOGICAL	7.2		J	pg/g	20	0.37	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 28 (BZ)	7012375	BIOLOGICAL	160		C B	pg/g	20	0.63	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 29 (BZ)	15862074	BIOLOGICAL	30		C	pg/g	20	0.61	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 30 (BZ)	35693926	BIOLOGICAL	88		C B	pg/g	20	0.42	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 31 (BZ)	16606023	BIOLOGICAL	130		B	pg/g	20	0.59	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 32 (BZ)	38444778	BIOLOGICAL	38			pg/g	20	0.35	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 33 (BZ)	38444869	BIOLOGICAL	63		C B	pg/g	20	0.6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 34 (BZ)	37680685	BIOLOGICAL	2.3		J	pg/g	20	0.62	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 35 (BZ)	37680696	BIOLOGICAL	2.9		J	pg/g	20	0.66	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 36 (BZ)	38444870	BIOLOGICAL	ND			pg/g	20	0.58	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 37 (BZ)	38444905	BIOLOGICAL	20		J B	pg/g	20	0.6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 38 (BZ)	53555661	BIOLOGICAL	ND			pg/g	20	0.66	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 39 (BZ)	38444881	BIOLOGICAL	1		J Q	pg/g	20	0.59	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 40 (BZ)	38444938	BIOLOGICAL	170		C B	pg/g	20	0.23	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 41 (BZ)	52663599	BIOLOGICAL	17		J	pg/g	20	0.33	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 42 (BZ)	36559225	BIOLOGICAL	110		B	pg/g	20	0.26	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 43 (BZ)	70362468	BIOLOGICAL	15		J	pg/g	20	0.29	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 44 (BZ)	41464395	BIOLOGICAL	510		C B	pg/g	20	0.23	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 45 (BZ)	70362457	BIOLOGICAL	43			pg/g	20	0.3	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 46 (BZ)	41464475	BIOLOGICAL	19		J	pg/g	20	0.29	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 47 (BZ)	2437798	BIOLOGICAL	510		C B	pg/g	20	0.23	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 48 (BZ)	70362479	BIOLOGICAL	58		B	pg/g	20	0.25	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 49 (BZ)	41464408	BIOLOGICAL	370		C B	pg/g	20	0.2	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 50 (BZ)	62796650	BIOLOGICAL	73		C B	pg/g	20	0.24	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 51 (BZ)	68194047	BIOLOGICAL	41		B	pg/g	20	0.23	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 52 (BZ)	35693993	BIOLOGICAL	910		B	pg/g	20	0.26	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 53 (BZ)	41464419	BIOLOGICAL	73		C B	pg/g	20	0.24	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 54 (BZ)	15968055	BIOLOGICAL	4.3		J	pg/g	20	0.17	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 55 (BZ)	74338242	BIOLOGICAL	ND			pg/g	20	0.8	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 56 (BZ)	41464431	BIOLOGICAL	170		B	pg/g	20	0.82	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 57 (BZ)	70424678	BIOLOGICAL	ND			pg/g	20	0.77	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 58 (BZ)	41464497	BIOLOGICAL	ND			pg/g	20	0.76	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 59 (BZ)	74472336	BIOLOGICAL	40		C	pg/g	20	0.18	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 60 (BZ)	33025411	BIOLOGICAL	46			pg/g	20	0.8	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 61 (BZ)	33284536	BIOLOGICAL	780		C B	pg/g	20	0.75	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 62 (BZ)	54230227	BIOLOGICAL	40		C	pg/g	20	0.18	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 63 (BZ)	74472347	BIOLOGICAL	22			pg/g	20	0.69	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 64 (BZ)	52663588	BIOLOGICAL	180		B	pg/g	20	0.17	1319160	1319160	1.98

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 65 (BZ)	33284547	BIOLOGICAL	510		C B	pg/g	20	0.23	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 66 (BZ)	32598100	BIOLOGICAL	400		B	pg/g	20	0.78	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 67 (BZ)	73575538	BIOLOGICAL	13		J	pg/g	20	0.73	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 68 (BZ)	73575527	BIOLOGICAL	9.8		J Q B	pg/g	20	0.71	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 69 (BZ)	60233241	BIOLOGICAL	370		C B	pg/g	20	0.2	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 70 (BZ)	32598111	BIOLOGICAL	780		C B	pg/g	20	0.75	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 71 (BZ)	41464464	BIOLOGICAL	170		C B	pg/g	20	0.23	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 72 (BZ)	41464420	BIOLOGICAL	18		J	pg/g	20	0.74	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 73 (BZ)	74338231	BIOLOGICAL	ND			pg/g	20	0.19	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 74 (BZ)	32690930	BIOLOGICAL	780		C B	pg/g	20	0.75	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 75 (BZ)	32598122	BIOLOGICAL	40		C	pg/g	20	0.18	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 76 (BZ)	70362480	BIOLOGICAL	780		C B	pg/g	20	0.75	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 77 (BZ)	32598133	BIOLOGICAL	21			pg/g	2	0.79	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 78 (BZ)	70362491	BIOLOGICAL	ND			pg/g	20	0.83	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 79 (BZ)	41464486	BIOLOGICAL	19		J	pg/g	20	0.71	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 80 (BZ)	33284525	BIOLOGICAL	ND			pg/g	20	0.69	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 81 (BZ)	70362504	BIOLOGICAL	ND			pg/g	2	0.75	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 82 (BZ)	52663624	BIOLOGICAL	240			pg/g	20	0.96	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 83 (BZ)	60145202	BIOLOGICAL	180			pg/g	20	0.78	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 84 (BZ)	52663602	BIOLOGICAL	460			pg/g	20	0.91	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 85 (BZ)	65510454	BIOLOGICAL	380		C	pg/g	20	0.65	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 86 (BZ)	55312691	BIOLOGICAL	1300		C B	pg/g	20	0.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 87 (BZ)	38380028	BIOLOGICAL	1300		C B	pg/g	20	0.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 88 (BZ)	55215173	BIOLOGICAL	300		C	pg/g	20	0.78	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 89 (BZ)	73575572	BIOLOGICAL	19		J	pg/g	20	0.86	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 90 (BZ)	68194070	BIOLOGICAL	2300		C B D	pg/g	200	6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 91 (BZ)	68194058	BIOLOGICAL	300		C	pg/g	20	0.78	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 92 (BZ)	52663613	BIOLOGICAL	580			pg/g	20	0.83	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 93 (BZ)	73575561	BIOLOGICAL	43		C	pg/g	20	0.76	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 94 (BZ)	73575550	BIOLOGICAL	17		J	pg/g	20	0.85	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 95 (BZ)	38379996	BIOLOGICAL	1700		B	pg/g	20	0.79	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 96 (BZ)	73575549	BIOLOGICAL	11		J	pg/g	20	0.13	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 97 (BZ)	41464511	BIOLOGICAL	1300		C B	pg/g	20	0.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 98 (BZ)	60233252	BIOLOGICAL	60		C	pg/g	20	0.8	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 99 (BZ)	38380017	BIOLOGICAL	950		B	pg/g	20	0.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 100 (BZ)	39485831	BIOLOGICAL	43		C	pg/g	20	0.76	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 101 (BZ)	37680732	BIOLOGICAL	2300		C D B	pg/g	200	6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 102 (BZ)	68194069	BIOLOGICAL	60		C	pg/g	20	0.8	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 103 (BZ)	60145213	BIOLOGICAL	43			pg/g	20	0.73	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 104 (BZ)	56558168	BIOLOGICAL	2.3		J	pg/g	20	0.12	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 105 (BZ)	32598144	BIOLOGICAL	440		B	pg/g	2	0.64	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 106 (BZ)	70424690	BIOLOGICAL	ND			pg/g	20	0.75	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 107 (BZ) /109 (IUPAC)	70424689	BIOLOGICAL	120			pg/g	20	0.49	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 108 (BZ) /107 (IUPAC)	70362413	BIOLOGICAL	60		C	pg/g	20	0.61	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 109 (BZ) /108 (IUPAC)	74472358	BIOLOGICAL	1300		C B	pg/g	20	0.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 110 (BZ)	38380039	BIOLOGICAL	2800		C D B	pg/g	200	5.4	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 111 (BZ)	39635320	BIOLOGICAL	5.2		J	pg/g	20	0.59	1319160	1319160	1.98

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 112 (BZ)	74472369	BIOLOGICAL	ND			pg/g	20	0.76	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 113 (BZ)	68194105	BIOLOGICAL	2300		C D B	pg/g	200	6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 114 (BZ)	74472370	BIOLOGICAL	27			pg/g	2	0.61	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 115 (BZ)	74472381	BIOLOGICAL	2800		C D B	pg/g	200	5.4	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 116 (BZ)	18259057	BIOLOGICAL	380		C	pg/g	20	0.65	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 117 (BZ)	68194116	BIOLOGICAL	380		C	pg/g	20	0.65	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 118 (BZ)	31508006	BIOLOGICAL	1300		B	pg/g	2	0.55	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 119 (BZ)	56558179	BIOLOGICAL	1300		C B	pg/g	20	0.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 120 (BZ)	68194127	BIOLOGICAL	15		J	pg/g	20	0.59	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 121 (BZ)	56558180	BIOLOGICAL	2		J Q	pg/g	20	0.58	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 122 (BZ)	76842074	BIOLOGICAL	22			pg/g	20	0.62	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 123 (BZ)	65510443	BIOLOGICAL	17			pg/g	2	0.6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 124 (BZ)	70424703	BIOLOGICAL	60		C	pg/g	20	0.61	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 125 (BZ)	74472392	BIOLOGICAL	1300		C B	pg/g	20	0.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 126 (BZ)	57465288	BIOLOGICAL	4.4			pg/g	2	0.66	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 127 (BZ)	39635331	BIOLOGICAL	ND			pg/g	20	0.62	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 128 (BZ)	38380073	BIOLOGICAL	450		C B	pg/g	20	0.53	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 129 (BZ)	55215184	BIOLOGICAL	3300		C D B	pg/g	200	3.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 130 (BZ)	52663668	BIOLOGICAL	220			pg/g	20	0.72	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 131 (BZ)	61798707	BIOLOGICAL	27			pg/g	20	0.68	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 132 (BZ)	38380051	BIOLOGICAL	980		B	pg/g	20	0.67	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 133 (BZ)	35694043	BIOLOGICAL	84			pg/g	20	0.66	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 134 (BZ)	52704708	BIOLOGICAL	150		C	pg/g	20	0.73	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 135 (BZ)	52744135	BIOLOGICAL	1600		C B	pg/g	20	0.62	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 136 (BZ)	38411222	BIOLOGICAL	410			pg/g	20	0.47	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 137 (BZ)	35694065	BIOLOGICAL	32			pg/g	20	0.48	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 138 (BZ)	35065282	BIOLOGICAL	3300		C D B	pg/g	200	3.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 139 (BZ)	56030569	BIOLOGICAL	65		C	pg/g	20	0.58	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 140 (BZ)	59291644	BIOLOGICAL	65		C	pg/g	20	0.58	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 141 (BZ)	52712046	BIOLOGICAL	80		B	pg/g	20	0.77	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 142 (BZ)	41411614	BIOLOGICAL	ND			pg/g	20	0.79	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 143 (BZ)	68194150	BIOLOGICAL	150		C	pg/g	20	0.73	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 144 (BZ)	68194149	BIOLOGICAL	110			pg/g	20	0.61	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 145 (BZ)	74472405	BIOLOGICAL	ND			pg/g	20	0.73	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 146 (BZ)	51908168	BIOLOGICAL	590			pg/g	20	0.49	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 147 (BZ)	68194138	BIOLOGICAL	3100		C D B	pg/g	200	4	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 148 (BZ)	74472416	BIOLOGICAL	16		J	pg/g	20	0.59	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 149 (BZ)	38380040	BIOLOGICAL	3100		C D B	pg/g	200	4	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 150 (BZ)	68194081	BIOLOGICAL	8.2		J	pg/g	20	0.45	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 151 (BZ)	52663635	BIOLOGICAL	1600		C B	pg/g	20	0.62	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 152 (BZ)	68194092	BIOLOGICAL	3.3		J Q	pg/g	20	0.43	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 153 (BZ)	35065271	BIOLOGICAL	2900		C D B	pg/g	200	3.2	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 154 (BZ)	60145224	BIOLOGICAL	83			pg/g	20	0.57	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 155 (BZ)	33979032	BIOLOGICAL	ND			pg/g	20	0.44	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 156 (BZ)	38380084	BIOLOGICAL	260		C B	pg/g	4	0.94	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 157 (BZ)	69782907	BIOLOGICAL	260		C B	pg/g	4	0.94	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 158 (BZ)	74472427	BIOLOGICAL	200			pg/g	20	0.48	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 159 (BZ)	39635353	BIOLOGICAL	16		J	pg/g	20	0.75	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 160 (BZ)	41411625	BIOLOGICAL	ND			pg/g	20	0.6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 161 (BZ)	74472438	BIOLOGICAL	ND			pg/g	20	0.6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 162 (BZ)	39635342	BIOLOGICAL	12		J B	pg/g	20	0.76	1319160	1319160	1.98

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 163 (BZ)	74472449	BIOLOGICAL	3300		C D B	pg/g	200	3.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 164 (BZ)	74472450	BIOLOGICAL	280			pg/g	20	0.61	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 165 (BZ)	74472461	BIOLOGICAL	2.7		J	pg/g	20	0.51	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 166 (BZ)	41411636	BIOLOGICAL	450		C B	pg/g	20	0.53	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 167 (BZ)	52663726	BIOLOGICAL	91			pg/g	2	0.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 168 (BZ)	59291655	BIOLOGICAL	2900		C D B	pg/g	200	3.2	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 169 (BZ)	32774166	BIOLOGICAL	ND			pg/g	2	0.82	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 170 (BZ)	35065306	BIOLOGICAL	580		B	pg/g	20	0.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 171 (BZ)	52663715	BIOLOGICAL	270		C	pg/g	20	0.72	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 172 (BZ)	52663748	BIOLOGICAL	98			pg/g	20	0.67	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 173 (BZ)	68194161	BIOLOGICAL	270		C	pg/g	20	0.72	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 174 (BZ)	38411255	BIOLOGICAL	740			pg/g	20	0.82	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 175 (BZ)	40186707	BIOLOGICAL	28			pg/g	20	0.19	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 176 (BZ)	52663657	BIOLOGICAL	140			pg/g	20	0.14	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 177 (BZ)	52663704	BIOLOGICAL	730			pg/g	20	0.7	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 178 (BZ)	52663679	BIOLOGICAL	280			pg/g	20	0.2	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 179 (BZ)	52663646	BIOLOGICAL	540			pg/g	20	0.15	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 180 (BZ)	35065293	BIOLOGICAL	300		C B	pg/g	20	0.57	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 181 (BZ)	74472472	BIOLOGICAL	ND			pg/g	20	0.57	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 182 (BZ)	60145235	BIOLOGICAL	ND			pg/g	20	0.19	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 183 (BZ)	52663691	BIOLOGICAL	330			pg/g	20	0.43	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 184 (BZ)	74472483	BIOLOGICAL	1.7		J	pg/g	20	0.16	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 185 (BZ)	52712057	BIOLOGICAL	170			pg/g	20	0.74	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 186 (BZ)	74472494	BIOLOGICAL	ND			pg/g	20	0.15	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 187 (BZ)	52663680	BIOLOGICAL	2200		D B	pg/g	200	1.6	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 188 (BZ)	74487857	BIOLOGICAL	3		J	pg/g	20	0.17	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 189 (BZ)	39635319	BIOLOGICAL	24			pg/g	2	0.35	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 190 (BZ)	41411647	BIOLOGICAL	170			pg/g	20	0.47	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 191 (BZ)	74472507	BIOLOGICAL	12		J	pg/g	20	0.51	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 192 (BZ)	74472518	BIOLOGICAL	ND			pg/g	20	0.53	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 193 (BZ)	69782918	BIOLOGICAL	300		C B	pg/g	20	0.57	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 194 (BZ)	35694087	BIOLOGICAL	120			pg/g	20	0.53	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 195 (BZ)	52663782	BIOLOGICAL	160			pg/g	20	0.55	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 196 (BZ)	42740501	BIOLOGICAL	83			pg/g	20	0.2	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 197 (BZ)	33091177	BIOLOGICAL	19		J	pg/g	20	0.14	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 198 (BZ)	68194172	BIOLOGICAL	630		C	pg/g	20	0.23	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 200 (BZ) /201 (IUPAC)	52663737	BIOLOGICAL	93			pg/g	20	0.22	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 201 (BZ) /199 (IUPAC)	40186718	BIOLOGICAL	81			pg/g	20	0.16	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 107 (BZ) /109 (IUPAC)	52663759	BIOLOGICAL	630		C	pg/g	20	0.23	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 202 (BZ)	2136994	BIOLOGICAL	130			pg/g	20	0.18	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 203 (BZ)	52663760	BIOLOGICAL	380			pg/g	20	0.23	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 204 (BZ)	74472529	BIOLOGICAL	ND			pg/g	20	0.16	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 205 (BZ)	74472530	BIOLOGICAL	21			pg/g	20	0.4	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 206 (BZ)	40186729	BIOLOGICAL	150			pg/g	20	0.39	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 207 (BZ)	52663793	BIOLOGICAL	23			pg/g	20	0.26	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 208 (BZ)	52663771	BIOLOGICAL	81			pg/g	20	0.25	1319160	1319160	1.98
SAC	G1K090434	2	SA	DS-11-MU5	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 209 (BZ)	2051243	BIOLOGICAL	120		B	pg/g	20	0.15	1319160	1319160	1.98
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 1	234432850	BIOLOGICAL	35			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 28	208263767	BIOLOGICAL	71			%REC			1319160	1319160	2

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 178	232919674	BIOLOGICAL	74			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 3	208263778	BIOLOGICAL	36			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 111	235416292	BIOLOGICAL	80			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 4	234432861	BIOLOGICAL	38			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 19	234432872	BIOLOGICAL	51			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 37	208263790	BIOLOGICAL	73			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 54	234432883	BIOLOGICAL	56			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 77	105600235	BIOLOGICAL	73			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 81	208461249	BIOLOGICAL	76			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 104	234432894	BIOLOGICAL	47			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 105	208263621	BIOLOGICAL	72			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 114	208263632	BIOLOGICAL	73			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 118	104130407	BIOLOGICAL	73			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 123	208263643	BIOLOGICAL	78			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 126	208263654	BIOLOGICAL	72			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 155	234432907	BIOLOGICAL	69			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 156	208263687	BIOLOGICAL	83		C	%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 157	235416305	BIOLOGICAL	83		C	%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 167	208263698	BIOLOGICAL	78			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 169	208263701	BIOLOGICAL	78			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 188	234432918	BIOLOGICAL	90			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 189	208263734	BIOLOGICAL	82			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 202	105600268	BIOLOGICAL	89			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 205	234446641	BIOLOGICAL	71			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 206	208263756	BIOLOGICAL	72			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 208	234432929	BIOLOGICAL	84			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 209	105600279	BIOLOGICAL	71			%REC			1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 1 (BZ)	2051607	BIOLOGICAL	216	200		pg/g	20	0.33	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 3 (BZ)	2051629	BIOLOGICAL	212	200		pg/g	20	0.14	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 4 (BZ)	13029088	BIOLOGICAL	203	200		pg/g	20	2	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 15 (BZ)	2050682	BIOLOGICAL	207	200		pg/g	20	1	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 19 (BZ)	38444734	BIOLOGICAL	194	200		pg/g	20	0.33	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 37 (BZ)	38444905	BIOLOGICAL	189	200		pg/g	20	0.24	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 54 (BZ)	15968055	BIOLOGICAL	196	200		pg/g	20	0.096	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 77 (BZ)	32598133	BIOLOGICAL	201	200		pg/g	2	0.32	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 81 (BZ)	70362504	BIOLOGICAL	197	200		pg/g	2	0.31	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 104 (BZ)	56558168	BIOLOGICAL	188	200		pg/g	20	0.12	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 105 (BZ)	32598144	BIOLOGICAL	189	200		pg/g	2	0.22	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 114 (BZ)	74472370	BIOLOGICAL	193	200		pg/g	2	0.23	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 118 (BZ)	31508006	BIOLOGICAL	185	200		pg/g	2	0.21	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 123 (BZ)	65510443	BIOLOGICAL	191	200		pg/g	2	0.21	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 126 (BZ)	57465288	BIOLOGICAL	192	200		pg/g	2	0.25	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 155 (BZ)	33979032	BIOLOGICAL	197	200		pg/g	10	0.082	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 156 (BZ)	38380084	BIOLOGICAL	404	400	C	pg/g	4	0.52	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 157 (BZ)	69782907	BIOLOGICAL	404	400	C	pg/g	4	0.52	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 167 (BZ)	52663726	BIOLOGICAL	203	200		pg/g	2	0.39	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 169 (BZ)	32774166	BIOLOGICAL	207	200		pg/g	2	0.48	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 188 (BZ)	74487857	BIOLOGICAL	199	200		pg/g	20	0.077	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 189 (BZ)	39635319	BIOLOGICAL	203	200		pg/g	2	0.21	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 202 (BZ)	2136994	BIOLOGICAL	209	200		pg/g	20	0.077	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 205 (BZ)	74472530	BIOLOGICAL	199	200		pg/g	20	0.17	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 206 (BZ)	40186729	BIOLOGICAL	193	200		pg/g	20	0.26	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 208 (BZ)	52663771	BIOLOGICAL	196	200		pg/g	20	0.15	1319160	1319160	2
SAC	G1K150000	160	LCS	CHECK SAMPLE	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 209 (BZ)	2051243	BIOLOGICAL	196	200		pg/g	20	0.1	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 1	234432850	BIOLOGICAL	30			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 28	208263767	BIOLOGICAL	66			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 178	232919674	BIOLOGICAL	73			%REC			1319160	1319160	2

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 3	208263778	BIOLOGICAL	35			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 111	235416292	BIOLOGICAL	86			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 4	234432861	BIOLOGICAL	36			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 19	234432872	BIOLOGICAL	53			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 37	208263790	BIOLOGICAL	67			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 54	234432883	BIOLOGICAL	56			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 77	105600235	BIOLOGICAL	72			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 81	208461249	BIOLOGICAL	79			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 104	234432894	BIOLOGICAL	50			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 105	208263621	BIOLOGICAL	70			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 114	208263632	BIOLOGICAL	70			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 118	104130407	BIOLOGICAL	74			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 123	208263643	BIOLOGICAL	83			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 126	208263654	BIOLOGICAL	74			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 155	234432907	BIOLOGICAL	77			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 156	208263687	BIOLOGICAL	86		C	%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 157	235416305	BIOLOGICAL	86		C	%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 167	208263698	BIOLOGICAL	87			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 169	208263701	BIOLOGICAL	75			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 188	234432918	BIOLOGICAL	92			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 189	208263734	BIOLOGICAL	87			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 202	105600268	BIOLOGICAL	105			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 205	234446641	BIOLOGICAL	75			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 206	208263756	BIOLOGICAL	68			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 208	234432929	BIOLOGICAL	89			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	13C12-PCB 209	105600279	BIOLOGICAL	65			%REC			1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 1 (BZ)	2051607	BIOLOGICAL	ND			pg/g	20	0.39	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 2 (BZ)	2051618	BIOLOGICAL	ND			pg/g	20	0.26	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 3 (BZ)	2051629	BIOLOGICAL	ND			pg/g	20	0.66	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 4 (BZ)	13029088	BIOLOGICAL	ND			pg/g	20	1.6	1319160	1319160	2

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 5 (BZ)	16605917	BIOLOGICAL	ND			pg/g	20	1.3	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 6 (BZ)	25569806	BIOLOGICAL	ND			pg/g	20	1.4	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 7 (BZ)	33284503	BIOLOGICAL	ND			pg/g	20	1.3	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 8 (BZ)	34883437	BIOLOGICAL	ND			pg/g	20	1.4	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 9 (BZ)	34883391	BIOLOGICAL	ND			pg/g	20	1.5	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 10 (BZ)	33146451	BIOLOGICAL	ND			pg/g	20	0.79	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 11 (BZ)	2050671	BIOLOGICAL	12		J	pg/g	20	1.4	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 12 (BZ)	2974927	BIOLOGICAL	ND			pg/g	20	1.4	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 13 (BZ)	2974905	BIOLOGICAL	ND			pg/g	20	1.4	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 14 (BZ)	34883415	BIOLOGICAL	ND			pg/g	20	1.2	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 15 (BZ)	2050682	BIOLOGICAL	ND			pg/g	20	0.96	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 16 (BZ)	38444789	BIOLOGICAL	ND			pg/g	20	0.97	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 17 (BZ)	37680663	BIOLOGICAL	ND			pg/g	20	0.56	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 18 (BZ)	37680652	BIOLOGICAL	1.1		C J	pg/g	20	0.22	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 19 (BZ)	38444734	BIOLOGICAL	ND			pg/g	20	0.3	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 20 (BZ)	38444847	BIOLOGICAL	1.9		C J	pg/g	20	0.27	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 21 (BZ)	55702460	BIOLOGICAL	1		C J Q	pg/g	20	0.26	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 22 (BZ)	38444858	BIOLOGICAL	0.81		J Q	pg/g	20	0.28	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 23 (BZ)	55720440	BIOLOGICAL	ND			pg/g	20	0.26	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 24 (BZ)	55702459	BIOLOGICAL	ND			pg/g	20	0.2	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 25 (BZ)	55712373	BIOLOGICAL	ND			pg/g	20	0.27	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 26 (BZ)	38444814	BIOLOGICAL	ND			pg/g	20	0.26	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 27 (BZ)	38444767	BIOLOGICAL	ND			pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 28 (BZ)	7012375	BIOLOGICAL	1.9		C J	pg/g	20	0.27	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 29 (BZ)	15862074	BIOLOGICAL	ND			pg/g	20	0.26	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 30 (BZ)	35693926	BIOLOGICAL	1.1		C J	pg/g	20	0.22	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 31 (BZ)	16606023	BIOLOGICAL	2		J	pg/g	20	0.25	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 32 (BZ)	38444778	BIOLOGICAL	ND			pg/g	20	0.52	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 33 (BZ)	38444869	BIOLOGICAL	1		C J Q	pg/g	20	0.26	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 34 (BZ)	37680685	BIOLOGICAL	ND			pg/g	20	0.27	1319160	1319160	2

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 35 (BZ)	37680696	BIOLOGICAL	ND			pg/g	20	0.28	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 36 (BZ)	38444870	BIOLOGICAL	ND			pg/g	20	0.25	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 37 (BZ)	38444905	BIOLOGICAL	0.52		J Q	pg/g	20	0.25	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 38 (BZ)	53555661	BIOLOGICAL	ND			pg/g	20	0.28	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 39 (BZ)	38444881	BIOLOGICAL	ND			pg/g	20	0.25	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 40 (BZ)	38444938	BIOLOGICAL	0.27		C J	pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 41 (BZ)	52663599	BIOLOGICAL	ND			pg/g	20	0.23	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 42 (BZ)	36559225	BIOLOGICAL	0.32		J	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 43 (BZ)	70362468	BIOLOGICAL	ND			pg/g	20	0.21	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 44 (BZ)	41464395	BIOLOGICAL	5.3		C J	pg/g	20	0.17	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 45 (BZ)	70362457	BIOLOGICAL	ND			pg/g	20	0.21	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 46 (BZ)	41464475	BIOLOGICAL	ND			pg/g	20	0.21	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 47 (BZ)	2437798	BIOLOGICAL	5.3		C J	pg/g	20	0.17	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 48 (BZ)	70362479	BIOLOGICAL	0.41		J	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 49 (BZ)	41464408	BIOLOGICAL	0.8		C J	pg/g	20	0.14	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 50 (BZ)	62796650	BIOLOGICAL	0.33		C J Q	pg/g	20	0.17	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 51 (BZ)	68194047	BIOLOGICAL	1.1		J	pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 52 (BZ)	35693993	BIOLOGICAL	1.8		J	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 53 (BZ)	41464419	BIOLOGICAL	0.33		C J Q	pg/g	20	0.17	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 54 (BZ)	15968055	BIOLOGICAL	ND			pg/g	20	0.1	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 55 (BZ)	74338242	BIOLOGICAL	ND			pg/g	20	0.2	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 56 (BZ)	41464431	BIOLOGICAL	0.38		J	pg/g	20	0.21	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 57 (BZ)	70424678	BIOLOGICAL	ND			pg/g	20	0.2	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 58 (BZ)	41464497	BIOLOGICAL	ND			pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 59 (BZ)	74472336	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 60 (BZ)	33025411	BIOLOGICAL	ND			pg/g	20	0.2	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 61 (BZ)	33284536	BIOLOGICAL	1.9		C J Q	pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 62 (BZ)	54230227	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 63 (BZ)	74472347	BIOLOGICAL	ND			pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 64 (BZ)	52663588	BIOLOGICAL	0.41		J	pg/g	20	0.12	1319160	1319160	2

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 65 (BZ)	33284547	BIOLOGICAL	5.3		C J	pg/g	20	0.17	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 66 (BZ)	32598100	BIOLOGICAL	0.88		J	pg/g	20	0.2	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 67 (BZ)	73575538	BIOLOGICAL	ND			pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 68 (BZ)	73575527	BIOLOGICAL	0.64		J	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 69 (BZ)	60233241	BIOLOGICAL	0.8		C J	pg/g	20	0.14	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 70 (BZ)	32598111	BIOLOGICAL	1.9		C J Q	pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 71 (BZ)	41464464	BIOLOGICAL	0.27		C J	pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 72 (BZ)	41464420	BIOLOGICAL	ND			pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 73 (BZ)	74338231	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 74 (BZ)	32690930	BIOLOGICAL	1.9		C J Q	pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 75 (BZ)	32598122	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 76 (BZ)	70362480	BIOLOGICAL	1.9		C J Q	pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 77 (BZ)	32598133	BIOLOGICAL	ND			pg/g	2	0.22	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 78 (BZ)	70362491	BIOLOGICAL	ND			pg/g	20	0.21	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 79 (BZ)	41464486	BIOLOGICAL	ND			pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 80 (BZ)	33284525	BIOLOGICAL	ND			pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 81 (BZ)	70362504	BIOLOGICAL	ND			pg/g	2	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 82 (BZ)	52663624	BIOLOGICAL	ND			pg/g	20	0.37	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 83 (BZ)	60145202	BIOLOGICAL	ND			pg/g	20	0.2	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 84 (BZ)	52663602	BIOLOGICAL	ND			pg/g	20	0.49	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 85 (BZ)	65510454	BIOLOGICAL	ND			pg/g	20	0.24	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 86 (BZ)	55312691	BIOLOGICAL	0.92		C J	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 87 (BZ)	38380028	BIOLOGICAL	0.92		C J	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 88 (BZ)	55215173	BIOLOGICAL	ND			pg/g	20	0.2	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 89 (BZ)	73575572	BIOLOGICAL	ND			pg/g	20	0.22	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 90 (BZ)	68194070	BIOLOGICAL	1		C J Q	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 91 (BZ)	68194058	BIOLOGICAL	ND			pg/g	20	0.2	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 92 (BZ)	52663613	BIOLOGICAL	ND			pg/g	20	0.21	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 93 (BZ)	73575561	BIOLOGICAL	ND			pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 94 (BZ)	73575550	BIOLOGICAL	ND			pg/g	20	0.22	1319160	1319160	2

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 95 (BZ)	38379996	BIOLOGICAL	0.94		J	pg/g	20	0.2	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 96 (BZ)	73575549	BIOLOGICAL	ND			pg/g	20	0.11	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 97 (BZ)	41464511	BIOLOGICAL	0.92		C J	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 98 (BZ)	60233252	BIOLOGICAL	ND			pg/g	20	0.21	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 99 (BZ)	38380017	BIOLOGICAL	0.65		J Q	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 100 (BZ)	39485831	BIOLOGICAL	ND			pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 101 (BZ)	37680732	BIOLOGICAL	1		C J Q	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 102 (BZ)	68194069	BIOLOGICAL	ND			pg/g	20	0.21	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 103 (BZ)	60145213	BIOLOGICAL	ND			pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 104 (BZ)	56558168	BIOLOGICAL	ND			pg/g	20	0.12	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 105 (BZ)	32598144	BIOLOGICAL	0.94		J Q	pg/g	2	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 106 (BZ)	70424690	BIOLOGICAL	ND			pg/g	20	0.19	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 107 (BZ) /109 (IUPAC)	70424689	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 108 (BZ) /107 (IUPAC)	70362413	BIOLOGICAL	ND			pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 109 (BZ) /108 (IUPAC)	74472358	BIOLOGICAL	0.92		C J	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 110 (BZ)	38380039	BIOLOGICAL	1.5		C J Q	pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 111 (BZ)	39635320	BIOLOGICAL	ND			pg/g	20	0.15	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 112 (BZ)	74472369	BIOLOGICAL	ND			pg/g	20	0.2	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 113 (BZ)	68194105	BIOLOGICAL	1		C J Q	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 114 (BZ)	74472370	BIOLOGICAL	ND			pg/g	2	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 115 (BZ)	74472381	BIOLOGICAL	1.5		C J Q	pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 116 (BZ)	18259057	BIOLOGICAL	ND			pg/g	20	0.24	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 117 (BZ)	68194116	BIOLOGICAL	ND			pg/g	20	0.24	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 118 (BZ)	31508006	BIOLOGICAL	1.3		J	pg/g	2	0.14	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 119 (BZ)	56558179	BIOLOGICAL	0.92		C J	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 120 (BZ)	68194127	BIOLOGICAL	ND			pg/g	20	0.15	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 121 (BZ)	56558180	BIOLOGICAL	ND			pg/g	20	0.15	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 122 (BZ)	76842074	BIOLOGICAL	ND			pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 123 (BZ)	65510443	BIOLOGICAL	ND			pg/g	2	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 124 (BZ)	70424703	BIOLOGICAL	ND			pg/g	20	0.16	1319160	1319160	2

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 125 (BZ)	74472392	BIOLOGICAL	0.92		C J	pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 126 (BZ)	57465288	BIOLOGICAL	ND			pg/g	2	0.17	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 127 (BZ)	39635331	BIOLOGICAL	ND			pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 128 (BZ)	38380073	BIOLOGICAL	0.27		C J	pg/g	20	0.11	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 129 (BZ)	55215184	BIOLOGICAL	1.3		C J Q	pg/g	20	0.12	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 130 (BZ)	52663668	BIOLOGICAL	ND			pg/g	20	0.15	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 131 (BZ)	61798707	BIOLOGICAL	ND			pg/g	20	0.15	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 132 (BZ)	38380051	BIOLOGICAL	0.41		J	pg/g	20	0.14	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 133 (BZ)	35694043	BIOLOGICAL	ND			pg/g	20	0.14	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 134 (BZ)	52704708	BIOLOGICAL	ND			pg/g	20	0.15	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 135 (BZ)	52744135	BIOLOGICAL	0.41		C J	pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 136 (BZ)	38411222	BIOLOGICAL	ND			pg/g	20	0.1	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 137 (BZ)	35694065	BIOLOGICAL	ND			pg/g	20	0.1	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 138 (BZ)	35065282	BIOLOGICAL	1.3		C J Q	pg/g	20	0.12	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 139 (BZ)	56030569	BIOLOGICAL	ND			pg/g	20	0.12	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 140 (BZ)	59291644	BIOLOGICAL	ND			pg/g	20	0.12	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 141 (BZ)	52712046	BIOLOGICAL	0.31		J	pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 142 (BZ)	41411614	BIOLOGICAL	ND			pg/g	20	0.17	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 143 (BZ)	68194150	BIOLOGICAL	ND			pg/g	20	0.15	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 144 (BZ)	68194149	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 145 (BZ)	74472405	BIOLOGICAL	ND			pg/g	20	0.1	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 146 (BZ)	51908168	BIOLOGICAL	ND			pg/g	20	0.1	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 147 (BZ)	68194138	BIOLOGICAL	0.83		C J	pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 148 (BZ)	74472416	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 149 (BZ)	38380040	BIOLOGICAL	0.83		C J	pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 150 (BZ)	68194081	BIOLOGICAL	ND			pg/g	20	0.097	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 151 (BZ)	52663635	BIOLOGICAL	0.41		C J	pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 152 (BZ)	68194092	BIOLOGICAL	ND			pg/g	20	0.093	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 153 (BZ)	35065271	BIOLOGICAL	1		C J	pg/g	20	0.1	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 154 (BZ)	60145224	BIOLOGICAL	ND			pg/g	20	0.12	1319160	1319160	2

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 155 (BZ)	33979032	BIOLOGICAL	ND			pg/g	20	0.087	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 156 (BZ)	38380084	BIOLOGICAL	0.37		C J	pg/g	4	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 157 (BZ)	69782907	BIOLOGICAL	0.37		C J	pg/g	4	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 158 (BZ)	74472427	BIOLOGICAL	ND			pg/g	20	0.1	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 159 (BZ)	39635353	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 160 (BZ)	41411625	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 161 (BZ)	74472438	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 162 (BZ)	39635342	BIOLOGICAL	0.5		J	pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 163 (BZ)	74472449	BIOLOGICAL	1.3		C J Q	pg/g	20	0.12	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 164 (BZ)	74472450	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 165 (BZ)	74472461	BIOLOGICAL	ND			pg/g	20	0.11	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 166 (BZ)	41411636	BIOLOGICAL	0.27		C J	pg/g	20	0.11	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 167 (BZ)	52663726	BIOLOGICAL	ND			pg/g	2	0.12	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 168 (BZ)	59291655	BIOLOGICAL	1		C J	pg/g	20	0.1	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 169 (BZ)	32774166	BIOLOGICAL	ND			pg/g	2	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 170 (BZ)	35065306	BIOLOGICAL	0.75		J Q	pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 171 (BZ)	52663715	BIOLOGICAL	ND			pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 172 (BZ)	52663748	BIOLOGICAL	ND			pg/g	20	0.15	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 173 (BZ)	68194161	BIOLOGICAL	ND			pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 174 (BZ)	38411255	BIOLOGICAL	ND			pg/g	20	0.18	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 175 (BZ)	40186707	BIOLOGICAL	ND			pg/g	20	0.092	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 176 (BZ)	52663657	BIOLOGICAL	ND			pg/g	20	0.068	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 177 (BZ)	52663704	BIOLOGICAL	ND			pg/g	20	0.15	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 178 (BZ)	52663679	BIOLOGICAL	ND			pg/g	20	0.096	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 179 (BZ)	52663646	BIOLOGICAL	ND			pg/g	20	0.073	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 180 (BZ)	35065293	BIOLOGICAL	0.57		C J Q	pg/g	20	0.12	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 181 (BZ)	74472472	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 182 (BZ)	60145235	BIOLOGICAL	ND			pg/g	20	0.093	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 183 (BZ)	52663691	BIOLOGICAL	ND			pg/g	20	0.095	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 184 (BZ)	74472483	BIOLOGICAL	ND			pg/g	20	0.076	1319160	1319160	2

Table 17: November Lumbriculus Analysis Results

Lab Name	Lot ID	Sample Number	Aliquot	Client ID	Collected	Received	Prepped	Analyzed	Method	Component	CAS	Matrix	Result	Spiked	Footnotes	Units	RL	MDL	QCLot	QCRun	Dilution
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 185 (BZ)	52712057	BIOLOGICAL	ND			pg/g	20	0.16	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 186 (BZ)	74472494	BIOLOGICAL	ND			pg/g	20	0.07	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 187 (BZ)	52663680	BIOLOGICAL	0.41		J	pg/g	20	0.08	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 188 (BZ)	74487857	BIOLOGICAL	ND			pg/g	20	0.08	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 189 (BZ)	39635319	BIOLOGICAL	ND			pg/g	2	0.12	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 190 (BZ)	41411647	BIOLOGICAL	ND			pg/g	20	0.1	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 191 (BZ)	74472507	BIOLOGICAL	ND			pg/g	20	0.11	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 192 (BZ)	74472518	BIOLOGICAL	ND			pg/g	20	0.12	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 193 (BZ)	69782918	BIOLOGICAL	0.57		C J Q	pg/g	20	0.12	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 194 (BZ)	35694087	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 195 (BZ)	52663782	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 196 (BZ)	42740501	BIOLOGICAL	ND			pg/g	20	0.072	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 197 (BZ)	33091177	BIOLOGICAL	ND			pg/g	20	0.048	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 198 (BZ)	68194172	BIOLOGICAL	ND			pg/g	20	0.082	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 200 (BZ) /201 (IUPAC)	52663737	BIOLOGICAL	ND			pg/g	20	0.077	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 201 (BZ) /199 (IUPAC)	40186718	BIOLOGICAL	ND			pg/g	20	0.057	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 107 (BZ) /109 (IUPAC)	52663759	BIOLOGICAL	ND			pg/g	20	0.082	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 202 (BZ)	2136994	BIOLOGICAL	ND			pg/g	20	0.057	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 203 (BZ)	52663760	BIOLOGICAL	ND			pg/g	20	0.081	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 204 (BZ)	74472529	BIOLOGICAL	ND			pg/g	20	0.058	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 205 (BZ)	74472530	BIOLOGICAL	ND			pg/g	20	0.11	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 206 (BZ)	40186729	BIOLOGICAL	ND			pg/g	20	0.21	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 207 (BZ)	52663793	BIOLOGICAL	ND			pg/g	20	0.13	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 208 (BZ)	52663771	BIOLOGICAL	ND			pg/g	20	0.084	1319160	1319160	2
SAC	G1K150000	160	MB	INTRA-LAB BLANK	11/4/2011	11/9/2011	11/15/2011	11/17/2011	1668A	PCB 209 (BZ)	2051243	BIOLOGICAL	0.66		J	pg/g	20	0.1	1319160	1319160	2

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

January 30, 2012

TestAmerica Project Number: G1J250505
PO/Contract: 11652-0040

Ali Al-Saffar
FutureNet Group, Inc
12801 Auburn Street
Detroit, MI 48223

Dear Dr. Al-Saffar,

This report contains the analytical results for the samples received under chain of custody by TestAmerica on October 25, 2011. These samples are associated with your Duluth project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4384.

Sincerely,

Karen Dahl
Project Manager

Table of Contents

TestAmerica West Sacramento Project Number G1J250505

Case Narrative

Sacramento Quality Assurance Program

Manual Integration Addendum

Sample Summary

Executive Summary

Analytical Methods Summary

Method / Analyst Summary

Sample Data Sheets

BIOLOGIC, 1668A, 209 Congeners
Samples: 1, 2

BIOLOGIC, Percent Lipids
Samples: 1, 2

QC Data Association Summary

Laboratory QC Reports

Raw Data Package

Shipping and Receiving Documents

Case Narrative

TestAmerica West Sacramento Project Number G1J250505

General Comments
Manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: S-Q-004, including Addendum 1. Detailed information can be found in the Manual Integration Addendum section of this report.

The samples were received by the laboratory at 6 degrees C. Wet ice was used as the cooling agent.

A reduced sample size of approximately 5 grams was extracted for these samples due to limited sample volume. The minimum levels were elevated accordingly.

BIOLOGIC, 1668A, 209 Congeners
Samples 1, 2
Some analytes for these samples & the method blank have been qualified with a "Q" flag since their ion abundance ratios did not meet acceptance criteria. These analytes have been reported as "estimated maximum possible concentrations" (EMPCs) since their quantitation was based on theoretical ion abundance ratios.

There are no other anomalies associated with this project.

TestAmerica Laboratories West Sacramento Certifications/Accreditations

Certifying State	Certificate #	Certifying State	Certificate #
A2LA (DoD-ELAP)	2928-01	New Mexico	NA
Alaska	UST-055	New York*	11666
Arizona	AZ0708	Oregon*	CA 200005
Arkansas	88-0691	Pennsylvania*	68-1272
California*	01119CA	South Carolina	87014
Colorado	NA	Texas*	T104704399-08-TX
Connecticut	PH-0691	UCMR	CA00044
Florida*	E87570	US Fish & Wildlife	LE148388-0
Georgia	960	USDA Foreign Plant	37-82605
Guam	10-009r	USDA Foreign Soil	P330-09-00055
Hawaii	NA	Utah*	QUAN1
Illinois*	002701	Virginia	178
Kansas*	E-10375	Washington	C581
Louisiana*	01944	West Virginia	9930C, 334
Michigan	9947	Wisconsin	998204680
Nevada	CA44	Wyoming	8TMS-Q
New Jersey*	CA005		

*NELAP accredited. A more detailed parameter list is available upon request. *Updated 5/25/2011*

QC Parameter Definitions

QC Batch: The QC batch consists of a set of up to 20 field samples that behave similarly (i.e., same matrix) and are processed using the same procedures, reagents, and standards at the same time.

Method Blank: An analytical control consisting of all reagents, which may include internal standards and surrogates, and is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background contamination.

Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD): An aliquot of blank matrix spiked with known amounts of representative target analytes. The LCS (and LCSD as required) is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. If an LCSD is performed, it may also be used to evaluate the precision of the process.

Duplicate Sample (DU): Different aliquots of the same sample are analyzed to evaluate the precision of an analysis.

Surrogates: Organic compounds not expected to be detected in field samples, which behave similarly to target analytes. These are added to every sample within a batch at a known concentration to determine the efficiency of the sample preparation and analytical process.

Matrix Spike and Matrix Spike Duplicate (MS/MSD): An MS is an aliquot of a matrix fortified with known quantities of specific compounds and subjected to an entire analytical procedure in order to indicate the appropriateness of the method for a particular matrix. The percent recovery for the respective compound(s) is then calculated. The MSD is a second aliquot of the same matrix as the matrix spike, also spiked, in order to determine the precision of the method.

Isotope Dilution: For isotope dilution methods, isotopically labeled analogs (internal standards) of the native target analytes are spiked into the sample at time of extraction. These internal standards are used for quantitation, and monitor and correct for matrix effects. Since matrix effects on method performance can be judged by the recovery of these analogs, there is little added benefit of performing MS/MSD for these methods. MS/MSD are only performed for client or QAPP requirements.

Control Limits: The reported control limits are either based on laboratory historical data, method requirements, or project data quality objectives. The control limits represent the estimated uncertainty of the test results.

Manual Integration Addendum

Manual Integration Record - Method 1668A

Instrument : 12D8 Lot #: G1J250505

Compound Name	Analysis date: 9/9/2011									Analysis date: 1/16-1/20					Analysis date: 1/16/2012-1/20/2012								
	ICAL									CCAL ST0(____)					Samples								
	1	2	3	4	5	6	7	8	ICV	0116	0117	0120A			MB	LCS	1	2					
PCB-1	X																						
PCB-4	X	X														X	X	X					
PCB-6										X							X	X					
PCB-7										X								X					
PCB-8																	X	X					
PCB-9										X								X					
PCB-10																	X						
PCB-11										X	X						X	X					
PCB-12/13																	X	X					
PCB-14										X													
PCB-15	X	X														X	X	X					
PCB-16																	X	X					
PCB-19		X																					
PCB-24																	X	X					
PCB-40/71																	X	X					
PCB-41																	X	X					
PCB-43																	X	X					
PCB-45										X		X					X	X					
PCB-49/69															X								
PCB-51										X		X					X	X					
PCB-56																		X					
PCB-57																		X					
PCB-60																		X					
PCB-61/70/74/76															X								
PCB-66															X								
PCB-73																	X	X					
PCB-77	X																						
PCB-79																		X					
PCB-82															X								
PCB-83										X		X					X	X					
PCB-85/116/117															X		X	X					
PCB-86/87/97/108/119/125															X		X						
PCB-90/101/113															X								
PCB-92															X								
PCB-93/100															X		X						
PCB-98/102																	X						

Manual Integration Record - Method 1668A

Instrument : 12D8 Lot #: G1J250505

Compound Name	Analysis date: 9/9/2011									Analysis date: 1/16-1/20					Analysis date: 1/16/2012-1/20/2012								
	ICAL									CCAL ST0(____)					Samples								
	1	2	3	4	5	6	7	8	ICV	0116	0117	0120A			MB	LCS	1	2					
PCB-99			X							X		X			X		X	X					
PCB-104	X																						
PCB-106												X											
PCB-109																		X					
PCB-110/115															X		X	X					
PCB-112			X									X			X								
PCB-114	X																X	X					
PCB-118	X																						
PCB-123												X						X					
PCB-126	X																	X					
PCB-129/138/163										X		X			X								
PCB-134/143			X								X												
PCB-137												X					X	X					
PCB-141																		X					
PCB-147/149															X								
PCB-153/168															X			X					
PCB-155	X																						
PCB-156/157	X																X						
PCB-160										X		X											
PCB-162																		X					
PCB-164												X					X	X					
PCB-167	X																						
PCB-169	X																X						
PCB-178																	X						
PCB-183			X						X	X		X						X					
PCB-185			X						X	X		X						X					
PCB-194																	X						
PCB-197									X	X		X					X	X					
PCB-200									X	X		X					X	X					
PCB-202	X																						
PCB-205	X																X						
PCB-206	X																						
PCB-1L																X		X					

Sample Summary

TestAmerica West Sacramento Project Number G1J250505

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
MNGA4	1	Control-Rep 5	10/21/2011	10/25/2011 01:10 PM
MNGA7	2	9052-Rep 1	10/21/2011	10/25/2011 01:10 PM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

FutureNet Group, Inc

Sample ID: Control-Rep 5

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 001	**Work Order #....:**	MNGA42AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	1.67
Prep Date....:	01/03/12	**Analysis Date....:**	01/17/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	5.96 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 1 (BZ)	**4.1**	**J**	**34**	**0.19**	**pg/g**
PCB 2 (BZ)	**1.1**	**J Q**	**34**	**0.17**	**pg/g**
PCB 3 (BZ)	**3.0**	**J Q**	**34**	**0.15**	**pg/g**
PCB 4 (BZ)	**25**	**J**	**34**	**4.4**	**pg/g**
PCB 5 (BZ)	ND		34	2.6	pg/g
PCB 6 (BZ)	**13**	**J Q**	**34**	**2.7**	**pg/g**
PCB 7 (BZ)	ND		34	2.5	pg/g
PCB 8 (BZ)	**66**		**34**	**2.6**	**pg/g**
PCB 9 (BZ)	ND		34	2.8	pg/g
PCB 10 (BZ)	ND		34	3.1	pg/g
PCB 11 (BZ)	**31**	**J Q**	**34**	**2.7**	**pg/g**
PCB 12 (BZ)	ND		34	2.7	pg/g
PCB 13 (BZ)	ND		34	2.7	pg/g
PCB 14 (BZ)	ND		34	2.3	pg/g
PCB 15 (BZ)	**15**	**J Q**	**34**	**2.4**	**pg/g**
PCB 16 (BZ)	**16**	**J**	**34**	**0.22**	**pg/g**
PCB 17 (BZ)	**16**	**J**	**34**	**0.18**	**pg/g**
PCB 18 (BZ)	**25**	**C J B**	**34**	**0.15**	**pg/g**
PCB 19 (BZ)	**4.6**	**J**	**34**	**0.21**	**pg/g**
PCB 20 (BZ)	**42**	**C B**	**34**	**0.25**	**pg/g**
PCB 21 (BZ)	**21**	**C J B**	**34**	**0.24**	**pg/g**
PCB 22 (BZ)	**16**	**J B**	**34**	**0.26**	**pg/g**
PCB 23 (BZ)	ND		34	0.24	pg/g
PCB 24 (BZ)	**0.33**	**J**	**34**	**0.14**	**pg/g**
PCB 25 (BZ)	**3.3**	**J**	**34**	**0.25**	**pg/g**
PCB 26 (BZ)	**7.5**	**C J**	**34**	**0.24**	**pg/g**
PCB 27 (BZ)	**2.3**	**J**	**34**	**0.13**	**pg/g**
PCB 28 (BZ)	**42**	**C B**	**34**	**0.25**	**pg/g**
PCB 29 (BZ)	**7.5**	**C J**	**34**	**0.24**	**pg/g**
PCB 30 (BZ)	**25**	**C J B**	**34**	**0.15**	**pg/g**
PCB 31 (BZ)	**33**	**J B**	**34**	**0.24**	**pg/g**
PCB 32 (BZ)	**9.1**	**J B**	**34**	**0.13**	**pg/g**
PCB 33 (BZ)	**21**	**C J B**	**34**	**0.24**	**pg/g**
PCB 34 (BZ)	ND		34	0.25	pg/g
PCB 35 (BZ)	**0.37**	**J**	**34**	**0.26**	**pg/g**
PCB 36 (BZ)	ND		34	0.23	pg/g

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FutureNet Group, Inc

Sample ID: Control-Rep 5

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 001	**Work Order #....:**	MNGA42AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	1.67
Prep Date....:	01/03/12	**Analysis Date....:**	01/17/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	5.96 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 37 (BZ)	**3.8**	**J**	**34**	**0.24**	**pg/g**
PCB 38 (BZ)	ND		34	0.26	pg/g
PCB 39 (BZ)	ND		34	0.24	pg/g
PCB 40 (BZ)	**6.0**	**C J**	**34**	**0.19**	**pg/g**
PCB 41 (BZ)	**2.2**	**J**	**34**	**0.27**	**pg/g**
PCB 42 (BZ)	**4.0**	**J**	**34**	**0.22**	**pg/g**
PCB 43 (BZ)	**0.71**	**J**	**34**	**0.24**	**pg/g**
PCB 44 (BZ)	**19**	**C J B**	**34**	**0.19**	**pg/g**
PCB 45 (BZ)	**3.1**	**J**	**34**	**0.25**	**pg/g**
PCB 46 (BZ)	**1.5**	**J**	**34**	**0.24**	**pg/g**
PCB 47 (BZ)	**19**	**C J B**	**34**	**0.19**	**pg/g**
PCB 48 (BZ)	**3.9**	**J**	**34**	**0.21**	**pg/g**
PCB 49 (BZ)	**9.4**	**C J B**	**34**	**0.17**	**pg/g**
PCB 50 (BZ)	**2.7**	**C J**	**34**	**0.20**	**pg/g**
PCB 51 (BZ)	**1.0**	**J**	**34**	**0.19**	**pg/g**
PCB 52 (BZ)	**26**	**J B**	**34**	**0.21**	**pg/g**
PCB 53 (BZ)	**2.7**	**C J**	**34**	**0.20**	**pg/g**
PCB 54 (BZ)	ND		34	0.11	pg/g
PCB 55 (BZ)	ND		34	0.21	pg/g
PCB 56 (BZ)	**5.1**	**J**	**34**	**0.21**	**pg/g**
PCB 57 (BZ)	ND		34	0.20	pg/g
PCB 58 (BZ)	ND		34	0.20	pg/g
PCB 59 (BZ)	**1.5**	**C J**	**34**	**0.15**	**pg/g**
PCB 60 (BZ)	**3.7**	**J**	**34**	**0.21**	**pg/g**
PCB 61 (BZ)	**28**	**C J B**	**34**	**0.19**	**pg/g**
PCB 62 (BZ)	**1.5**	**C J**	**34**	**0.15**	**pg/g**
PCB 63 (BZ)	**0.54**	**J Q**	**34**	**0.18**	**pg/g**
PCB 64 (BZ)	**7.2**	**J B**	**34**	**0.14**	**pg/g**
PCB 65 (BZ)	**19**	**C J B**	**34**	**0.19**	**pg/g**
PCB 66 (BZ)	**13**	**J B**	**34**	**0.20**	**pg/g**
PCB 67 (BZ)	**0.58**	**J**	**34**	**0.19**	**pg/g**
PCB 68 (BZ)	**0.38**	**J Q**	**34**	**0.18**	**pg/g**
PCB 69 (BZ)	**9.4**	**C J B**	**34**	**0.17**	**pg/g**
PCB 70 (BZ)	**28**	**C J B**	**34**	**0.19**	**pg/g**
PCB 71 (BZ)	**6.0**	**C J**	**34**	**0.19**	**pg/g**
PCB 72 (BZ)	ND		34	0.19	pg/g

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FutureNet Group, Inc

Sample ID: Control-Rep 5

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 001	**Work Order #....:**	MNGA42AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	1.67
Prep Date....:	01/03/12	**Analysis Date....:**	01/17/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	5.96 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 73 (BZ)	ND		34	0.16	pg/g
PCB 74 (BZ)	**28**	**C J B**	**34**	**0.19**	**pg/g**
PCB 75 (BZ)	**1.5**	**C J**	**34**	**0.15**	**pg/g**
PCB 76 (BZ)	**28**	**C J B**	**34**	**0.19**	**pg/g**
PCB 77 (BZ)	**1.5**	**J Q**	**3.4**	**0.19**	**pg/g**
PCB 78 (BZ)	ND		34	0.21	pg/g
PCB 79 (BZ)	ND		34	0.18	pg/g
PCB 80 (BZ)	ND		34	0.18	pg/g
PCB 81 (BZ)	ND		3.4	0.18	pg/g
PCB 82 (BZ)	**2.4**	**J Q**	**34**	**0.27**	**pg/g**
PCB 83 (BZ)	**2.1**	**J Q**	**34**	**0.22**	**pg/g**
PCB 84 (BZ)	**5.1**	**J**	**34**	**0.25**	**pg/g**
PCB 85 (BZ)	**4.9**	**C J**	**34**	**0.18**	**pg/g**
PCB 86 (BZ)	**17**	**C J**	**34**	**0.19**	**pg/g**
PCB 87 (BZ)	**17**	**C J**	**34**	**0.19**	**pg/g**
PCB 88 (BZ)	**2.7**	**C J**	**34**	**0.22**	**pg/g**
PCB 89 (BZ)	ND		34	0.24	pg/g
PCB 90 (BZ)	**28**	**C J B**	**34**	**0.20**	**pg/g**
PCB 91 (BZ)	**2.7**	**C J**	**34**	**0.22**	**pg/g**
PCB 92 (BZ)	**5.1**	**J**	**34**	**0.23**	**pg/g**
PCB 93 (BZ)	ND		34	0.21	pg/g
PCB 94 (BZ)	ND		34	0.24	pg/g
PCB 95 (BZ)	**18**	**J B**	**34**	**0.22**	**pg/g**
PCB 96 (BZ)	ND		34	0.074	pg/g
PCB 97 (BZ)	**17**	**C J**	**34**	**0.19**	**pg/g**
PCB 98 (BZ)	**0.42**	**C J**	**34**	**0.22**	**pg/g**
PCB 99 (BZ)	**13**	**J**	**34**	**0.20**	**pg/g**
PCB 100 (BZ)	ND		34	0.21	pg/g
PCB 101 (BZ)	**28**	**C J B**	**34**	**0.20**	**pg/g**
PCB 102 (BZ)	**0.42**	**C J**	**34**	**0.22**	**pg/g**
PCB 103 (BZ)	ND		34	0.20	pg/g
PCB 104 (BZ)	ND		34	0.075	pg/g
PCB 105 (BZ)	**13**		**3.4**	**0.16**	**pg/g**
PCB 106 (BZ)	ND		34	0.21	pg/g
PCB 107 (BZ)/109 (IUPAC)	**1.8**	**J Q**	**34**	**0.14**	**pg/g**
PCB 108 (BZ)/107 (IUPAC)	**1.1**	**C J Q**	**34**	**0.17**	**pg/g**

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FutureNet Group, Inc

Sample ID: Control-Rep 5

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 001	**Work Order #....:**	MNGA42AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	1.67
Prep Date....:	01/03/12	**Analysis Date....:**	01/17/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	5.96 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 109 (BZ)/108 (IUPAC)	**17**	**C J**	**34**	**0.19**	**pg/g**
PCB 110 (BZ)	**35**	**C B**	**34**	**0.18**	**pg/g**
PCB 111 (BZ)	ND		34	0.16	pg/g
PCB 112 (BZ)	ND		34	0.21	pg/g
PCB 113 (BZ)	**28**	**C J B**	**34**	**0.20**	**pg/g**
PCB 114 (BZ)	**0.50**	**J**	**3.4**	**0.17**	**pg/g**
PCB 115 (BZ)	**35**	**C B**	**34**	**0.18**	**pg/g**
PCB 116 (BZ)	**4.9**	**C J**	**34**	**0.18**	**pg/g**
PCB 117 (BZ)	**4.9**	**C J**	**34**	**0.18**	**pg/g**
PCB 118 (BZ)	**28**	**B**	**3.4**	**0.15**	**pg/g**
PCB 119 (BZ)	**17**	**C J**	**34**	**0.19**	**pg/g**
PCB 120 (BZ)	ND		34	0.16	pg/g
PCB 121 (BZ)	ND		34	0.16	pg/g
PCB 122 (BZ)	ND		34	0.17	pg/g
PCB 123 (BZ)	**0.55**	**J Q**	**3.4**	**0.17**	**pg/g**
PCB 124 (BZ)	**1.1**	**C J Q**	**34**	**0.17**	**pg/g**
PCB 125 (BZ)	**17**	**C J**	**34**	**0.19**	**pg/g**
PCB 126 (BZ)	ND		3.4	0.20	pg/g
PCB 127 (BZ)	ND		34	0.17	pg/g
PCB 128 (BZ)	**5.6**	**C J**	**34**	**0.13**	**pg/g**
PCB 129 (BZ)	**37**	**C B**	**34**	**0.13**	**pg/g**
PCB 130 (BZ)	**2.3**	**J**	**34**	**0.17**	**pg/g**
PCB 131 (BZ)	ND		34	0.16	pg/g
PCB 132 (BZ)	**6.5**	**J**	**34**	**0.16**	**pg/g**
PCB 133 (BZ)	**0.82**	**J Q**	**34**	**0.16**	**pg/g**
PCB 134 (BZ)	**0.63**	**C J Q**	**34**	**0.17**	**pg/g**
PCB 135 (BZ)	**9.5**	**C J**	**34**	**0.15**	**pg/g**
PCB 136 (BZ)	**2.2**	**J**	**34**	**0.11**	**pg/g**
PCB 137 (BZ)	**0.24**	**J Q**	**34**	**0.12**	**pg/g**
PCB 138 (BZ)	**37**	**C B**	**34**	**0.13**	**pg/g**
PCB 139 (BZ)	**0.52**	**C J**	**34**	**0.14**	**pg/g**
PCB 140 (BZ)	**0.52**	**C J**	**34**	**0.14**	**pg/g**
PCB 141 (BZ)	**1.4**	**J**	**34**	**0.18**	**pg/g**
PCB 142 (BZ)	ND		34	0.19	pg/g
PCB 143 (BZ)	**0.63**	**C J Q**	**34**	**0.17**	**pg/g**
PCB 144 (BZ)	**0.40**	**J Q**	**34**	**0.15**	**pg/g**

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FutureNet Group, Inc

Sample ID: Control-Rep 5

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 001	**Work Order #....:**	MNGA42AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	1.67
Prep Date....:	01/03/12	**Analysis Date....:**	01/17/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	5.96 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 145 (BZ)	ND		34	0.11	pg/g
PCB 146 (BZ)	**5.6**	**J**	**34**	**0.12**	**pg/g**
PCB 147 (BZ)	**22**	**C J B**	**34**	**0.14**	**pg/g**
PCB 148 (BZ)	ND		34	0.14	pg/g
PCB 149 (BZ)	**22**	**C J B**	**34**	**0.14**	**pg/g**
PCB 150 (BZ)	ND		34	0.11	pg/g
PCB 151 (BZ)	**9.5**	**C J**	**34**	**0.15**	**pg/g**
PCB 152 (BZ)	ND		34	0.10	pg/g
PCB 153 (BZ)	**33**	**C J B**	**34**	**0.11**	**pg/g**
PCB 154 (BZ)	**0.55**	**J**	**34**	**0.14**	**pg/g**
PCB 155 (BZ)	ND		34	0.11	pg/g
PCB 156 (BZ)	**3.8**	**C J Q**	**6.7**	**0.20**	**pg/g**
PCB 157 (BZ)	**3.8**	**C J Q**	**6.7**	**0.20**	**pg/g**
PCB 158 (BZ)	**2.0**	**J Q**	**34**	**0.11**	**pg/g**
PCB 159 (BZ)	ND		34	0.17	pg/g
PCB 160 (BZ)	ND		34	0.14	pg/g
PCB 161 (BZ)	ND		34	0.14	pg/g
PCB 162 (BZ)	**0.35**	**J Q**	**34**	**0.17**	**pg/g**
PCB 163 (BZ)	**37**	**C B**	**34**	**0.13**	**pg/g**
PCB 164 (BZ)	**2.9**	**J**	**34**	**0.15**	**pg/g**
PCB 165 (BZ)	ND		34	0.12	pg/g
PCB 166 (BZ)	**5.6**	**C J**	**34**	**0.13**	**pg/g**
PCB 167 (BZ)	**1.3**	**J Q**	**3.4**	**0.15**	**pg/g**
PCB 168 (BZ)	**33**	**C J B**	**34**	**0.11**	**pg/g**
PCB 169 (BZ)	ND		3.4	0.19	pg/g
PCB 170 (BZ)	**6.4**	**J**	**34**	**0.20**	**pg/g**
PCB 171 (BZ)	**1.8**	**C J Q**	**34**	**0.20**	**pg/g**
PCB 172 (BZ)	**0.94**	**J**	**34**	**0.19**	**pg/g**
PCB 173 (BZ)	**1.8**	**C J Q**	**34**	**0.20**	**pg/g**
PCB 174 (BZ)	**6.2**	**J**	**34**	**0.23**	**pg/g**
PCB 175 (BZ)	ND		34	0.13	pg/g
PCB 176 (BZ)	**0.75**	**J**	**34**	**0.098**	**pg/g**
PCB 177 (BZ)	**5.1**	**J Q**	**34**	**0.20**	**pg/g**
PCB 178 (BZ)	**2.8**	**J**	**34**	**0.14**	**pg/g**
PCB 179 (BZ)	**3.0**	**J Q**	**34**	**0.10**	**pg/g**
PCB 180 (BZ)	**3.6**	**C J**	**34**	**0.16**	**pg/g**

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FutureNet Group, Inc

Sample ID: Control-Rep 5

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 001	**Work Order #....:**	MNGA42AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	1.67
Prep Date....:	01/03/12	**Analysis Date....:**	01/17/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	5.96 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 181 (BZ)	ND		34	0.16	pg/g
PCB 182 (BZ)	ND		34	0.13	pg/g
PCB 183 (BZ)	**2.4**	**J**	**34**	**0.12**	**pg/g**
PCB 184 (BZ)	ND		34	0.11	pg/g
PCB 185 (BZ)	**0.92**	**J Q**	**34**	**0.21**	**pg/g**
PCB 186 (BZ)	ND		34	0.10	pg/g
PCB 187 (BZ)	**19**	**J**	**34**	**0.12**	**pg/g**
PCB 188 (BZ)	ND		34	0.12	pg/g
PCB 189 (BZ)	**0.36**	**J Q**	**3.4**	**0.16**	**pg/g**
PCB 190 (BZ)	**1.6**	**J**	**34**	**0.13**	**pg/g**
PCB 191 (BZ)	ND		34	0.14	pg/g
PCB 192 (BZ)	ND		34	0.15	pg/g
PCB 193 (BZ)	**3.6**	**C J**	**34**	**0.16**	**pg/g**
PCB 194 (BZ)	**1.5**	**J**	**34**	**0.20**	**pg/g**
PCB 195 (BZ)	**1.6**	**J**	**34**	**0.21**	**pg/g**
PCB 196 (BZ)	**0.48**	**J Q**	**34**	**0.14**	**pg/g**
PCB 197 (BZ)	**0.46**	**J Q**	**34**	**0.095**	**pg/g**
PCB 198 (BZ)	**10**	**C J**	**34**	**0.16**	**pg/g**
PCB 199 (BZ)/200 (IUPAC)	**0.84**	**J**	**34**	**0.15**	**pg/g**
PCB 200 (BZ)/201 (IUPAC)	**0.82**	**J**	**34**	**0.11**	**pg/g**
PCB 201 (BZ)/199 (IUPAC)	**10**	**C J**	**34**	**0.16**	**pg/g**
PCB 202 (BZ)	**2.9**	**J**	**34**	**0.12**	**pg/g**
PCB 203 (BZ)	**5.8**	**J**	**34**	**0.16**	**pg/g**
PCB 204 (BZ)	ND		34	0.12	pg/g
PCB 205 (BZ)	**0.52**	**J Q**	**34**	**0.15**	**pg/g**
PCB 206 (BZ)	**5.8**	**J**	**34**	**0.23**	**pg/g**
PCB 207 (BZ)	**1.2**	**J**	**34**	**0.15**	**pg/g**
PCB 208 (BZ)	**3.8**	**J**	**34**	**0.14**	**pg/g**
PCB 209 (BZ)	**7.1**	**J**	**34**	**0.13**	**pg/g**

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FutureNet Group, Inc

Sample ID: Control-Rep 5

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 001	**Work Order #....:**	MNGA42AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	1.67
Prep Date....:	01/03/12	**Analysis Date....:**	01/17/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	5.96 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

INTERNAL STANDARDS	PERCENT RECOVERY		RECOVERY LIMITS
13C12-PCB 1	42		15 - 150
13C12-PCB 3	55		15 - 150
13C12-PCB 4	46		25 - 150
13C12-PCB 19	54		25 - 150
13C12-PCB 37	92		25 - 150
13C12-PCB 54	56		25 - 150
13C12-PCB 77	106		25 - 150
13C12-PCB 81	105		25 - 150
13C12-PCB 104	70		25 - 150
13C12-PCB 105	99		25 - 150
13C12-PCB 114	100		25 - 150
13C12-PCB 118	102		25 - 150
13C12-PCB 123	101		25 - 150
13C12-PCB 126	97		25 - 150
13C12-PCB 155	82		25 - 150
13C12-PCB 156	112	C	25 - 150
13C12-PCB 157	112	C	25 - 150
13C12-PCB 167	110		25 - 150
13C12-PCB 169	103		25 - 150
13C12-PCB 188	104		25 - 150
13C12-PCB 189	113		25 - 150
13C12-PCB 202	107		25 - 150
13C12-PCB 205	95		25 - 150
13C12-PCB 206	95		25 - 150
13C12-PCB 208	106		25 - 150
13C12-PCB 209	92		25 - 150

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C12-PCB 28	76	30 - 135
13C12-PCB 178	83	30 - 135
13C12-PCB 111	88	30 - 135

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FutureNet Group, Inc

Sample ID: Control-Rep 5

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 001	**Work Order #....:**	MNGA42AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	1.67
Prep Date....:	01/03/12	**Analysis Date....:**	01/17/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	5.96 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

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FutureNet Group, Inc

Sample ID: 9052-Rep 1

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 002	**Work Order #....:**	MNGA72AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	5.05
Prep Date....:	01/03/12	**Analysis Date....:**	01/20/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	9.81 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 1 (BZ)	**10**	**J**	**100**	**0.49**	**pg/g**
PCB 2 (BZ)	ND		100	0.53	pg/g
PCB 3 (BZ)	**5.5**	**J Q**	**100**	**0.57**	**pg/g**
PCB 4 (BZ)	**62**	**J**	**100**	**6.6**	**pg/g**
PCB 5 (BZ)	ND		100	5.3	pg/g
PCB 6 (BZ)	**33**	**J**	**100**	**5.4**	**pg/g**
PCB 7 (BZ)	**11**	**J**	**100**	**5.1**	**pg/g**
PCB 8 (BZ)	**180**		**100**	**5.3**	**pg/g**
PCB 9 (BZ)	**6.5**	**J Q**	**100**	**5.7**	**pg/g**
PCB 10 (BZ)	ND		100	5.0	pg/g
PCB 11 (BZ)	**70**	**J**	**100**	**5.5**	**pg/g**
PCB 12 (BZ)	**8.8**	**C J Q**	**100**	**5.5**	**pg/g**
PCB 13 (BZ)	**8.8**	**C J Q**	**100**	**5.5**	**pg/g**
PCB 14 (BZ)	ND		100	4.6	pg/g
PCB 15 (BZ)	**48**	**J**	**100**	**5.3**	**pg/g**
PCB 16 (BZ)	**44**	**J**	**100**	**0.66**	**pg/g**
PCB 17 (BZ)	**50**	**J**	**100**	**0.54**	**pg/g**
PCB 18 (BZ)	**93**	**C J B**	**100**	**0.46**	**pg/g**
PCB 19 (BZ)	**15**	**J**	**100**	**0.56**	**pg/g**
PCB 20 (BZ)	**170**	**C B**	**100**	**1.1**	**pg/g**
PCB 21 (BZ)	**71**	**C J B**	**100**	**1.0**	**pg/g**
PCB 22 (BZ)	**56**	**J B**	**100**	**1.1**	**pg/g**
PCB 23 (BZ)	ND		100	1.1	pg/g
PCB 24 (BZ)	**0.42**	**J Q**	**100**	**0.42**	**pg/g**
PCB 25 (BZ)	**15**	**J**	**100**	**1.1**	**pg/g**
PCB 26 (BZ)	**32**	**C J**	**100**	**1.1**	**pg/g**
PCB 27 (BZ)	**7.8**	**J**	**100**	**0.40**	**pg/g**
PCB 28 (BZ)	**170**	**C B**	**100**	**1.1**	**pg/g**
PCB 29 (BZ)	**32**	**C J**	**100**	**1.1**	**pg/g**
PCB 30 (BZ)	**93**	**C J B**	**100**	**0.46**	**pg/g**
PCB 31 (BZ)	**140**	**B**	**100**	**1.0**	**pg/g**
PCB 32 (BZ)	**34**	**J B**	**100**	**0.39**	**pg/g**
PCB 33 (BZ)	**71**	**C J B**	**100**	**1.0**	**pg/g**
PCB 34 (BZ)	ND		100	1.1	pg/g
PCB 35 (BZ)	ND		100	1.1	pg/g
PCB 36 (BZ)	**5.1**	**J Q**	**100**	**1.0**	**pg/g**

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FutureNet Group, Inc

Sample ID: 9052-Rep 1

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 002	**Work Order #....:**	MNGA72AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	5.05
Prep Date....:	01/03/12	**Analysis Date....:**	01/20/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	9.81 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 37 (BZ)	**15**	**J**	**100**	**1.1**	**pg/g**
PCB 38 (BZ)	ND		100	1.1	pg/g
PCB 39 (BZ)	ND		100	1.0	pg/g
PCB 40 (BZ)	**94**	**C J**	**100**	**0.76**	**pg/g**
PCB 41 (BZ)	**16**	**J**	**100**	**1.1**	**pg/g**
PCB 42 (BZ)	**68**	**J**	**100**	**0.86**	**pg/g**
PCB 43 (BZ)	**8.8**	**J**	**100**	**0.95**	**pg/g**
PCB 44 (BZ)	**350**	**C B**	**100**	**0.77**	**pg/g**
PCB 45 (BZ)	**31**	**J Q**	**100**	**0.97**	**pg/g**
PCB 46 (BZ)	**13**	**J**	**100**	**0.96**	**pg/g**
PCB 47 (BZ)	**350**	**C B**	**100**	**0.77**	**pg/g**
PCB 48 (BZ)	**39**	**J**	**100**	**0.82**	**pg/g**
PCB 49 (BZ)	**240**	**C B**	**100**	**0.67**	**pg/g**
PCB 50 (BZ)	**39**	**C J**	**100**	**0.78**	**pg/g**
PCB 51 (BZ)	**13**	**J**	**100**	**0.74**	**pg/g**
PCB 52 (BZ)	**600**	**B**	**100**	**0.84**	**pg/g**
PCB 53 (BZ)	**39**	**C J**	**100**	**0.78**	**pg/g**
PCB 54 (BZ)	ND		100	0.32	pg/g
PCB 55 (BZ)	ND		100	1.4	pg/g
PCB 56 (BZ)	**120**		**100**	**1.5**	**pg/g**
PCB 57 (BZ)	ND		100	1.4	pg/g
PCB 58 (BZ)	ND		100	1.3	pg/g
PCB 59 (BZ)	**27**	**C J**	**100**	**0.60**	**pg/g**
PCB 60 (BZ)	**70**	**J**	**100**	**1.4**	**pg/g**
PCB 61 (BZ)	**670**	**C B**	**100**	**1.3**	**pg/g**
PCB 62 (BZ)	**27**	**C J**	**100**	**0.60**	**pg/g**
PCB 63 (BZ)	**15**	**J Q**	**100**	**1.2**	**pg/g**
PCB 64 (BZ)	**140**	**B**	**100**	**0.56**	**pg/g**
PCB 65 (BZ)	**350**	**C B**	**100**	**0.77**	**pg/g**
PCB 66 (BZ)	**350**	**B**	**100**	**1.4**	**pg/g**
PCB 67 (BZ)	**9.3**	**J**	**100**	**1.3**	**pg/g**
PCB 68 (BZ)	**12**	**J**	**100**	**1.3**	**pg/g**
PCB 69 (BZ)	**240**	**C B**	**100**	**0.67**	**pg/g**
PCB 70 (BZ)	**670**	**C B**	**100**	**1.3**	**pg/g**
PCB 71 (BZ)	**94**	**C J**	**100**	**0.76**	**pg/g**
PCB 72 (BZ)	**11**	**J**	**100**	**1.3**	**pg/g**

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FutureNet Group, Inc

Sample ID: 9052-Rep 1

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 002	**Work Order #....:**	MNGA72AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	5.05
Prep Date....:	01/03/12	**Analysis Date....:**	01/20/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	9.81 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 73 (BZ)	ND		100	0.61	pg/g
PCB 74 (BZ)	**670**	**C B**	**100**	**1.3**	**pg/g**
PCB 75 (BZ)	**27**	**C J**	**100**	**0.60**	**pg/g**
PCB 76 (BZ)	**670**	**C B**	**100**	**1.3**	**pg/g**
PCB 77 (BZ)	**20**		**10**	**1.4**	**pg/g**
PCB 78 (BZ)	ND		100	1.5	pg/g
PCB 79 (BZ)	**9.8**	**J Q**	**100**	**1.3**	**pg/g**
PCB 80 (BZ)	ND		100	1.2	pg/g
PCB 81 (BZ)	ND		10	1.3	pg/g
PCB 82 (BZ)	**140**		**100**	**1.8**	**pg/g**
PCB 83 (BZ)	**130**		**100**	**1.4**	**pg/g**
PCB 84 (BZ)	**300**		**100**	**1.7**	**pg/g**
PCB 85 (BZ)	**240**	**C**	**100**	**1.2**	**pg/g**
PCB 86 (BZ)	**770**	**C**	**100**	**1.3**	**pg/g**
PCB 87 (BZ)	**770**	**C**	**100**	**1.3**	**pg/g**
PCB 88 (BZ)	**200**	**C**	**100**	**1.4**	**pg/g**
PCB 89 (BZ)	**10**	**J**	**100**	**1.6**	**pg/g**
PCB 90 (BZ)	**1500**	**C B**	**100**	**1.3**	**pg/g**
PCB 91 (BZ)	**200**	**C**	**100**	**1.4**	**pg/g**
PCB 92 (BZ)	**340**		**100**	**1.5**	**pg/g**
PCB 93 (BZ)	**16**	**C J**	**100**	**1.4**	**pg/g**
PCB 94 (BZ)	**6.1**	**J**	**100**	**1.5**	**pg/g**
PCB 95 (BZ)	**1200**	**B**	**100**	**1.4**	**pg/g**
PCB 96 (BZ)	**5.6**	**J**	**100**	**0.32**	**pg/g**
PCB 97 (BZ)	**770**	**C**	**100**	**1.3**	**pg/g**
PCB 98 (BZ)	**37**	**C J**	**100**	**1.5**	**pg/g**
PCB 99 (BZ)	**710**		**100**	**1.3**	**pg/g**
PCB 100 (BZ)	**16**	**C J**	**100**	**1.4**	**pg/g**
PCB 101 (BZ)	**1500**	**C B**	**100**	**1.3**	**pg/g**
PCB 102 (BZ)	**37**	**C J**	**100**	**1.5**	**pg/g**
PCB 103 (BZ)	**20**	**J**	**100**	**1.3**	**pg/g**
PCB 104 (BZ)	ND		100	0.27	pg/g
PCB 105 (BZ)	**360**		**10**	**1.1**	**pg/g**
PCB 106 (BZ)	ND		100	1.4	pg/g
PCB 107 (BZ)/109 (IUPAC)	**96**	**J**	**100**	**0.90**	**pg/g**
PCB 108 (BZ)/107 (IUPAC)	**39**	**C J**	**100**	**1.1**	**pg/g**

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FutureNet Group, Inc

Sample ID: 9052-Rep 1

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 002	**Work Order #....:**	MNGA72AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	5.05
Prep Date....:	01/03/12	**Analysis Date....:**	01/20/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	9.81 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 109 (BZ)/108 (IUPAC)	**770**	**C**	**100**	**1.3**	**pg/g**
PCB 110 (BZ)	**1900**	**C B**	**100**	**1.2**	**pg/g**
PCB 111 (BZ)	**3.7**	**J**	**100**	**1.1**	**pg/g**
PCB 112 (BZ)	ND		100	1.4	pg/g
PCB 113 (BZ)	**1500**	**C B**	**100**	**1.3**	**pg/g**
PCB 114 (BZ)	**22**		**10**	**1.2**	**pg/g**
PCB 115 (BZ)	**1900**	**C B**	**100**	**1.2**	**pg/g**
PCB 116 (BZ)	**240**	**C**	**100**	**1.2**	**pg/g**
PCB 117 (BZ)	**240**	**C**	**100**	**1.2**	**pg/g**
PCB 118 (BZ)	**1100**	**B**	**10**	**1.1**	**pg/g**
PCB 119 (BZ)	**770**	**C**	**100**	**1.3**	**pg/g**
PCB 120 (BZ)	**11**	**J**	**100**	**1.1**	**pg/g**
PCB 121 (BZ)	ND		100	1.1	pg/g
PCB 122 (BZ)	**15**	**J Q**	**100**	**1.1**	**pg/g**
PCB 123 (BZ)	**15**		**10**	**1.1**	**pg/g**
PCB 124 (BZ)	**39**	**C J**	**100**	**1.1**	**pg/g**
PCB 125 (BZ)	**770**	**C**	**100**	**1.3**	**pg/g**
PCB 126 (BZ)	**4.9**	**J**	**10**	**1.2**	**pg/g**
PCB 127 (BZ)	ND		100	1.1	pg/g
PCB 128 (BZ)	**290**	**C**	**100**	**0.99**	**pg/g**
PCB 129 (BZ)	**1900**	**C B**	**100**	**1.0**	**pg/g**
PCB 130 (BZ)	**120**		**100**	**1.3**	**pg/g**
PCB 131 (BZ)	**16**	**J**	**100**	**1.3**	**pg/g**
PCB 132 (BZ)	**530**		**100**	**1.2**	**pg/g**
PCB 133 (BZ)	**44**	**J**	**100**	**1.2**	**pg/g**
PCB 134 (BZ)	**68**	**C J**	**100**	**1.3**	**pg/g**
PCB 135 (BZ)	**780**	**C**	**100**	**1.1**	**pg/g**
PCB 136 (BZ)	**230**		**100**	**0.88**	**pg/g**
PCB 137 (BZ)	**19**	**J**	**100**	**0.90**	**pg/g**
PCB 138 (BZ)	**1900**	**C B**	**100**	**1.0**	**pg/g**
PCB 139 (BZ)	**31**	**C J**	**100**	**1.1**	**pg/g**
PCB 140 (BZ)	**31**	**C J**	**100**	**1.1**	**pg/g**
PCB 141 (BZ)	**36**	**J**	**100**	**1.4**	**pg/g**
PCB 142 (BZ)	ND		100	1.5	pg/g
PCB 143 (BZ)	**68**	**C J**	**100**	**1.3**	**pg/g**
PCB 144 (BZ)	**52**	**J**	**100**	**1.1**	**pg/g**

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FutureNet Group, Inc

Sample ID: 9052-Rep 1

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 002	**Work Order #....:**	MNGA72AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	5.05
Prep Date....:	01/03/12	**Analysis Date....:**	01/20/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	9.81 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 145 (BZ)	ND		100	0.86	pg/g
PCB 146 (BZ)	**310**		**100**	**0.90**	**pg/g**
PCB 147 (BZ)	**1700**	**C B**	**100**	**1.1**	**pg/g**
PCB 148 (BZ)	**5.6**	**J Q**	**100**	**1.1**	**pg/g**
PCB 149 (BZ)	**1700**	**C B**	**100**	**1.1**	**pg/g**
PCB 150 (BZ)	**4.4**	**J Q**	**100**	**0.84**	**pg/g**
PCB 151 (BZ)	**780**	**C**	**100**	**1.1**	**pg/g**
PCB 152 (BZ)	ND		100	0.80	pg/g
PCB 153 (BZ)	**1600**	**C B**	**100**	**0.87**	**pg/g**
PCB 154 (BZ)	**45**	**J**	**100**	**1.1**	**pg/g**
PCB 155 (BZ)	**2.1**	**J Q**	**100**	**0.85**	**pg/g**
PCB 156 (BZ)	**140**	**C**	**20**	**1.2**	**pg/g**
PCB 157 (BZ)	**140**	**C**	**20**	**1.2**	**pg/g**
PCB 158 (BZ)	**79**	**J**	**100**	**0.88**	**pg/g**
PCB 159 (BZ)	**5.7**	**J Q**	**100**	**1.1**	**pg/g**
PCB 160 (BZ)	ND		100	1.1	pg/g
PCB 161 (BZ)	ND		100	1.1	pg/g
PCB 162 (BZ)	**5.4**	**J Q**	**100**	**1.1**	**pg/g**
PCB 163 (BZ)	**1900**	**C B**	**100**	**1.0**	**pg/g**
PCB 164 (BZ)	**140**		**100**	**1.1**	**pg/g**
PCB 165 (BZ)	**1.2**	**J Q**	**100**	**0.95**	**pg/g**
PCB 166 (BZ)	**290**	**C**	**100**	**0.99**	**pg/g**
PCB 167 (BZ)	**46**		**10**	**1.1**	**pg/g**
PCB 168 (BZ)	**1600**	**C B**	**100**	**0.87**	**pg/g**
PCB 169 (BZ)	ND		10	1.3	pg/g
PCB 170 (BZ)	**230**		**100**	**1.2**	**pg/g**
PCB 171 (BZ)	**120**	**C**	**100**	**1.2**	**pg/g**
PCB 172 (BZ)	**32**	**J**	**100**	**1.1**	**pg/g**
PCB 173 (BZ)	**120**	**C**	**100**	**1.2**	**pg/g**
PCB 174 (BZ)	**290**		**100**	**1.4**	**pg/g**
PCB 175 (BZ)	**4.0**	**J Q**	**100**	**0.44**	**pg/g**
PCB 176 (BZ)	**59**	**J**	**100**	**0.32**	**pg/g**
PCB 177 (BZ)	**340**		**100**	**1.2**	**pg/g**
PCB 178 (BZ)	**140**		**100**	**0.46**	**pg/g**
PCB 179 (BZ)	**240**		**100**	**0.35**	**pg/g**
PCB 180 (BZ)	**140**	**C**	**100**	**0.95**	**pg/g**

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FutureNet Group, Inc

Sample ID: 9052-Rep 1

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 002	**Work Order #....:**	MNGA72AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	5.05
Prep Date....:	01/03/12	**Analysis Date....:**	01/20/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	9.81 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 181 (BZ)	**2.7**	**J**	**100**	**0.97**	**pg/g**
PCB 182 (BZ)	ND		100	0.45	pg/g
PCB 183 (BZ)	**120**		**100**	**0.73**	**pg/g**
PCB 184 (BZ)	ND		100	0.36	pg/g
PCB 185 (BZ)	**59**	**J**	**100**	**1.2**	**pg/g**
PCB 186 (BZ)	ND		100	0.33	pg/g
PCB 187 (BZ)	**990**		**100**	**0.38**	**pg/g**
PCB 188 (BZ)	**1.9**	**J Q**	**100**	**0.41**	**pg/g**
PCB 189 (BZ)	**14**		**10**	**0.55**	**pg/g**
PCB 190 (BZ)	**86**	**J**	**100**	**0.79**	**pg/g**
PCB 191 (BZ)	**3.0**	**J Q**	**100**	**0.86**	**pg/g**
PCB 192 (BZ)	ND		100	0.90	pg/g
PCB 193 (BZ)	**140**	**C**	**100**	**0.95**	**pg/g**
PCB 194 (BZ)	**50**	**J**	**100**	**1.3**	**pg/g**
PCB 195 (BZ)	**72**	**J**	**100**	**1.3**	**pg/g**
PCB 196 (BZ)	**32**	**J**	**100**	**0.43**	**pg/g**
PCB 197 (BZ)	**7.6**	**J**	**100**	**0.28**	**pg/g**
PCB 198 (BZ)	**250**	**C**	**100**	**0.49**	**pg/g**
PCB 199 (BZ)/200 (IUPAC)	**37**	**J**	**100**	**0.46**	**pg/g**
PCB 200 (BZ)/201 (IUPAC)	**40**	**J**	**100**	**0.34**	**pg/g**
PCB 201 (BZ)/199 (IUPAC)	**250**	**C**	**100**	**0.49**	**pg/g**
PCB 202 (BZ)	**76**	**J**	**100**	**0.41**	**pg/g**
PCB 203 (BZ)	**160**		**100**	**0.48**	**pg/g**
PCB 204 (BZ)	ND		100	0.34	pg/g
PCB 205 (BZ)	**10**	**J Q**	**100**	**0.82**	**pg/g**
PCB 206 (BZ)	**81**	**J Q**	**100**	**1.2**	**pg/g**
PCB 207 (BZ)	**14**	**J**	**100**	**0.85**	**pg/g**
PCB 208 (BZ)	**54**	**J**	**100**	**0.88**	**pg/g**
PCB 209 (BZ)	**74**	**J**	**100**	**0.33**	**pg/g**

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FutureNet Group, Inc

Sample ID: 9052-Rep 1

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 002	**Work Order #....:**	MNGA72AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	5.05
Prep Date....:	01/03/12	**Analysis Date....:**	01/20/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	9.81 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

INTERNAL STANDARDS	PERCENT RECOVERY		RECOVERY LIMITS
13C12-PCB 1	57		15 - 150
13C12-PCB 3	65		15 - 150
13C12-PCB 4	57		25 - 150
13C12-PCB 19	70		25 - 150
13C12-PCB 37	107		25 - 150
13C12-PCB 54	65		25 - 150
13C12-PCB 77	110		25 - 150
13C12-PCB 81	108		25 - 150
13C12-PCB 104	80		25 - 150
13C12-PCB 105	97		25 - 150
13C12-PCB 114	95		25 - 150
13C12-PCB 118	99		25 - 150
13C12-PCB 123	102		25 - 150
13C12-PCB 126	103		25 - 150
13C12-PCB 155	87		25 - 150
13C12-PCB 156	110	C	25 - 150
13C12-PCB 157	110	C	25 - 150
13C12-PCB 167	105		25 - 150
13C12-PCB 169	110		25 - 150
13C12-PCB 188	83		25 - 150
13C12-PCB 189	103		25 - 150
13C12-PCB 202	82		25 - 150
13C12-PCB 205	97		25 - 150
13C12-PCB 206	103		25 - 150
13C12-PCB 208	91		25 - 150
13C12-PCB 209	95		25 - 150

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C12-PCB 28	89	30 - 135
13C12-PCB 178	81	30 - 135
13C12-PCB 111	88	30 - 135

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FutureNet Group, Inc

Sample ID: 9052-Rep 1

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 002	**Work Order #....:**	MNGA72AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	5.05
Prep Date....:	01/03/12	**Analysis Date....:**	01/20/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	9.81 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

QUALIFIERS

B Method blank contamination The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

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FutureNet Group, Inc

Sample ID: Control-Rep 5

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 001	**Work Order #....:**	MNGA41AC	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	1
Prep Date....:	10/27/11	**Analysis Date....:**	11/10/11		
Prep Batch # ....:	1300103				
Initial Wgt/Vol :	10.5 g	**Instrument ID....:**	12D8	**Method:**	SW846 8290
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
Percent Lipids	2.3	0.10		%

QUALIFIERS

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FutureNet Group, Inc

Sample ID: 9052-Rep 1

Trace Level Organic Compounds

Lot - Sample #....:	G1J250505 - 002	**Work Order #....:**	MNGA71AC	**Matrix....:**	BIOLOGICAL
Date Sampled....:	10/21/11	**Date Received....:**	10/25/11	**Dilution Factor:**	1
Prep Date....:	10/27/11	**Analysis Date....:**	11/10/11		
Prep Batch # ....:	1300103				
Initial Wgt/Vol :	10.07 g	**Instrument ID....:**	12D8	**Method:**	SW846 8290
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
Percent Lipids	1.7	0.10		%

QUALIFIERS

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QC DATA ASSOCIATION SUMMARY

G1J250505

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	BIOLOGIC	EPA-22 1668A		2003108	
	BIOLOGIC	SW846 8290		1300103	
002	BIOLOGIC	EPA-22 1668A		2003108	
	BIOLOGIC	SW846 8290		1300103	

Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G2A030000 - 108B	**Work Order #....:**	MP1AJ1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	1				
Prep Date....:	01/03/12	**Analysis Date....:**	01/16/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 1 (BZ)	ND		20	0.30	pg/g
PCB 2 (BZ)	ND		20	0.24	pg/g
PCB 3 (BZ)	ND		20	0.18	pg/g
PCB 4 (BZ)	ND		20	2.1	pg/g
PCB 5 (BZ)	ND		20	1.6	pg/g
PCB 6 (BZ)	ND		20	1.6	pg/g
PCB 7 (BZ)	ND		20	1.6	pg/g
PCB 8 (BZ)	ND		20	1.6	pg/g
PCB 9 (BZ)	ND		20	1.8	pg/g
PCB 10 (BZ)	ND		20	1.2	pg/g
PCB 11 (BZ)	ND		20	1.7	pg/g
PCB 12 (BZ)	ND		20	1.7	pg/g
PCB 13 (BZ)	ND		20	1.7	pg/g
PCB 14 (BZ)	ND		20	1.4	pg/g
PCB 15 (BZ)	ND		20	1.3	pg/g
PCB 16 (BZ)	ND		20	0.26	pg/g
PCB 17 (BZ)	ND		20	0.21	pg/g
PCB 18 (BZ)	**0.82**	**C J Q**	**20**	**0.18**	**pg/g**
PCB 19 (BZ)	ND		20	0.26	pg/g
PCB 20 (BZ)	**2.1**	**C J**	**20**	**0.25**	**pg/g**
PCB 21 (BZ)	**0.68**	**C J Q**	**20**	**0.24**	**pg/g**
PCB 22 (BZ)	**0.61**	**J**	**20**	**0.26**	**pg/g**
PCB 23 (BZ)	ND		20	0.24	pg/g
PCB 24 (BZ)	ND		20	0.16	pg/g
PCB 25 (BZ)	ND		20	0.25	pg/g
PCB 26 (BZ)	ND		20	0.24	pg/g
PCB 27 (BZ)	ND		20	0.16	pg/g
PCB 28 (BZ)	**2.1**	**C J**	**20**	**0.25**	**pg/g**
PCB 29 (BZ)	ND		20	0.24	pg/g
PCB 30 (BZ)	**0.82**	**C J Q**	**20**	**0.18**	**pg/g**
PCB 31 (BZ)	**1.6**	**J Q**	**20**	**0.23**	**pg/g**
PCB 32 (BZ)	**0.51**	**J**	**20**	**0.15**	**pg/g**
PCB 33 (BZ)	**0.68**	**C J Q**	**20**	**0.24**	**pg/g**
PCB 34 (BZ)	ND		20	0.25	pg/g
PCB 35 (BZ)	ND		20	0.26	pg/g
PCB 36 (BZ)	ND		20	0.23	pg/g

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Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G2A030000 - 108B	**Work Order #....:**	MP1AJ1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	1				
Prep Date....:	01/03/12	**Analysis Date....:**	01/16/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 37 (BZ)	ND		20	0.23	pg/g
PCB 38 (BZ)	ND		20	0.26	pg/g
PCB 39 (BZ)	ND		20	0.23	pg/g
PCB 40 (BZ)	ND		20	0.23	pg/g
PCB 41 (BZ)	ND		20	0.33	pg/g
PCB 42 (BZ)	ND		20	0.26	pg/g
PCB 43 (BZ)	ND		20	0.29	pg/g
PCB 44 (BZ)	**2.5**	**C J**	**20**	**0.23**	**pg/g**
PCB 45 (BZ)	ND		20	0.30	pg/g
PCB 46 (BZ)	ND		20	0.29	pg/g
PCB 47 (BZ)	**2.5**	**C J**	**20**	**0.23**	**pg/g**
PCB 48 (BZ)	ND		20	0.25	pg/g
PCB 49 (BZ)	**0.65**	**C J Q**	**20**	**0.20**	**pg/g**
PCB 50 (BZ)	ND		20	0.24	pg/g
PCB 51 (BZ)	ND		20	0.22	pg/g
PCB 52 (BZ)	**1.8**	**J Q**	**20**	**0.26**	**pg/g**
PCB 53 (BZ)	ND		20	0.24	pg/g
PCB 54 (BZ)	ND		20	0.097	pg/g
PCB 55 (BZ)	ND		20	0.24	pg/g
PCB 56 (BZ)	ND		20	0.24	pg/g
PCB 57 (BZ)	ND		20	0.23	pg/g
PCB 58 (BZ)	ND		20	0.22	pg/g
PCB 59 (BZ)	ND		20	0.18	pg/g
PCB 60 (BZ)	ND		20	0.23	pg/g
PCB 61 (BZ)	**1.6**	**C J**	**20**	**0.22**	**pg/g**
PCB 62 (BZ)	ND		20	0.18	pg/g
PCB 63 (BZ)	ND		20	0.20	pg/g
PCB 64 (BZ)	**0.44**	**J**	**20**	**0.17**	**pg/g**
PCB 65 (BZ)	**2.5**	**C J**	**20**	**0.23**	**pg/g**
PCB 66 (BZ)	**0.77**	**J**	**20**	**0.23**	**pg/g**
PCB 67 (BZ)	ND		20	0.22	pg/g
PCB 68 (BZ)	ND		20	0.21	pg/g
PCB 69 (BZ)	**0.65**	**C J Q**	**20**	**0.20**	**pg/g**
PCB 70 (BZ)	**1.6**	**C J**	**20**	**0.22**	**pg/g**
PCB 71 (BZ)	ND		20	0.23	pg/g
PCB 72 (BZ)	ND		20	0.22	pg/g

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Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G2A030000 - 108B	**Work Order #....:**	MP1AJ1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	1				
Prep Date....:	01/03/12	**Analysis Date....:**	01/16/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 73 (BZ)	ND		20	0.19	pg/g
PCB 74 (BZ)	**1.6**	**C J**	**20**	**0.22**	**pg/g**
PCB 75 (BZ)	ND		20	0.18	pg/g
PCB 76 (BZ)	**1.6**	**C J**	**20**	**0.22**	**pg/g**
PCB 77 (BZ)	ND		2.0	0.23	pg/g
PCB 78 (BZ)	ND		20	0.25	pg/g
PCB 79 (BZ)	ND		20	0.21	pg/g
PCB 80 (BZ)	ND		20	0.20	pg/g
PCB 81 (BZ)	ND		2.0	0.22	pg/g
PCB 82 (BZ)	ND		20	0.25	pg/g
PCB 83 (BZ)	ND		20	0.20	pg/g
PCB 84 (BZ)	ND		20	0.24	pg/g
PCB 85 (BZ)	ND		20	0.17	pg/g
PCB 86 (BZ)	ND		20	0.18	pg/g
PCB 87 (BZ)	ND		20	0.18	pg/g
PCB 88 (BZ)	ND		20	0.20	pg/g
PCB 89 (BZ)	ND		20	0.22	pg/g
PCB 90 (BZ)	**0.92**	**C J**	**20**	**0.18**	**pg/g**
PCB 91 (BZ)	ND		20	0.20	pg/g
PCB 92 (BZ)	ND		20	0.21	pg/g
PCB 93 (BZ)	ND		20	0.20	pg/g
PCB 94 (BZ)	ND		20	0.22	pg/g
PCB 95 (BZ)	**1.1**	**J**	**20**	**0.20**	**pg/g**
PCB 96 (BZ)	ND		20	0.11	pg/g
PCB 97 (BZ)	ND		20	0.18	pg/g
PCB 98 (BZ)	ND		20	0.21	pg/g
PCB 99 (BZ)	ND		20	0.18	pg/g
PCB 100 (BZ)	ND		20	0.20	pg/g
PCB 101 (BZ)	**0.92**	**C J**	**20**	**0.18**	**pg/g**
PCB 102 (BZ)	ND		20	0.21	pg/g
PCB 103 (BZ)	ND		20	0.19	pg/g
PCB 104 (BZ)	ND		20	0.14	pg/g
PCB 105 (BZ)	ND		2.0	0.15	pg/g
PCB 106 (BZ)	ND		20	0.19	pg/g
PCB 107 (BZ)/109 (IUPAC)	ND		20	0.13	pg/g
PCB 108 (BZ)/107 (IUPAC)	ND		20	0.16	pg/g

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Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G2A030000 - 108B	**Work Order #....:**	MP1AJ1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	1				
Prep Date....:	01/03/12	**Analysis Date....:**	01/16/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 109 (BZ)/108 (IUPAC)	ND		20	0.18	pg/g
PCB 110 (BZ)	**0.93**	**C J**	**20**	**0.17**	**pg/g**
PCB 111 (BZ)	ND		20	0.15	pg/g
PCB 112 (BZ)	ND		20	0.20	pg/g
PCB 113 (BZ)	**0.92**	**C J**	**20**	**0.18**	**pg/g**
PCB 114 (BZ)	ND		2.0	0.14	pg/g
PCB 115 (BZ)	**0.93**	**C J**	**20**	**0.17**	**pg/g**
PCB 116 (BZ)	ND		20	0.17	pg/g
PCB 117 (BZ)	ND		20	0.17	pg/g
PCB 118 (BZ)	**0.51**	**J**	**2.0**	**0.14**	**pg/g**
PCB 119 (BZ)	ND		20	0.18	pg/g
PCB 120 (BZ)	ND		20	0.15	pg/g
PCB 121 (BZ)	ND		20	0.15	pg/g
PCB 122 (BZ)	ND		20	0.16	pg/g
PCB 123 (BZ)	ND		2.0	0.14	pg/g
PCB 124 (BZ)	ND		20	0.16	pg/g
PCB 125 (BZ)	ND		20	0.18	pg/g
PCB 126 (BZ)	ND		2.0	0.18	pg/g
PCB 127 (BZ)	ND		20	0.16	pg/g
PCB 128 (BZ)	ND		20	0.15	pg/g
PCB 129 (BZ)	**0.48**	**C J Q**	**20**	**0.15**	**pg/g**
PCB 130 (BZ)	ND		20	0.20	pg/g
PCB 131 (BZ)	ND		20	0.19	pg/g
PCB 132 (BZ)	ND		20	0.19	pg/g
PCB 133 (BZ)	ND		20	0.18	pg/g
PCB 134 (BZ)	ND		20	0.20	pg/g
PCB 135 (BZ)	ND		20	0.17	pg/g
PCB 136 (BZ)	ND		20	0.13	pg/g
PCB 137 (BZ)	ND		20	0.14	pg/g
PCB 138 (BZ)	**0.48**	**C J Q**	**20**	**0.15**	**pg/g**
PCB 139 (BZ)	ND		20	0.16	pg/g
PCB 140 (BZ)	ND		20	0.16	pg/g
PCB 141 (BZ)	ND		20	0.21	pg/g
PCB 142 (BZ)	ND		20	0.22	pg/g
PCB 143 (BZ)	ND		20	0.20	pg/g
PCB 144 (BZ)	ND		20	0.17	pg/g

Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G2A030000 - 108B	**Work Order #....:**	MP1AJ1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	1				
Prep Date....:	01/03/12	**Analysis Date....:**	01/16/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 145 (BZ)	ND		20	0.13	pg/g
PCB 146 (BZ)	ND		20	0.14	pg/g
PCB 147 (BZ)	**0.54**	**C J Q**	**20**	**0.16**	**pg/g**
PCB 148 (BZ)	ND		20	0.17	pg/g
PCB 149 (BZ)	**0.54**	**C J Q**	**20**	**0.16**	**pg/g**
PCB 150 (BZ)	ND		20	0.13	pg/g
PCB 151 (BZ)	ND		20	0.17	pg/g
PCB 152 (BZ)	ND		20	0.12	pg/g
PCB 153 (BZ)	**0.39**	**C J Q**	**20**	**0.13**	**pg/g**
PCB 154 (BZ)	ND		20	0.16	pg/g
PCB 155 (BZ)	ND		20	0.16	pg/g
PCB 156 (BZ)	ND		4.0	0.19	pg/g
PCB 157 (BZ)	ND		4.0	0.19	pg/g
PCB 158 (BZ)	ND		20	0.13	pg/g
PCB 159 (BZ)	ND		20	0.17	pg/g
PCB 160 (BZ)	ND		20	0.17	pg/g
PCB 161 (BZ)	ND		20	0.17	pg/g
PCB 162 (BZ)	ND		20	0.17	pg/g
PCB 163 (BZ)	**0.48**	**C J Q**	**20**	**0.15**	**pg/g**
PCB 164 (BZ)	ND		20	0.17	pg/g
PCB 165 (BZ)	ND		20	0.14	pg/g
PCB 166 (BZ)	ND		20	0.15	pg/g
PCB 167 (BZ)	ND		2.0	0.14	pg/g
PCB 168 (BZ)	**0.39**	**C J Q**	**20**	**0.13**	**pg/g**
PCB 169 (BZ)	ND		2.0	0.19	pg/g
PCB 170 (BZ)	ND		20	0.23	pg/g
PCB 171 (BZ)	ND		20	0.23	pg/g
PCB 172 (BZ)	ND		20	0.22	pg/g
PCB 173 (BZ)	ND		20	0.23	pg/g
PCB 174 (BZ)	ND		20	0.27	pg/g
PCB 175 (BZ)	ND		20	0.12	pg/g
PCB 176 (BZ)	ND		20	0.090	pg/g
PCB 177 (BZ)	ND		20	0.23	pg/g
PCB 178 (BZ)	ND		20	0.13	pg/g
PCB 179 (BZ)	ND		20	0.096	pg/g
PCB 180 (BZ)	ND		20	0.18	pg/g

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Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G2A030000 - 108B	**Work Order #....:**	MP1AJ1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	1				
Prep Date....:	01/03/12	**Analysis Date....:**	01/16/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

PARAMETER	RESULT	MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 181 (BZ)	ND	20	0.19	pg/g
PCB 182 (BZ)	ND	20	0.12	pg/g
PCB 183 (BZ)	ND	20	0.14	pg/g
PCB 184 (BZ)	ND	20	0.10	pg/g
PCB 185 (BZ)	ND	20	0.24	pg/g
PCB 186 (BZ)	ND	20	0.093	pg/g
PCB 187 (BZ)	ND	20	0.11	pg/g
PCB 188 (BZ)	ND	20	0.12	pg/g
PCB 189 (BZ)	ND	2.0	0.15	pg/g
PCB 190 (BZ)	ND	20	0.15	pg/g
PCB 191 (BZ)	ND	20	0.17	pg/g
PCB 192 (BZ)	ND	20	0.17	pg/g
PCB 193 (BZ)	ND	20	0.18	pg/g
PCB 194 (BZ)	ND	20	0.18	pg/g
PCB 195 (BZ)	ND	20	0.19	pg/g
PCB 196 (BZ)	ND	20	0.12	pg/g
PCB 197 (BZ)	ND	20	0.076	pg/g
PCB 198 (BZ)	ND	20	0.13	pg/g
PCB 199 (BZ)/200 (IUPAC)	ND	20	0.12	pg/g
PCB 200 (BZ)/201 (IUPAC)	ND	20	0.091	pg/g
PCB 201 (BZ)/199 (IUPAC)	ND	20	0.13	pg/g
PCB 202 (BZ)	ND	20	0.10	pg/g
PCB 203 (BZ)	ND	20	0.13	pg/g
PCB 204 (BZ)	ND	20	0.092	pg/g
PCB 205 (BZ)	ND	20	0.14	pg/g
PCB 206 (BZ)	ND	20	0.20	pg/g
PCB 207 (BZ)	ND	20	0.12	pg/g
PCB 208 (BZ)	ND	20	0.11	pg/g
PCB 209 (BZ)	ND	20	0.14	pg/g

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Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G2A030000 - 108B	**Work Order #....:**	MP1AJ1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	1				
Prep Date....:	01/03/12	**Analysis Date....:**	01/16/12		
Prep Batch # ....:	2003108				
Initial Wgt/Vol :	10 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Grandfield S. Virginia				

INTERNAL STANDARDS	PERCENT RECOVERY		RECOVERY LIMITS
13C12-PCB 1	46		15 - 150
13C12-PCB 3	49		15 - 150
13C12-PCB 4	45		25 - 150
13C12-PCB 19	51		25 - 150
13C12-PCB 37	88		25 - 150
13C12-PCB 54	55		25 - 150
13C12-PCB 77	99		25 - 150
13C12-PCB 81	97		25 - 150
13C12-PCB 104	55		25 - 150
13C12-PCB 105	97		25 - 150
13C12-PCB 114	99		25 - 150
13C12-PCB 118	97		25 - 150
13C12-PCB 123	106		25 - 150
13C12-PCB 126	92		25 - 150
13C12-PCB 155	77		25 - 150
13C12-PCB 156	127	C	25 - 150
13C12-PCB 157	127	C	25 - 150
13C12-PCB 167	129		25 - 150
13C12-PCB 169	115		25 - 150
13C12-PCB 188	91		25 - 150
13C12-PCB 189	112		25 - 150
13C12-PCB 202	107		25 - 150
13C12-PCB 205	91		25 - 150
13C12-PCB 206	85		25 - 150
13C12-PCB 208	105		25 - 150
13C12-PCB 209	84		25 - 150

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C12-PCB 28	68	30 - 135
13C12-PCB 178	76	30 - 135
13C12-PCB 111	87	30 - 135

QUALIFIERS

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

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LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...:	G1J250505	**Work Order # ...:**	MP1AJ1AC-LCS	**Matrix .....:**	BIOLOGICAl
LCS Lot-Sample# :	G2A030000 - 108				
Prep Date .....:	01/03/12	**Analysis Date ..:**	01/16/12		
Prep Batch # ...:	2003108				
Dilution Factor :	1				
Analyst ID.....:	Grandfield S. Virginia	**Instrument ID..:**	12D8	**Method.....:**	EPA-22 1668A
Initial Wgt/Vol:	10 g				

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY		RECOVERY LIMITS
PCB 1 (BZ)	**200**	**208**	**pg/g**	**104**		**(50 - 150)**
PCB 3 (BZ)	**200**	**216**	**pg/g**	**108**		**(50 - 150)**
PCB 4 (BZ)	**200**	**206**	**pg/g**	**103**		**(50 - 150)**
PCB 15 (BZ)	**200**	**190**	**pg/g**	**95**		**(50 - 150)**
PCB 19 (BZ)	**200**	**195**	**pg/g**	**98**		**(50 - 150)**
PCB 37 (BZ)	**200**	**177**	**pg/g**	**88**		**(50 - 150)**
PCB 54 (BZ)	**200**	**189**	**pg/g**	**95**		**(50 - 150)**
PCB 77 (BZ)	**200**	**192**	**pg/g**	**96**		**(50 - 150)**
PCB 81 (BZ)	**200**	**178**	**pg/g**	**89**		**(50 - 150)**
PCB 104 (BZ)	**200**	**188**	**pg/g**	**94**		**(50 - 150)**
PCB 105 (BZ)	**200**	**185**	**pg/g**	**92**		**(50 - 150)**
PCB 114 (BZ)	**200**	**183**	**pg/g**	**92**		**(50 - 150)**
PCB 118 (BZ)	**200**	**178**	**pg/g**	**89**		**(50 - 150)**
PCB 123 (BZ)	**200**	**182**	**pg/g**	**91**		**(50 - 150)**
PCB 126 (BZ)	**200**	**180**	**pg/g**	**90**		**(50 - 150)**
PCB 155 (BZ)	**200**	**181**	**pg/g**	**90**		**(50 - 150)**
PCB 156 (BZ)	**400**	**380**	**pg/g**	**95**	**C**	**(50 - 150)**
PCB 157 (BZ)	**400**	**380**	**pg/g**	**95**	**C**	**(50 - 150)**
PCB 167 (BZ)	**200**	**189**	**pg/g**	**95**		**(50 - 150)**
PCB 169 (BZ)	**200**	**202**	**pg/g**	**101**		**(50 - 150)**
PCB 188 (BZ)	**200**	**183**	**pg/g**	**92**		**(50 - 150)**
PCB 189 (BZ)	**200**	**195**	**pg/g**	**97**		**(50 - 150)**
PCB 202 (BZ)	**200**	**195**	**pg/g**	**98**		**(50 - 150)**
PCB 205 (BZ)	**200**	**185**	**pg/g**	**92**		**(50 - 150)**
PCB 206 (BZ)	**200**	**179**	**pg/g**	**90**		**(50 - 150)**
PCB 208 (BZ)	**200**	**186**	**pg/g**	**93**		**(50 - 150)**
PCB 209 (BZ)	**200**	**183**	**pg/g**	**91**		**(50 - 150)**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C12-PCB 1	41	(15 - 150)
13C12-PCB 3	43	(15 - 150)
13C12-PCB 4	39	(25 - 150)
13C12-PCB 19	46	(25 - 150)
13C12-PCB 37	76	(25 - 150)
13C12-PCB 54	46	(25 - 150)
13C12-PCB 77	84	(25 - 150)
13C12-PCB 81	87	(25 - 150)
13C12-PCB 104	47	(25 - 150)
13C12-PCB 105	85	(25 - 150)
13C12-PCB 114	88	(25 - 150)

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...: G1J250505 **Work Order # ...:** MP1AJ1AC-LCS **Matrix .....:** BIOLOGICAI
LCS Lot-Sample# : G2A030000 - 108

INTERNAL STANDARD	PERCENT RECOVERY		RECOVERY LIMITS
13C12-PCB 118	82		(25 - 150)
13C12-PCB 123	92		(25 - 150)
13C12-PCB 126	80		(25 - 150)
13C12-PCB 155	65		(25 - 150)
13C12-PCB 156	112	**C**	(25 - 150)
13C12-PCB 157	112	**C**	(25 - 150)
13C12-PCB 167	114		(25 - 150)
13C12-PCB 169	102		(25 - 150)
13C12-PCB 188	77		(25 - 150)
13C12-PCB 189	95		(25 - 150)
13C12-PCB 202	88		(25 - 150)
13C12-PCB 205	83		(25 - 150)
13C12-PCB 206	78		(25 - 150)
13C12-PCB 208	91		(25 - 150)
13C12-PCB 209	76		(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C12-PCB 28	60	(30 - 135)
13C12-PCB 178	71	(30 - 135)
13C12-PCB 111	80	(30 - 135)

Notes:

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

C Co-eluting isomer.

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

November 30, 2011

TestAmerica Project Number: G1K090434
PO/Contract:

Ali Al-Saffar
FutureNet Group, Inc
12801 Auburn Street
Detroit, MI 48223

Dear Dr. Al-Saffar,

This report contains the analytical results for the samples received under chain of custody by TestAmerica on November 9, 2011. These samples are associated with your Duluth project.

The test results in this report meet all NELAC requirements for parameters that accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The case narrative is an integral part of this report.

If you have any questions, please feel free to call me at (916) 374-4384.

Sincerely,

Karen Dahl
Project Manager

Table of Contents

TestAmerica West Sacramento Project Number G1K090434

Case Narrative

Sacramento Quality Assurance Program

Manual Integration Addendum

Sample Summary

Executive Summary

Analytical Methods Summary

Method / Analyst Summary

Sample Data Sheets

BIOLOGIC, 1668A, 209 Congeners
Samples: 1, 2

BIOLOGIC, % Lipids
Samples: 1, 2

QC Data Association Summary

Laboratory QC Reports

Raw Data Package

Shipping and Receiving Documents

Case Narrative

TestAmerica West Sacramento Project Number G1K090434

General Comments
Manual integrations were performed only when necessary and are in compliance with the laboratory's standard operating procedure, Acceptable Manual Integration Practices, SOP No.: S-Q-004, including Addendum 1. Detailed information can be found in the Manual Integration Addendum section of this report.

BIOLOGIC, 1668A, 209 Congeners
Sample(s): 1, 2
There was insufficient sample volume to prepare a matrix spike/matrix spike duplicate (MS/MSD) pair with this batch.

Sample(s): 1, 2
Some analytes for these samples & the method blank have been qualified with a "Q" flag since their ion abundance ratios did not meet acceptance criteria. These analytes have been reported as "estimated maximum possible concentrations" (EMPCs) since their quantitation was based on theoretical ion abundance ratios.

Sample(s): 1, 2
These samples were analyzed at a 10X dilution on 11/17/11. Those analytes reported from the dilution have been flagged with a “D” qualifier.

Sample(s): 1, 2
The associated method blank has results for PCB 11 & PCB 118 that are greater than ½ the minimum level (reporting limit). The associated sample results for PCB 118 are greater than 10X the amount present in the method blank. The associated sample results for PCB 11 are above the minimum level but they are not greater than 10X the amount present in the method blank.

Sample(s): 1
This sample has high recoveries for two of the internal standards. These internal standards are used in the quantitiation of the Hepta-PCB and Octa-PCB analytes. PCB-187 is the only analyte of all the Hepta-PCBs and Octa-PCBs in the sample that has a concentration above the minimum level. All other positive Hepta-PCBs and Octa-PCBs results are below the minimum level and are considered "estimated concentrations". The sample was also analyzed at a 10X dilution and all of the internal standards met acceptance criteria. Only the PCB 187 result has been reported from this 10X dilution.

There were no other anomalies associated with this project.

TestAmerica Laboratories West Sacramento Certifications/Accreditations

Certifying State	Certificate #	Certifying State	Certificate #
A2LA (DoD-ELAP)	2928-01	New Mexico	NA
Alaska	UST-055	New York*	11666
Arizona	AZ0708	Oregon*	CA 200005
Arkansas	88-0691	Pennsylvania*	68-1272
California*	01119CA	South Carolina	87014
Colorado	NA	Texas*	T104704399-08-TX
Connecticut	PH-0691	UCMR	CA00044
Florida*	E87570	US Fish & Wildlife	LE148388-0
Georgia	960	USDA Foreign Plant	37-82605
Guam	10-009r	USDA Foreign Soil	P330-09-00055
Hawaii	NA	Utah*	QUAN1
Illinois*	002701	Virginia	178
Kansas*	E-10375	Washington	C581
Louisiana*	01944	West Virginia	9930C, 334
Michigan	9947	Wisconsin	998204680
Nevada	CA44	Wyoming	8TMS-Q
New Jersey*	CA005		

*NELAP accredited. A more detailed parameter list is available upon request. *Updated 5/25/2011*

QC Parameter Definitions

QC Batch: The QC batch consists of a set of up to 20 field samples that behave similarly (i.e., same matrix) and are processed using the same procedures, reagents, and standards at the same time.

Method Blank: An analytical control consisting of all reagents, which may include internal standards and surrogates, and is carried through the entire analytical procedure. The method blank is used to define the level of laboratory background contamination.

Laboratory Control Sample and Laboratory Control Sample Duplicate (LCS/LCSD): An aliquot of blank matrix spiked with known amounts of representative target analytes. The LCS (and LCSD as required) is carried through the entire analytical process and is used to monitor the accuracy of the analytical process independent of potential matrix effects. If an LCSD is performed, it may also be used to evaluate the precision of the process.

Duplicate Sample (DU): Different aliquots of the same sample are analyzed to evaluate the precision of an analysis.

Surrogates: Organic compounds not expected to be detected in field samples, which behave similarly to target analytes. These are added to every sample within a batch at a known concentration to determine the efficiency of the sample preparation and analytical process.

Matrix Spike and Matrix Spike Duplicate (MS/MSD): An MS is an aliquot of a matrix fortified with known quantities of specific compounds and subjected to an entire analytical procedure in order to indicate the appropriateness of the method for a particular matrix. The percent recovery for the respective compound(s) is then calculated. The MSD is a second aliquot of the same matrix as the matrix spike, also spiked, in order to determine the precision of the method.

Isotope Dilution: For isotope dilution methods, isotopically labeled analogs (internal standards) of the native target analytes are spiked into the sample at time of extraction. These internal standards are used for quantitation, and monitor and correct for matrix effects. Since matrix effects on method performance can be judged by the recovery of these analogs, there is little added benefit of performing MS/MSD for these methods. MS/MSD are only performed for client or QAPP requirements.

Control Limits: The reported control limits are either based on laboratory historical data, method requirements, or project data quality objectives. The control limits represent the estimated uncertainty of the test results.

Manual Integration Addendum

Manual Integration Record - Method 1668A

Instrument : 12D8 Lot #: G1K090434

Compound Name	Analysis date: 9/9/2011							Analysis date: 11/17/2011					Analysis date: 11/17/2011								
	ICAL							CCAL STD					Prep QC /Samples								
	CS1	CS2	CS3	CS4	CS5		ICV	ST1117					MB	LCS	1	2	2(10X)				
PCB-1	X														X	X					
PCB-2																X					
PCB-3															X	X					
PCB-4	X	X													X	X					
PCB-10															X						
PCB-9								X							X	X					
PCB-7															X						
PCB-6								X							X	X					
PCB-8															X	X					
PCB-11													X		X	X					
PCB-13/12															X	X					
PCB-15	X	X													X	X					
PCB-19		X																			
PCB-30/18													X								
PCB-24															X	X					
PCB-16													X		X	X					
PCB-32													X								
PCB-31													X								
PCB-35															X						
PCB-37													X								
PCB-54															X						
PCB-45													X		X	X					
PCB-51													X		X	X					
PCB-69/49													X								
PCB-59/62/75													X								
PCB-42													X								
PCB-41																X					
PCB-40/71													X			X					
PCB-64													X								
PCB-68													X								
PCB-66													X								
PCB-79															X	X					
PCB-77	X														X						
PCB-104	X														X						
PCB-96															X						
PCB-95													X								
PCB-83													X		X	X					
PCB-99			X										X		X	X					
PCB-112			X																		

Manual Integration Record - Method 1668A

Instrument : 12D8 Lot #: G1K090434

Compound Name	Analysis date: 9/9/2011							Analysis date: 11/17/2011					Analysis date: 11/17/2011								
	ICAL							CCAL STD					Prep QC /Samples								
	CS1	CS2	CS3	CS4	CS5		ICV	ST1117					MB	LCS	1	2	2(10X)				
PCB-108/119/86/97/125/87													X		X						
PCB-117/116/85																X					
PCB-110/115																	X				
PCB-82															X						
PCB-109															X	X					
PCB-123															X	X					
PCB-118	X																				
PCB-114	X														X						
PCB-126	X														X						
PCB-155	X																				
PCB-151/135													X		X						
PCB-134/143			X					X													
PCB-132													X								
PCB-165																X					
PCB-146																X					
PCB-141													X								
PCB-137															X	X					
PCB-164															X	X					
PCB-128/166													X								
PCB-162													X		X						
PCB-167	X																				
PCB-156/157	X												X								
PCB-169	X															X					
PCB-188																X					
PCB-187													X								
PCB-183			X				X								X	X					
PCB-185			X				X								X	X					
PCB-180/193													X								
PCB-170													X								
PCB-189															X						
PCB-202	X																				
PCB-197							X								X	X					
PCB-200							X								X	X					
PCB-198/199															X	X					
PCB-196															X						
PCB-203															X						
PCB-205	X																				
PCB-206	X																				
PCB-209													X								

Manual Integration Record - Method 1668A

Instrument : 12D8 Lot #: G1K090434

Compound Name	Analysis date: 9/9/2011							Analysis date: 11/17/2011					Analysis date: 11/17/2011								
	ICAL							CCAL STD					Prep QC /Samples								
	CS1	CS2	CS3	CS4	CS5		ICV	ST1117					MB	LCS	1	2	2(10X)				
13C-PCB-1													X	X	X	X					
13C-PCB-3															X	X					

Sample Summary

TestAmerica West Sacramento Project Number G1K090434

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
MNVJK	1	LAB CONTROL	11/4/2011	11/9/2011 08:55 AM
MNVJL	2	DS-11-MU5	11/4/2011	11/9/2011 08:55 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

EXECUTIVE SUMMARY - Detection Highlights

G1K090434

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LAB CONTROL 11/04/11 001				
PCB 1 (BZ)	2.7 J	19	pg/g	EPA-22 1668A
PCB 2 (BZ)	1.2 J,Q	19	pg/g	EPA-22 1668A
PCB 3 (BZ)	4.5 J	19	pg/g	EPA-22 1668A
PCB 4 (BZ)	32	19	pg/g	EPA-22 1668A
PCB 6 (BZ)	20	19	pg/g	EPA-22 1668A
PCB 8 (BZ)	110	19	pg/g	EPA-22 1668A
PCB 9 (BZ)	6.8 J,Q	19	pg/g	EPA-22 1668A
PCB 11 (BZ)	44 B	19	pg/g	EPA-22 1668A
PCB 12 (BZ)	3.9 C,J	19	pg/g	EPA-22 1668A
PCB 13 (BZ)	3.9 C,J	19	pg/g	EPA-22 1668A
PCB 15 (BZ)	24	19	pg/g	EPA-22 1668A
PCB 16 (BZ)	25	19	pg/g	EPA-22 1668A
PCB 17 (BZ)	25	19	pg/g	EPA-22 1668A
PCB 18 (BZ)	49 C,B	19	pg/g	EPA-22 1668A
PCB 19 (BZ)	6.3 J	19	pg/g	EPA-22 1668A
PCB 20 (BZ)	65 C,B	19	pg/g	EPA-22 1668A
PCB 21 (BZ)	35 C,B	19	pg/g	EPA-22 1668A
PCB 22 (BZ)	25 B	19	pg/g	EPA-22 1668A
PCB 24 (BZ)	0.68 J	19	pg/g	EPA-22 1668A
PCB 25 (BZ)	5.5 J	19	pg/g	EPA-22 1668A
PCB 26 (BZ)	12 C,J	19	pg/g	EPA-22 1668A
PCB 27 (BZ)	3.8 J	19	pg/g	EPA-22 1668A
PCB 28 (BZ)	65 C,B	19	pg/g	EPA-22 1668A
PCB 29 (BZ)	12 C,J	19	pg/g	EPA-22 1668A
PCB 30 (BZ)	49 C,B	19	pg/g	EPA-22 1668A
PCB 31 (BZ)	56 B	19	pg/g	EPA-22 1668A
PCB 32 (BZ)	15 J	19	pg/g	EPA-22 1668A
PCB 33 (BZ)	35 C,B	19	pg/g	EPA-22 1668A
PCB 37 (BZ)	5.2 J,B	19	pg/g	EPA-22 1668A
PCB 40 (BZ)	9.5 C,J,B	19	pg/g	EPA-22 1668A
PCB 41 (BZ)	2.8 J	19	pg/g	EPA-22 1668A
PCB 42 (BZ)	6.2 J,B	19	pg/g	EPA-22 1668A
PCB 43 (BZ)	1.1 J,Q	19	pg/g	EPA-22 1668A
PCB 44 (BZ)	36 C,B	19	pg/g	EPA-22 1668A
PCB 45 (BZ)	5.1 J	19	pg/g	EPA-22 1668A
PCB 46 (BZ)	2.1 J	19	pg/g	EPA-22 1668A
PCB 47 (BZ)	36 C,B	19	pg/g	EPA-22 1668A
PCB 48 (BZ)	5.0 J,Q,B	19	pg/g	EPA-22 1668A
PCB 49 (BZ)	15 C,J,B	19	pg/g	EPA-22 1668A
PCB 50 (BZ)	4.6 C,J,B	19	pg/g	EPA-22 1668A
PCB 51 (BZ)	2.9 J,B	19	pg/g	EPA-22 1668A
PCB 52 (BZ)	41 B	19	pg/g	EPA-22 1668A
PCB 53 (BZ)	4.6 C,J,B	19	pg/g	EPA-22 1668A

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

G1K090434

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LAB CONTROL 11/04/11 001				
PCB 54 (BZ)	0.28 J	19	pg/g	EPA-22 1668A
PCB 56 (BZ)	7.1 J,B	19	pg/g	EPA-22 1668A
PCB 59 (BZ)	2.1 C,J	19	pg/g	EPA-22 1668A
PCB 60 (BZ)	4.9 J	19	pg/g	EPA-22 1668A
PCB 61 (BZ)	39 C,B	19	pg/g	EPA-22 1668A
PCB 62 (BZ)	2.1 C,J	19	pg/g	EPA-22 1668A
PCB 63 (BZ)	0.89 J,Q	19	pg/g	EPA-22 1668A
PCB 64 (BZ)	11 J,B	19	pg/g	EPA-22 1668A
PCB 65 (BZ)	36 C,B	19	pg/g	EPA-22 1668A
PCB 66 (BZ)	18 J,B	19	pg/g	EPA-22 1668A
PCB 67 (BZ)	0.31 J,Q	19	pg/g	EPA-22 1668A
PCB 68 (BZ)	1.5 J,B	19	pg/g	EPA-22 1668A
PCB 69 (BZ)	15 C,J,B	19	pg/g	EPA-22 1668A
PCB 70 (BZ)	39 C,B	19	pg/g	EPA-22 1668A
PCB 71 (BZ)	9.5 C,J,B	19	pg/g	EPA-22 1668A
PCB 74 (BZ)	39 C,B	19	pg/g	EPA-22 1668A
PCB 75 (BZ)	2.1 C,J	19	pg/g	EPA-22 1668A
PCB 76 (BZ)	39 C,B	19	pg/g	EPA-22 1668A
PCB 77 (BZ)	2.4	1.9	pg/g	EPA-22 1668A
PCB 82 (BZ)	2.5 J	19	pg/g	EPA-22 1668A
PCB 83 (BZ)	2.7 J	19	pg/g	EPA-22 1668A
PCB 84 (BZ)	7.2 J	19	pg/g	EPA-22 1668A
PCB 85 (BZ)	9.4 C,J,Q	19	pg/g	EPA-22 1668A
PCB 86 (BZ)	23 C,B	19	pg/g	EPA-22 1668A
PCB 87 (BZ)	23 C,B	19	pg/g	EPA-22 1668A
PCB 88 (BZ)	4.1 C,J	19	pg/g	EPA-22 1668A
PCB 90 (BZ)	39 C,B	19	pg/g	EPA-22 1668A
PCB 91 (BZ)	4.1 C,J	19	pg/g	EPA-22 1668A
PCB 92 (BZ)	7.7 J	19	pg/g	EPA-22 1668A
PCB 95 (BZ)	24 B	19	pg/g	EPA-22 1668A
PCB 96 (BZ)	0.20 J	19	pg/g	EPA-22 1668A
PCB 97 (BZ)	23 C,B	19	pg/g	EPA-22 1668A
PCB 99 (BZ)	20 B	19	pg/g	EPA-22 1668A
PCB 101 (BZ)	39 C,B	19	pg/g	EPA-22 1668A
PCB 104 (BZ)	0.20 J,Q	19	pg/g	EPA-22 1668A
PCB 105 (BZ)	17 B	1.9	pg/g	EPA-22 1668A
PCB 107 (BZ)/109 (IUPAC)	3.2 J	19	pg/g	EPA-22 1668A
PCB 108 (BZ)/107 (IUPAC)	1.7 C,J	19	pg/g	EPA-22 1668A
PCB 109 (BZ)/108 (IUPAC)	23 C,B	19	pg/g	EPA-22 1668A
PCB 110 (BZ)	45 C,B	19	pg/g	EPA-22 1668A
PCB 113 (BZ)	39 C,B	19	pg/g	EPA-22 1668A
PCB 114 (BZ)	0.70 J	1.9	pg/g	EPA-22 1668A
PCB 115 (BZ)	45 C,B	19	pg/g	EPA-22 1668A

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

G1K090434

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LAB CONTROL 11/04/11 001				
PCB 116 (BZ)	9.4 C,J,Q	19	pg/g	EPA-22 1668A
PCB 117 (BZ)	9.4 C,J,Q	19	pg/g	EPA-22 1668A
PCB 118 (BZ)	38 B	1.9	pg/g	EPA-22 1668A
PCB 119 (BZ)	23 C,B	19	pg/g	EPA-22 1668A
PCB 123 (BZ)	0.65 J	1.9	pg/g	EPA-22 1668A
PCB 124 (BZ)	1.7 C,J	19	pg/g	EPA-22 1668A
PCB 125 (BZ)	23 C,B	19	pg/g	EPA-22 1668A
PCB 126 (BZ)	0.44 J	1.9	pg/g	EPA-22 1668A
PCB 128 (BZ)	8.7 C,J,B	19	pg/g	EPA-22 1668A
PCB 129 (BZ)	59 C,B	19	pg/g	EPA-22 1668A
PCB 130 (BZ)	3.4 J	19	pg/g	EPA-22 1668A
PCB 132 (BZ)	8.6 J,B	19	pg/g	EPA-22 1668A
PCB 133 (BZ)	0.94 J,Q	19	pg/g	EPA-22 1668A
PCB 134 (BZ)	1.3 C,J	19	pg/g	EPA-22 1668A
PCB 135 (BZ)	13 C,J,B	19	pg/g	EPA-22 1668A
PCB 136 (BZ)	3.5 J	19	pg/g	EPA-22 1668A
PCB 137 (BZ)	0.50 J	19	pg/g	EPA-22 1668A
PCB 138 (BZ)	59 C,B	19	pg/g	EPA-22 1668A
PCB 141 (BZ)	1.4 J,Q,B	19	pg/g	EPA-22 1668A
PCB 143 (BZ)	1.3 C,J	19	pg/g	EPA-22 1668A
PCB 144 (BZ)	0.73 J,Q	19	pg/g	EPA-22 1668A
PCB 146 (BZ)	8.2 J	19	pg/g	EPA-22 1668A
PCB 147 (BZ)	32 C,B	19	pg/g	EPA-22 1668A
PCB 149 (BZ)	32 C,B	19	pg/g	EPA-22 1668A
PCB 151 (BZ)	13 C,J,B	19	pg/g	EPA-22 1668A
PCB 153 (BZ)	51 C,B	19	pg/g	EPA-22 1668A
PCB 154 (BZ)	0.56 J	19	pg/g	EPA-22 1668A
PCB 156 (BZ)	5.4 C,B	3.7	pg/g	EPA-22 1668A
PCB 157 (BZ)	5.4 C,B	3.7	pg/g	EPA-22 1668A
PCB 158 (BZ)	3.0 J,Q	19	pg/g	EPA-22 1668A
PCB 163 (BZ)	59 C,B	19	pg/g	EPA-22 1668A
PCB 164 (BZ)	4.6 J	19	pg/g	EPA-22 1668A
PCB 166 (BZ)	8.7 C,J,B	19	pg/g	EPA-22 1668A
PCB 167 (BZ)	2.3	1.9	pg/g	EPA-22 1668A
PCB 168 (BZ)	51 C,B	19	pg/g	EPA-22 1668A
PCB 169 (BZ)	0.45 J	1.9	pg/g	EPA-22 1668A
PCB 170 (BZ)	6.6 J,Q,B	19	pg/g	EPA-22 1668A
PCB 171 (BZ)	2.6 C,J,Q	19	pg/g	EPA-22 1668A
PCB 172 (BZ)	1.6 J	19	pg/g	EPA-22 1668A
PCB 173 (BZ)	2.6 C,J,Q	19	pg/g	EPA-22 1668A
PCB 174 (BZ)	7.9 J	19	pg/g	EPA-22 1668A
PCB 176 (BZ)	1.3 J	19	pg/g	EPA-22 1668A
PCB 177 (BZ)	7.4 J	19	pg/g	EPA-22 1668A

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

G1K090434

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
LAB CONTROL 11/04/11 001				
PCB 178 (BZ)	4.1 J	19	pg/g	EPA-22 1668A
PCB 179 (BZ)	5.2 J	19	pg/g	EPA-22 1668A
PCB 180 (BZ)	4.0 C,J,B	19	pg/g	EPA-22 1668A
PCB 183 (BZ)	3.3 J	19	pg/g	EPA-22 1668A
PCB 185 (BZ)	1.5 J	19	pg/g	EPA-22 1668A
PCB 187 (BZ)	29 B,J,D	190	pg/g	EPA-22 1668A
PCB 189 (BZ)	0.84 J	1.9	pg/g	EPA-22 1668A
PCB 190 (BZ)	1.8 J,Q	19	pg/g	EPA-22 1668A
PCB 193 (BZ)	4.0 C,J,B	19	pg/g	EPA-22 1668A
PCB 194 (BZ)	1.6 J,Q	19	pg/g	EPA-22 1668A
PCB 195 (BZ)	2.3 J	19	pg/g	EPA-22 1668A
PCB 196 (BZ)	1.4 J	19	pg/g	EPA-22 1668A
PCB 197 (BZ)	0.46 J	19	pg/g	EPA-22 1668A
PCB 198 (BZ)	17 C,J	19	pg/g	EPA-22 1668A
PCB 199 (BZ)/200 (IUPAC)	1.6 J	19	pg/g	EPA-22 1668A
PCB 200 (BZ)/201 (IUPAC)	1.9 J	19	pg/g	EPA-22 1668A
PCB 201 (BZ)/199 (IUPAC)	17 C,J	19	pg/g	EPA-22 1668A
PCB 202 (BZ)	4.1 J	19	pg/g	EPA-22 1668A
PCB 203 (BZ)	10 J	19	pg/g	EPA-22 1668A
PCB 205 (BZ)	0.98 J	19	pg/g	EPA-22 1668A
PCB 206 (BZ)	8.5 J	19	pg/g	EPA-22 1668A
PCB 207 (BZ)	1.7 J,Q	19	pg/g	EPA-22 1668A
PCB 208 (BZ)	4.7 J	19	pg/g	EPA-22 1668A
PCB 209 (BZ)	9.3 J,B	19	pg/g	EPA-22 1668A
Percent Lipids	1.6	0.10	%	SW846 8290
DS-11-MU5 11/04/11 002				
PCB 1 (BZ)	3.8 J	20	pg/g	EPA-22 1668A
PCB 2 (BZ)	1.1 J	20	pg/g	EPA-22 1668A
PCB 3 (BZ)	3.6 J	20	pg/g	EPA-22 1668A
PCB 4 (BZ)	30	20	pg/g	EPA-22 1668A
PCB 6 (BZ)	20 J	20	pg/g	EPA-22 1668A
PCB 8 (BZ)	100	20	pg/g	EPA-22 1668A
PCB 11 (BZ)	44 B	20	pg/g	EPA-22 1668A
PCB 15 (BZ)	25	20	pg/g	EPA-22 1668A
PCB 16 (BZ)	40	20	pg/g	EPA-22 1668A
PCB 17 (BZ)	46	20	pg/g	EPA-22 1668A
PCB 18 (BZ)	88 C,B	20	pg/g	EPA-22 1668A
PCB 19 (BZ)	11 J	20	pg/g	EPA-22 1668A
PCB 20 (BZ)	160 C,B	20	pg/g	EPA-22 1668A
PCB 21 (BZ)	63 C,B	20	pg/g	EPA-22 1668A
PCB 22 (BZ)	48 B	20	pg/g	EPA-22 1668A

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EXECUTIVE SUMMARY - Detection Highlights

G1K090434

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DS-11-MU5 11/04/11 002				
PCB 24 (BZ)	0.65 J,Q	20	pg/g	EPA-22 1668A
PCB 25 (BZ)	16 J	20	pg/g	EPA-22 1668A
PCB 26 (BZ)	30 C	20	pg/g	EPA-22 1668A
PCB 27 (BZ)	7.2 J	20	pg/g	EPA-22 1668A
PCB 28 (BZ)	160 C,B	20	pg/g	EPA-22 1668A
PCB 29 (BZ)	30 C	20	pg/g	EPA-22 1668A
PCB 30 (BZ)	88 C,B	20	pg/g	EPA-22 1668A
PCB 31 (BZ)	130 B	20	pg/g	EPA-22 1668A
PCB 32 (BZ)	38	20	pg/g	EPA-22 1668A
PCB 33 (BZ)	63 C,B	20	pg/g	EPA-22 1668A
PCB 34 (BZ)	2.3 J	20	pg/g	EPA-22 1668A
PCB 35 (BZ)	2.9 J	20	pg/g	EPA-22 1668A
PCB 37 (BZ)	20 J,B	20	pg/g	EPA-22 1668A
PCB 39 (BZ)	1.0 J,Q	20	pg/g	EPA-22 1668A
PCB 40 (BZ)	170 C,B	20	pg/g	EPA-22 1668A
PCB 41 (BZ)	17 J	20	pg/g	EPA-22 1668A
PCB 42 (BZ)	110 B	20	pg/g	EPA-22 1668A
PCB 43 (BZ)	15 J	20	pg/g	EPA-22 1668A
PCB 44 (BZ)	510 C,B	20	pg/g	EPA-22 1668A
PCB 45 (BZ)	43	20	pg/g	EPA-22 1668A
PCB 46 (BZ)	19 J	20	pg/g	EPA-22 1668A
PCB 47 (BZ)	510 C,B	20	pg/g	EPA-22 1668A
PCB 48 (BZ)	58 B	20	pg/g	EPA-22 1668A
PCB 49 (BZ)	370 C,B	20	pg/g	EPA-22 1668A
PCB 50 (BZ)	73 C,B	20	pg/g	EPA-22 1668A
PCB 51 (BZ)	41 B	20	pg/g	EPA-22 1668A
PCB 52 (BZ)	910 B	20	pg/g	EPA-22 1668A
PCB 53 (BZ)	73 C,B	20	pg/g	EPA-22 1668A
PCB 54 (BZ)	4.3 J	20	pg/g	EPA-22 1668A
PCB 56 (BZ)	170 B	20	pg/g	EPA-22 1668A
PCB 59 (BZ)	40 C	20	pg/g	EPA-22 1668A
PCB 60 (BZ)	46	20	pg/g	EPA-22 1668A
PCB 61 (BZ)	780 C,B	20	pg/g	EPA-22 1668A
PCB 62 (BZ)	40 C	20	pg/g	EPA-22 1668A
PCB 63 (BZ)	22	20	pg/g	EPA-22 1668A
PCB 64 (BZ)	180 B	20	pg/g	EPA-22 1668A
PCB 65 (BZ)	510 C,B	20	pg/g	EPA-22 1668A
PCB 66 (BZ)	400 B	20	pg/g	EPA-22 1668A
PCB 67 (BZ)	13 J	20	pg/g	EPA-22 1668A
PCB 68 (BZ)	9.8 J,Q,B	20	pg/g	EPA-22 1668A
PCB 69 (BZ)	370 C,B	20	pg/g	EPA-22 1668A
PCB 70 (BZ)	780 C,B	20	pg/g	EPA-22 1668A
PCB 71 (BZ)	170 C,B	20	pg/g	EPA-22 1668A

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

G1K090434

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DS-11-MU5 11/04/11 002				
PCB 72 (BZ)	18 J	20	pg/g	EPA-22 1668A
PCB 74 (BZ)	780 C,B	20	pg/g	EPA-22 1668A
PCB 75 (BZ)	40 C	20	pg/g	EPA-22 1668A
PCB 76 (BZ)	780 C,B	20	pg/g	EPA-22 1668A
PCB 77 (BZ)	21	2.0	pg/g	EPA-22 1668A
PCB 79 (BZ)	19 J	20	pg/g	EPA-22 1668A
PCB 82 (BZ)	240	20	pg/g	EPA-22 1668A
PCB 83 (BZ)	180	20	pg/g	EPA-22 1668A
PCB 84 (BZ)	460	20	pg/g	EPA-22 1668A
PCB 85 (BZ)	380 C	20	pg/g	EPA-22 1668A
PCB 86 (BZ)	1300 C,B	20	pg/g	EPA-22 1668A
PCB 87 (BZ)	1300 C,B	20	pg/g	EPA-22 1668A
PCB 88 (BZ)	300 C	20	pg/g	EPA-22 1668A
PCB 89 (BZ)	19 J	20	pg/g	EPA-22 1668A
PCB 90 (BZ)	2300	200	pg/g	EPA-22 1668A
	Qualifiers: C,B,D			
PCB 91 (BZ)	300 C	20	pg/g	EPA-22 1668A
PCB 92 (BZ)	580	20	pg/g	EPA-22 1668A
PCB 93 (BZ)	43 C	20	pg/g	EPA-22 1668A
PCB 94 (BZ)	17 J	20	pg/g	EPA-22 1668A
PCB 95 (BZ)	1700 B	20	pg/g	EPA-22 1668A
PCB 96 (BZ)	11 J	20	pg/g	EPA-22 1668A
PCB 97 (BZ)	1300 C,B	20	pg/g	EPA-22 1668A
PCB 98 (BZ)	60 C	20	pg/g	EPA-22 1668A
PCB 99 (BZ)	950 B	20	pg/g	EPA-22 1668A
PCB 100 (BZ)	43 C	20	pg/g	EPA-22 1668A
PCB 101 (BZ)	2300	200	pg/g	EPA-22 1668A
	Qualifiers: C,D,B			
PCB 102 (BZ)	60 C	20	pg/g	EPA-22 1668A
PCB 103 (BZ)	43	20	pg/g	EPA-22 1668A
PCB 104 (BZ)	2.3 J	20	pg/g	EPA-22 1668A
PCB 105 (BZ)	440 B	2.0	pg/g	EPA-22 1668A
PCB 107 (BZ)/109 (IUPAC)	120	20	pg/g	EPA-22 1668A
PCB 108 (BZ)/107 (IUPAC)	60 C	20	pg/g	EPA-22 1668A
PCB 109 (BZ)/108 (IUPAC)	1300 C,B	20	pg/g	EPA-22 1668A
PCB 110 (BZ)	2800	200	pg/g	EPA-22 1668A
	Qualifiers: C,D,B			
PCB 111 (BZ)	5.2 J	20	pg/g	EPA-22 1668A
PCB 113 (BZ)	2300	200	pg/g	EPA-22 1668A
	Qualifiers: C,D,B			
PCB 114 (BZ)	27	2.0	pg/g	EPA-22 1668A
PCB 115 (BZ)	2800	200	pg/g	EPA-22 1668A
	Qualifiers: C,D,B			

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EXECUTIVE SUMMARY - Detection Highlights

G1K090434

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DS-11-MU5 11/04/11 002				
PCB 116 (BZ)	380 C	20	pg/g	EPA-22 1668A
PCB 117 (BZ)	380 C	20	pg/g	EPA-22 1668A
PCB 118 (BZ)	1300 B	2.0	pg/g	EPA-22 1668A
PCB 119 (BZ)	1300 C,B	20	pg/g	EPA-22 1668A
PCB 120 (BZ)	15 J	20	pg/g	EPA-22 1668A
PCB 121 (BZ)	2.0 J,Q	20	pg/g	EPA-22 1668A
PCB 122 (BZ)	22	20	pg/g	EPA-22 1668A
PCB 123 (BZ)	17	2.0	pg/g	EPA-22 1668A
PCB 124 (BZ)	60 C	20	pg/g	EPA-22 1668A
PCB 125 (BZ)	1300 C,B	20	pg/g	EPA-22 1668A
PCB 126 (BZ)	4.4	2.0	pg/g	EPA-22 1668A
PCB 128 (BZ)	450 C,B	20	pg/g	EPA-22 1668A
PCB 129 (BZ)	3300	200	pg/g	EPA-22 1668A
	Qualifiers: C,D,B			
PCB 130 (BZ)	220	20	pg/g	EPA-22 1668A
PCB 131 (BZ)	27	20	pg/g	EPA-22 1668A
PCB 132 (BZ)	980 B	20	pg/g	EPA-22 1668A
PCB 133 (BZ)	84	20	pg/g	EPA-22 1668A
PCB 134 (BZ)	150 C	20	pg/g	EPA-22 1668A
PCB 135 (BZ)	1600 C,B	20	pg/g	EPA-22 1668A
PCB 136 (BZ)	410	20	pg/g	EPA-22 1668A
PCB 137 (BZ)	32	20	pg/g	EPA-22 1668A
PCB 138 (BZ)	3300	200	pg/g	EPA-22 1668A
	Qualifiers: C,D,B			
PCB 139 (BZ)	65 C	20	pg/g	EPA-22 1668A
PCB 140 (BZ)	65 C	20	pg/g	EPA-22 1668A
PCB 141 (BZ)	80 B	20	pg/g	EPA-22 1668A
PCB 143 (BZ)	150 C	20	pg/g	EPA-22 1668A
PCB 144 (BZ)	110	20	pg/g	EPA-22 1668A
PCB 146 (BZ)	590	20	pg/g	EPA-22 1668A
PCB 147 (BZ)	3100	200	pg/g	EPA-22 1668A
	Qualifiers: C,D,B			
PCB 148 (BZ)	16 J	20	pg/g	EPA-22 1668A
PCB 149 (BZ)	3100	200	pg/g	EPA-22 1668A
	Qualifiers: C,D,B			
PCB 150 (BZ)	8.2 J	20	pg/g	EPA-22 1668A
PCB 151 (BZ)	1600 C,B	20	pg/g	EPA-22 1668A
PCB 152 (BZ)	3.3 J,Q	20	pg/g	EPA-22 1668A
PCB 153 (BZ)	2900	200	pg/g	EPA-22 1668A
	Qualifiers: C,D,B			
PCB 154 (BZ)	83	20	pg/g	EPA-22 1668A
PCB 156 (BZ)	260 C,B	4.0	pg/g	EPA-22 1668A
PCB 157 (BZ)	260 C,B	4.0	pg/g	EPA-22 1668A

(Continued on next page)

EXECUTIVE SUMMARY - Detection Highlights

G1K090434

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DS-11-MU5 11/04/11 002				
PCB 158 (BZ)	200	20	pg/g	EPA-22 1668A
PCB 159 (BZ)	16 J	20	pg/g	EPA-22 1668A
PCB 162 (BZ)	12 J,B	20	pg/g	EPA-22 1668A
PCB 163 (BZ)	3300	200	pg/g	EPA-22 1668A
	Qualifiers: C,D,B			
PCB 164 (BZ)	280	20	pg/g	EPA-22 1668A
PCB 165 (BZ)	2.7 J	20	pg/g	EPA-22 1668A
PCB 166 (BZ)	450 C,B	20	pg/g	EPA-22 1668A
PCB 167 (BZ)	91	2.0	pg/g	EPA-22 1668A
PCB 168 (BZ)	2900	200	pg/g	EPA-22 1668A
	Qualifiers: C,D,B			
PCB 170 (BZ)	580 B	20	pg/g	EPA-22 1668A
PCB 171 (BZ)	270 C	20	pg/g	EPA-22 1668A
PCB 172 (BZ)	98	20	pg/g	EPA-22 1668A
PCB 173 (BZ)	270 C	20	pg/g	EPA-22 1668A
PCB 174 (BZ)	740	20	pg/g	EPA-22 1668A
PCB 175 (BZ)	28	20	pg/g	EPA-22 1668A
PCB 176 (BZ)	140	20	pg/g	EPA-22 1668A
PCB 177 (BZ)	730	20	pg/g	EPA-22 1668A
PCB 178 (BZ)	280	20	pg/g	EPA-22 1668A
PCB 179 (BZ)	540	20	pg/g	EPA-22 1668A
PCB 180 (BZ)	300 C,B	20	pg/g	EPA-22 1668A
PCB 183 (BZ)	330	20	pg/g	EPA-22 1668A
PCB 184 (BZ)	1.7 J	20	pg/g	EPA-22 1668A
PCB 185 (BZ)	170	20	pg/g	EPA-22 1668A
PCB 187 (BZ)	2200 D,B	200	pg/g	EPA-22 1668A
PCB 188 (BZ)	3.0 J	20	pg/g	EPA-22 1668A
PCB 189 (BZ)	24	2.0	pg/g	EPA-22 1668A
PCB 190 (BZ)	170	20	pg/g	EPA-22 1668A
PCB 191 (BZ)	12 J	20	pg/g	EPA-22 1668A
PCB 193 (BZ)	300 C,B	20	pg/g	EPA-22 1668A
PCB 194 (BZ)	120	20	pg/g	EPA-22 1668A
PCB 195 (BZ)	160	20	pg/g	EPA-22 1668A
PCB 196 (BZ)	83	20	pg/g	EPA-22 1668A
PCB 197 (BZ)	19 J	20	pg/g	EPA-22 1668A
PCB 198 (BZ)	630 C	20	pg/g	EPA-22 1668A
PCB 199 (BZ)/200 (IUPAC)	93	20	pg/g	EPA-22 1668A
PCB 200 (BZ)/201 (IUPAC)	81	20	pg/g	EPA-22 1668A
PCB 201 (BZ)/199 (IUPAC)	630 C	20	pg/g	EPA-22 1668A
PCB 202 (BZ)	130	20	pg/g	EPA-22 1668A
PCB 203 (BZ)	380	20	pg/g	EPA-22 1668A
PCB 205 (BZ)	21	20	pg/g	EPA-22 1668A
PCB 206 (BZ)	150	20	pg/g	EPA-22 1668A

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EXECUTIVE SUMMARY - Detection Highlights

G1K090434

PARAMETER	RESULT	REPORTING LIMIT	UNITS	ANALYTICAL METHOD
DS-11-MU5 11/04/11 002				
PCB 207 (BZ)	23	20	pg/g	EPA-22 1668A
PCB 208 (BZ)	81	20	pg/g	EPA-22 1668A
PCB 209 (BZ)	120 B	20	pg/g	EPA-22 1668A
Percent Lipids	1.5	0.10	%	SW846 8290

ANALYTICAL METHODS SUMMARY

G1K090434

PARAMETER	ANALYTICAL METHOD
Lipids, Percent (8290)	SW846 8290
PCBs, HRGC/HRMS	EPA-22 1668A

References:

EPA-22 "METHOD 1668, REVISION A: CHLORINATED BIPHENYL CONGENERS IN WATER, SOIL, SEDIMENT, AND TISSUE BY HRGC/HRMS" EPA-821-R-00-002 12/99

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

G1K090434

ANALYTICAL METHOD	ANALYST	ANALYST ID
EPA-22 1668A	Lisa L. Hernandez	000080
SW846 8290	Lisa L. Hernandez	000080

References:

EPA-22 "METHOD 1668, REVISION A: CHLORINATED BIPHENYL CONGENERS IN WATER, SOIL, SEDIMENT, AND TISSUE BY HRGC/HRMS" EPA-821-R-00-002 12/99

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

FutureNet Group, Inc

Sample ID: LAB CONTROL

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 001	Work Order #....:	MNVJK1AA	Matrix....:	BIOLOGICAL
Date Sampled....:	11/04/11	Date Received....:	11/09/11	Dilution Factor:	1.86
Prep Date....:	11/15/11	Analysis Date....:	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.78 g	Instrument ID....:	12D8	Method:	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 1 (BZ)	2.7	J	19	0.24	pg/g
PCB 2 (BZ)	1.2	J Q	19	0.20	pg/g
PCB 3 (BZ)	4.5	J	19	0.15	pg/g
PCB 4 (BZ)	32		19	1.5	pg/g
PCB 5 (BZ)	ND		19	1.2	pg/g
PCB 6 (BZ)	20		19	1.3	pg/g
PCB 7 (BZ)	ND		19	1.8	pg/g
PCB 8 (BZ)	110		19	1.2	pg/g
PCB 9 (BZ)	6.8	J Q	19	1.3	pg/g
PCB 10 (BZ)	ND		19	1.3	pg/g
PCB 11 (BZ)	44	B	19	1.3	pg/g
PCB 12 (BZ)	3.9	C J	19	1.3	pg/g
PCB 13 (BZ)	3.9	C J	19	1.3	pg/g
PCB 14 (BZ)	ND		19	1.1	pg/g
PCB 15 (BZ)	24		19	1.2	pg/g
PCB 16 (BZ)	25		19	0.32	pg/g
PCB 17 (BZ)	25		19	0.26	pg/g
PCB 18 (BZ)	49	C B	19	0.22	pg/g
PCB 19 (BZ)	6.3	J	19	0.30	pg/g
PCB 20 (BZ)	65	C B	19	0.31	pg/g
PCB 21 (BZ)	35	C B	19	0.30	pg/g
PCB 22 (BZ)	25	B	19	0.32	pg/g
PCB 23 (BZ)	ND		19	0.30	pg/g
PCB 24 (BZ)	0.68	J	19	0.20	pg/g
PCB 25 (BZ)	5.5	J	19	0.31	pg/g
PCB 26 (BZ)	12	C J	19	0.30	pg/g
PCB 27 (BZ)	3.8	J	19	0.20	pg/g
PCB 28 (BZ)	65	C B	19	0.31	pg/g
PCB 29 (BZ)	12	C J	19	0.30	pg/g
PCB 30 (BZ)	49	C B	19	0.22	pg/g
PCB 31 (BZ)	56	B	19	0.29	pg/g
PCB 32 (BZ)	15	J	19	0.19	pg/g
PCB 33 (BZ)	35	C B	19	0.30	pg/g
PCB 34 (BZ)	ND		19	0.33	pg/g
PCB 35 (BZ)	ND		19	0.41	pg/g
PCB 36 (BZ)	ND		19	0.30	pg/g

FutureNet Group, Inc

Sample ID: LAB CONTROL

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 001	Work Order #....:	MNVJK1AA	Matrix....:	BIOLOGICAL
Date Sampled....:	11/04/11	Date Received....:	11/09/11	Dilution Factor:	1.86
Prep Date....:	11/15/11	Analysis Date....:	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.78 g	Instrument ID....:	12D8	Method:	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 37 (BZ)	5.2	J B	19	0.30	pg/g
PCB 38 (BZ)	ND		19	0.43	pg/g
PCB 39 (BZ)	ND		19	0.29	pg/g
PCB 40 (BZ)	9.5	C J B	19	0.18	pg/g
PCB 41 (BZ)	2.8	J	19	0.25	pg/g
PCB 42 (BZ)	6.2	J B	19	0.20	pg/g
PCB 43 (BZ)	1.1	J Q	19	0.23	pg/g
PCB 44 (BZ)	36	C B	19	0.18	pg/g
PCB 45 (BZ)	5.1	J	19	0.23	pg/g
PCB 46 (BZ)	2.1	J	19	0.23	pg/g
PCB 47 (BZ)	36	C B	19	0.18	pg/g
PCB 48 (BZ)	5.0	J Q B	19	0.19	pg/g
PCB 49 (BZ)	15	C J B	19	0.16	pg/g
PCB 50 (BZ)	4.6	C J B	19	0.18	pg/g
PCB 51 (BZ)	2.9	J B	19	0.17	pg/g
PCB 52 (BZ)	41	B	19	0.20	pg/g
PCB 53 (BZ)	4.6	C J B	19	0.18	pg/g
PCB 54 (BZ)	0.28	J	19	0.11	pg/g
PCB 55 (BZ)	ND		19	0.26	pg/g
PCB 56 (BZ)	7.1	J B	19	0.27	pg/g
PCB 57 (BZ)	ND		19	0.25	pg/g
PCB 58 (BZ)	ND		19	0.25	pg/g
PCB 59 (BZ)	2.1	C J	19	0.14	pg/g
PCB 60 (BZ)	4.9	J	19	0.26	pg/g
PCB 61 (BZ)	39	C B	19	0.24	pg/g
PCB 62 (BZ)	2.1	C J	19	0.14	pg/g
PCB 63 (BZ)	0.89	J Q	19	0.23	pg/g
PCB 64 (BZ)	11	J B	19	0.13	pg/g
PCB 65 (BZ)	36	C B	19	0.18	pg/g
PCB 66 (BZ)	18	J B	19	0.26	pg/g
PCB 67 (BZ)	0.31	J Q	19	0.24	pg/g
PCB 68 (BZ)	1.5	J B	19	0.23	pg/g
PCB 69 (BZ)	15	C J B	19	0.16	pg/g
PCB 70 (BZ)	39	C B	19	0.24	pg/g
PCB 71 (BZ)	9.5	C J B	19	0.18	pg/g
PCB 72 (BZ)	ND		19	0.24	pg/g

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FutureNet Group, Inc

Sample ID: LAB CONTROL

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 001	**Work Order #....:**	MNVJK1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.86
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.78 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 73 (BZ)	ND		19	0.15	pg/g
PCB 74 (BZ)	**39**	**C B**	**19**	**0.24**	**pg/g**
PCB 75 (BZ)	**2.1**	**C J**	**19**	**0.14**	**pg/g**
PCB 76 (BZ)	**39**	**C B**	**19**	**0.24**	**pg/g**
PCB 77 (BZ)	**2.4**		**1.9**	**0.26**	**pg/g**
PCB 78 (BZ)	ND		19	0.27	pg/g
PCB 79 (BZ)	ND		19	0.23	pg/g
PCB 80 (BZ)	ND		19	0.22	pg/g
PCB 81 (BZ)	ND		1.9	0.25	pg/g
PCB 82 (BZ)	**2.5**	**J**	**19**	**0.37**	**pg/g**
PCB 83 (BZ)	**2.7**	**J**	**19**	**0.30**	**pg/g**
PCB 84 (BZ)	**7.2**	**J**	**19**	**0.35**	**pg/g**
PCB 85 (BZ)	**9.4**	**C J Q**	**19**	**0.25**	**pg/g**
PCB 86 (BZ)	**23**	**C B**	**19**	**0.27**	**pg/g**
PCB 87 (BZ)	**23**	**C B**	**19**	**0.27**	**pg/g**
PCB 88 (BZ)	**4.1**	**C J**	**19**	**0.30**	**pg/g**
PCB 89 (BZ)	ND		19	0.33	pg/g
PCB 90 (BZ)	**39**	**C B**	**19**	**0.27**	**pg/g**
PCB 91 (BZ)	**4.1**	**C J**	**19**	**0.30**	**pg/g**
PCB 92 (BZ)	**7.7**	**J**	**19**	**0.32**	**pg/g**
PCB 93 (BZ)	ND		19	0.29	pg/g
PCB 94 (BZ)	ND		19	0.32	pg/g
PCB 95 (BZ)	**24**	**B**	**19**	**0.30**	**pg/g**
PCB 96 (BZ)	**0.20**	**J**	**19**	**0.11**	**pg/g**
PCB 97 (BZ)	**23**	**C B**	**19**	**0.27**	**pg/g**
PCB 98 (BZ)	ND		19	0.31	pg/g
PCB 99 (BZ)	**20**	**B**	**19**	**0.27**	**pg/g**
PCB 100 (BZ)	ND		19	0.29	pg/g
PCB 101 (BZ)	**39**	**C B**	**19**	**0.27**	**pg/g**
PCB 102 (BZ)	ND		19	0.31	pg/g
PCB 103 (BZ)	ND		19	0.28	pg/g
PCB 104 (BZ)	**0.20**	**J Q**	**19**	**0.11**	**pg/g**
PCB 105 (BZ)	**17**	**B**	**1.9**	**0.22**	**pg/g**
PCB 106 (BZ)	ND		19	0.29	pg/g
PCB 107 (BZ)/109 (IUPAC)	**3.2**	**J**	**19**	**0.19**	**pg/g**
PCB 108 (BZ)/107 (IUPAC)	**1.7**	**C J**	**19**	**0.24**	**pg/g**

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FutureNet Group, Inc

Sample ID: LAB CONTROL

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 001	Work Order #....:	MNVJK1AA	Matrix....:	BIOLOGICAL
Date Sampled....:	11/04/11	Date Received....:	11/09/11	Dilution Factor:	1.86
Prep Date....:	11/15/11	Analysis Date....:	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.78 g	Instrument ID....:	12D8	Method:	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 109 (BZ)/108 (IUPAC)	**23**	**C B**	**19**	**0.27**	**pg/g**
PCB 110 (BZ)	**45**	**C B**	**19**	**0.25**	**pg/g**
PCB 111 (BZ)	ND		19	0.23	pg/g
PCB 112 (BZ)	ND		19	0.29	pg/g
PCB 113 (BZ)	**39**	**C B**	**19**	**0.27**	**pg/g**
PCB 114 (BZ)	**0.70**	**J**	**1.9**	**0.24**	**pg/g**
PCB 115 (BZ)	**45**	**C B**	**19**	**0.25**	**pg/g**
PCB 116 (BZ)	**9.4**	**C J Q**	**19**	**0.25**	**pg/g**
PCB 117 (BZ)	**9.4**	**C J Q**	**19**	**0.25**	**pg/g**
PCB 118 (BZ)	**38**	**B**	**1.9**	**0.22**	**pg/g**
PCB 119 (BZ)	**23**	**C B**	**19**	**0.27**	**pg/g**
PCB 120 (BZ)	ND		19	0.23	pg/g
PCB 121 (BZ)	ND		19	0.22	pg/g
PCB 122 (BZ)	ND		19	0.24	pg/g
PCB 123 (BZ)	**0.65**	**J**	**1.9**	**0.23**	**pg/g**
PCB 124 (BZ)	**1.7**	**C J**	**19**	**0.24**	**pg/g**
PCB 125 (BZ)	**23**	**C B**	**19**	**0.27**	**pg/g**
PCB 126 (BZ)	**0.44**	**J**	**1.9**	**0.24**	**pg/g**
PCB 127 (BZ)	ND		19	0.24	pg/g
PCB 128 (BZ)	**8.7**	**C J B**	**19**	**0.16**	**pg/g**
PCB 129 (BZ)	**59**	**C B**	**19**	**0.16**	**pg/g**
PCB 130 (BZ)	**3.4**	**J**	**19**	**0.21**	**pg/g**
PCB 131 (BZ)	ND		19	0.20	pg/g
PCB 132 (BZ)	**8.6**	**J B**	**19**	**0.20**	**pg/g**
PCB 133 (BZ)	**0.94**	**J Q**	**19**	**0.19**	**pg/g**
PCB 134 (BZ)	**1.3**	**C J**	**19**	**0.21**	**pg/g**
PCB 135 (BZ)	**13**	**C J B**	**19**	**0.18**	**pg/g**
PCB 136 (BZ)	**3.5**	**J**	**19**	**0.14**	**pg/g**
PCB 137 (BZ)	**0.50**	**J**	**19**	**0.14**	**pg/g**
PCB 138 (BZ)	**59**	**C B**	**19**	**0.16**	**pg/g**
PCB 139 (BZ)	ND		19	0.17	pg/g
PCB 140 (BZ)	ND		19	0.17	pg/g
PCB 141 (BZ)	**1.4**	**J Q B**	**19**	**0.22**	**pg/g**
PCB 142 (BZ)	ND		19	0.23	pg/g
PCB 143 (BZ)	**1.3**	**C J**	**19**	**0.21**	**pg/g**
PCB 144 (BZ)	**0.73**	**J Q**	**19**	**0.18**	**pg/g**

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FutureNet Group, Inc

Sample ID: LAB CONTROL

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 001	**Work Order #....:**	MNVJK1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.86
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.78 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 145 (BZ)	ND		19	0.14	pg/g
PCB 146 (BZ)	**8.2**	**J**	**19**	**0.14**	**pg/g**
PCB 147 (BZ)	**32**	**C B**	**19**	**0.17**	**pg/g**
PCB 148 (BZ)	ND		19	0.17	pg/g
PCB 149 (BZ)	**32**	**C B**	**19**	**0.17**	**pg/g**
PCB 150 (BZ)	ND		19	0.13	pg/g
PCB 151 (BZ)	**13**	**C J B**	**19**	**0.18**	**pg/g**
PCB 152 (BZ)	ND		19	0.13	pg/g
PCB 153 (BZ)	**51**	**C B**	**19**	**0.14**	**pg/g**
PCB 154 (BZ)	**0.56**	**J**	**19**	**0.17**	**pg/g**
PCB 155 (BZ)	ND		19	0.12	pg/g
PCB 156 (BZ)	**5.4**	**C B**	**3.7**	**0.22**	**pg/g**
PCB 157 (BZ)	**5.4**	**C B**	**3.7**	**0.22**	**pg/g**
PCB 158 (BZ)	**3.0**	**J Q**	**19**	**0.14**	**pg/g**
PCB 159 (BZ)	ND		19	0.17	pg/g
PCB 160 (BZ)	ND		19	0.17	pg/g
PCB 161 (BZ)	ND		19	0.17	pg/g
PCB 162 (BZ)	ND		19	0.55	pg/g
PCB 163 (BZ)	**59**	**C B**	**19**	**0.16**	**pg/g**
PCB 164 (BZ)	**4.6**	**J**	**19**	**0.18**	**pg/g**
PCB 165 (BZ)	ND		19	0.15	pg/g
PCB 166 (BZ)	**8.7**	**C J B**	**19**	**0.16**	**pg/g**
PCB 167 (BZ)	**2.3**		**1.9**	**0.17**	**pg/g**
PCB 168 (BZ)	**51**	**C B**	**19**	**0.14**	**pg/g**
PCB 169 (BZ)	**0.45**	**J**	**1.9**	**0.18**	**pg/g**
PCB 170 (BZ)	**6.6**	**J Q B**	**19**	**0.21**	**pg/g**
PCB 171 (BZ)	**2.6**	**C J Q**	**19**	**0.22**	**pg/g**
PCB 172 (BZ)	**1.6**	**J**	**19**	**0.20**	**pg/g**
PCB 173 (BZ)	**2.6**	**C J Q**	**19**	**0.22**	**pg/g**
PCB 174 (BZ)	**7.9**	**J**	**19**	**0.25**	**pg/g**
PCB 175 (BZ)	ND		19	0.11	pg/g
PCB 176 (BZ)	**1.3**	**J**	**19**	**0.081**	**pg/g**
PCB 177 (BZ)	**7.4**	**J**	**19**	**0.21**	**pg/g**
PCB 178 (BZ)	**4.1**	**J**	**19**	**0.11**	**pg/g**
PCB 179 (BZ)	**5.2**	**J**	**19**	**0.086**	**pg/g**
PCB 180 (BZ)	**4.0**	**C J B**	**19**	**0.17**	**pg/g**

FutureNet Group, Inc

Sample ID: LAB CONTROL

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 001	**Work Order #....:**	MNVJK1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.86
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.78 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 181 (BZ)	ND		19	0 17	pg/g
PCB 182 (BZ)	ND		19	0.11	pg/g
PCB 183 (BZ)	**3.3**	**J**	**19**	**0.13**	**pg/g**
PCB 184 (BZ)	ND		19	0.090	pg/g
PCB 185 (BZ)	**1.5**	**J**	**19**	**0.22**	**pg/g**
PCB 186 (BZ)	ND		19	0.083	pg/g
PCB 187 (BZ)	**29**	**B J D**	**190**	**1.2**	**pg/g**
PCB 188 (BZ)	ND		19	0.085	pg/g
PCB 189 (BZ)	**0.84**	**J**	**1.9**	**0.17**	**pg/g**
PCB 190 (BZ)	**1.8**	**J Q**	**19**	**0.14**	**pg/g**
PCB 191 (BZ)	ND		19	0.16	pg/g
PCB 192 (BZ)	ND		19	0.16	pg/g
PCB 193 (BZ)	**4.0**	**C J B**	**19**	**0.17**	**pg/g**
PCB 194 (BZ)	**1.6**	**J Q**	**19**	**0.17**	**pg/g**
PCB 195 (BZ)	**2.3**	**J**	**19**	**0.17**	**pg/g**
PCB 196 (BZ)	**1.4**	**J**	**19**	**0.11**	**pg/g**
PCB 197 (BZ)	**0.46**	**J**	**19**	**0.073**	**pg/g**
PCB 198 (BZ)	**17**	**C J**	**19**	**0.13**	**pg/g**
PCB 199 (BZ)/200 (IUPAC)	**1.6**	**J**	**19**	**0.12**	**pg/g**
PCB 200 (BZ)/201 (IUPAC)	**1.9**	**J**	**19**	**0.088**	**pg/g**
PCB 201 (BZ)/199 (IUPAC)	**17**	**C J**	**19**	**0.13**	**pg/g**
PCB 202 (BZ)	**4.1**	**J**	**19**	**0.081**	**pg/g**
PCB 203 (BZ)	**10**	**J**	**19**	**0.12**	**pg/g**
PCB 204 (BZ)	ND		19	0.089	pg/g
PCB 205 (BZ)	**0.98**	**J**	**19**	**0.16**	**pg/g**
PCB 206 (BZ)	**8.5**	**J**	**19**	**0.23**	**pg/g**
PCB 207 (BZ)	**1.7**	**J Q**	**19**	**0.13**	**pg/g**
PCB 208 (BZ)	**4.7**	**J**	**19**	**0.11**	**pg/g**
PCB 209 (BZ)	**9.3**	**J B**	**19**	**0.095**	**pg/g**

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FutureNet Group, Inc

Sample ID: LAB CONTROL

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 001	**Work Order #....:**	MNVJK1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.86
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.78 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

INTERNAL STANDARDS	PERCENT RECOVERY		RECOVERY LIMITS
13C12-PCB 1	58		15 - 150
13C12-PCB 3	57		15 - 150
13C12-PCB 4	61		25 - 150
13C12-PCB 19	65		25 - 150
13C12-PCB 37	89		25 - 150
13C12-PCB 54	67		25 - 150
13C12-PCB 77	95		25 - 150
13C12-PCB 81	97		25 - 150
13C12-PCB 104	74		25 - 150
13C12-PCB 105	94		25 - 150
13C12-PCB 114	90		25 - 150
13C12-PCB 118	93		25 - 150
13C12-PCB 123	93		25 - 150
13C12-PCB 126	98		25 - 150
13C12-PCB 155	85		25 - 150
13C12-PCB 156	95	C	25 - 150
13C12-PCB 157	95	C	25 - 150
13C12-PCB 167	95		25 - 150
13C12-PCB 169	87		25 - 150
13C12-PCB 188	152	*	25 - 150
13C12-PCB 189	131		25 - 150
13C12-PCB 202	153	*	25 - 150
13C12-PCB 205	94		25 - 150
13C12-PCB 206	106		25 - 150
13C12-PCB 208	140		25 - 150
13C12-PCB 209	118		25 - 150

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C12-PCB 28	88	30 - 135
13C12-PCB 178	92	30 - 135
13C12-PCB 111	87	30 - 135

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FutureNet Group, Inc

Sample ID: LAB CONTROL

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 001	**Work Order #....:**	MNVJK1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.86
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.78 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

QUALIFIERS

*	Surrogate recovery is outside stated control limits.
B	Method blank contamination. The associated method blank contains the target analyte at a reportable level
C	Co-eluting isomer.
D	Result was obtained from the analysis of a dilution.
J	Estimated Result.
Q	Estimated maximum possible concentration (EMPC).

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FutureNet Group, Inc

Sample ID: DS-11-MU5

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 002	**Work Order #....:**	MNVJL1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.98
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.09 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 1 (BZ)	**3.8**	**J**	**20**	**0.39**	**pg/g**
PCB 2 (BZ)	**1.1**	**J**	**20**	**0.31**	**pg/g**
PCB 3 (BZ)	**3.6**	**J**	**20**	**0.25**	**pg/g**
PCB 4 (BZ)	**30**		**20**	**2.4**	**pg/g**
PCB 5 (BZ)	ND		20	2.0	pg/g
PCB 6 (BZ)	**20**	**J**	**20**	**2.0**	**pg/g**
PCB 7 (BZ)	ND		20	3.3	pg/g
PCB 8 (BZ)	**100**		**20**	**2.0**	**pg/g**
PCB 9 (BZ)	ND		20	3.2	pg/g
PCB 10 (BZ)	ND		20	1.7	pg/g
PCB 11 (BZ)	**44**	**B**	**20**	**2.1**	**pg/g**
PCB 12 (BZ)	ND		20	3.6	pg/g
PCB 13 (BZ)	ND		20	3.6	pg/g
PCB 14 (BZ)	ND		20	1.7	pg/g
PCB 15 (BZ)	**25**		**20**	**1.8**	**pg/g**
PCB 16 (BZ)	**40**		**20**	**0.61**	**pg/g**
PCB 17 (BZ)	**46**		**20**	**0.50**	**pg/g**
PCB 18 (BZ)	**88**	**C B**	**20**	**0.42**	**pg/g**
PCB 19 (BZ)	**11**	**J**	**20**	**0.57**	**pg/g**
PCB 20 (BZ)	**160**	**C B**	**20**	**0.63**	**pg/g**
PCB 21 (BZ)	**63**	**C B**	**20**	**0.60**	**pg/g**
PCB 22 (BZ)	**48**	**B**	**20**	**0.66**	**pg/g**
PCB 23 (BZ)	ND		20	0.60	pg/g
PCB 24 (BZ)	**0.65**	**J Q**	**20**	**0.38**	**pg/g**
PCB 25 (BZ)	**16**	**J**	**20**	**0.62**	**pg/g**
PCB 26 (BZ)	**30**	**C**	**20**	**0.61**	**pg/g**
PCB 27 (BZ)	**7.2**	**J**	**20**	**0.37**	**pg/g**
PCB 28 (BZ)	**160**	**C B**	**20**	**0.63**	**pg/g**
PCB 29 (BZ)	**30**	**C**	**20**	**0.61**	**pg/g**
PCB 30 (BZ)	**88**	**C B**	**20**	**0.42**	**pg/g**
PCB 31 (BZ)	**130**	**B**	**20**	**0.59**	**pg/g**
PCB 32 (BZ)	**38**		**20**	**0.35**	**pg/g**
PCB 33 (BZ)	**63**	**C B**	**20**	**0.60**	**pg/g**
PCB 34 (BZ)	**2.3**	**J**	**20**	**0.62**	**pg/g**
PCB 35 (BZ)	**2.9**	**J**	**20**	**0.66**	**pg/g**
PCB 36 (BZ)	ND		20	0.58	pg/g

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FutureNet Group, Inc

Sample ID: DS-11-MU5

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 002	Work Order #....:	MNVJL1AA	Matrix....:	BIOLOGICAL
Date Sampled....:	11/04/11	Date Received....:	11/09/11	Dilution Factor:	1.98
Prep Date....:	11/15/11	Analysis Date....:	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.09 g	Instrument ID....:	12D8	Method:	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 37 (BZ)	20	J B	20	0.60	pg/g
PCB 38 (BZ)	ND		20	0.66	pg/g
PCB 39 (BZ)	1.0	J Q	20	0.59	pg/g
PCB 40 (BZ)	170	C B	20	0.23	pg/g
PCB 41 (BZ)	17	J	20	0.33	pg/g
PCB 42 (BZ)	110	B	20	0.26	pg/g
PCB 43 (BZ)	15	J	20	0.29	pg/g
PCB 44 (BZ)	510	C B	20	0.23	pg/g
PCB 45 (BZ)	43		20	0.30	pg/g
PCB 46 (BZ)	19	J	20	0.29	pg/g
PCB 47 (BZ)	510	C B	20	0.23	pg/g
PCB 48 (BZ)	58	B	20	0.25	pg/g
PCB 49 (BZ)	370	C B	20	0.20	pg/g
PCB 50 (BZ)	73	C B	20	0.24	pg/g
PCB 51 (BZ)	41	B	20	0.23	pg/g
PCB 52 (BZ)	910	B	20	0.26	pg/g
PCB 53 (BZ)	73	C B	20	0.24	pg/g
PCB 54 (BZ)	4.3	J	20	0.17	pg/g
PCB 55 (BZ)	ND		20	0.80	pg/g
PCB 56 (BZ)	170	B	20	0.82	pg/g
PCB 57 (BZ)	ND		20	0.77	pg/g
PCB 58 (BZ)	ND		20	0.76	pg/g
PCB 59 (BZ)	40	C	20	0.18	pg/g
PCB 60 (BZ)	46		20	0.80	pg/g
PCB 61 (BZ)	780	C B	20	0.75	pg/g
PCB 62 (BZ)	40	C	20	0.18	pg/g
PCB 63 (BZ)	22		20	0.69	pg/g
PCB 64 (BZ)	180	B	20	0.17	pg/g
PCB 65 (BZ)	510	C B	20	0.23	pg/g
PCB 66 (BZ)	400	B	20	0.78	pg/g
PCB 67 (BZ)	13	J	20	0.73	pg/g
PCB 68 (BZ)	9.8	J Q B	20	0.71	pg/g
PCB 69 (BZ)	370	C B	20	0.20	pg/g
PCB 70 (BZ)	780	C B	20	0.75	pg/g
PCB 71 (BZ)	170	C B	20	0.23	pg/g
PCB 72 (BZ)	18	J	20	0.74	pg/g

FutureNet Group, Inc

Sample ID: DS-11-MU5

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 002	**Work Order #....:**	MNVJL1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.98
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.09 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 73 (BZ)	ND		20	0.19	pg/g
PCB 74 (BZ)	**780**	**C B**	**20**	**0.75**	**pg/g**
PCB 75 (BZ)	**40**	**C**	**20**	**0.18**	**pg/g**
PCB 76 (BZ)	**780**	**C B**	**20**	**0.75**	**pg/g**
PCB 77 (BZ)	**21**		**2.0**	**0.79**	**pg/g**
PCB 78 (BZ)	ND		20	0.83	pg/g
PCB 79 (BZ)	**19**	**J**	**20**	**0.71**	**pg/g**
PCB 80 (BZ)	ND		20	0.69	pg/g
PCB 81 (BZ)	ND		2.0	0.75	pg/g
PCB 82 (BZ)	**240**		**20**	**0.96**	**pg/g**
PCB 83 (BZ)	**180**		**20**	**0.78**	**pg/g**
PCB 84 (BZ)	**460**		**20**	**0.91**	**pg/g**
PCB 85 (BZ)	**380**	**C**	**20**	**0.65**	**pg/g**
PCB 86 (BZ)	**1300**	**C B**	**20**	**0.70**	**pg/g**
PCB 87 (BZ)	**1300**	**C B**	**20**	**0.70**	**pg/g**
PCB 88 (BZ)	**300**	**C**	**20**	**0.78**	**pg/g**
PCB 89 (BZ)	**19**	**J**	**20**	**0.86**	**pg/g**
PCB 90 (BZ)	**2300**	**C B D**	**200**	**6.0**	**pg/g**
PCB 91 (BZ)	**300**	**C**	**20**	**0.78**	**pg/g**
PCB 92 (BZ)	**580**		**20**	**0.83**	**pg/g**
PCB 93 (BZ)	**43**	**C**	**20**	**0.76**	**pg/g**
PCB 94 (BZ)	**17**	**J**	**20**	**0.85**	**pg/g**
PCB 95 (BZ)	**1700**	**B**	**20**	**0.79**	**pg/g**
PCB 96 (BZ)	**11**	**J**	**20**	**0.13**	**pg/g**
PCB 97 (BZ)	**1300**	**C B**	**20**	**0.70**	**pg/g**
PCB 98 (BZ)	**60**	**C**	**20**	**0.80**	**pg/g**
PCB 99 (BZ)	**950**	**B**	**20**	**0.70**	**pg/g**
PCB 100 (BZ)	**43**	**C**	**20**	**0.76**	**pg/g**
PCB 101 (BZ)	**2300**	**C D B**	**200**	**6.0**	**pg/g**
PCB 102 (BZ)	**60**	**C**	**20**	**0.80**	**pg/g**
PCB 103 (BZ)	**43**		**20**	**0.73**	**pg/g**
PCB 104 (BZ)	**2.3**	**J**	**20**	**0.12**	**pg/g**
PCB 105 (BZ)	**440**	**B**	**2.0**	**0.64**	**pg/g**
PCB 106 (BZ)	ND		20	0.75	pg/g
PCB 107 (BZ)/109 (IUPAC)	**120**		**20**	**0.49**	**pg/g**
PCB 108 (BZ)/107 (IUPAC)	**60**	**C**	**20**	**0.61**	**pg/g**

FutureNet Group, Inc

Sample ID: DS-11-MU5

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 002	**Work Order #....:**	MNVJL1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.98
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.09 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 109 (BZ)/108 (IUPAC)	1300	C B	20	0.70	pg/g
PCB 110 (BZ)	2800	C D B	200	5.4	pg/g
PCB 111 (BZ)	5.2	J	20	0.59	pg/g
PCB 112 (BZ)	ND		20	0.76	pg/g
PCB 113 (BZ)	2300	C D B	200	6.0	pg/g
PCB 114 (BZ)	27		2.0	0.61	pg/g
PCB 115 (BZ)	2800	C D B	200	5.4	pg/g
PCB 116 (BZ)	380	C	20	0.65	pg/g
PCB 117 (BZ)	380	C	20	0.65	pg/g
PCB 118 (BZ)	1300	B	2.0	0.55	pg/g
PCB 119 (BZ)	1300	C B	20	0.70	pg/g
PCB 120 (BZ)	15	J	20	0.59	pg/g
PCB 121 (BZ)	2.0	J Q	20	0.58	pg/g
PCB 122 (BZ)	22		20	0.62	pg/g
PCB 123 (BZ)	17		2.0	0.60	pg/g
PCB 124 (BZ)	60	C	20	0.61	pg/g
PCB 125 (BZ)	1300	C B	20	0.70	pg/g
PCB 126 (BZ)	4.4		2.0	0.66	pg/g
PCB 127 (BZ)	ND		20	0.62	pg/g
PCB 128 (BZ)	450	C B	20	0.53	pg/g
PCB 129 (BZ)	3300	C D B	200	3.7	pg/g
PCB 130 (BZ)	220		20	0.72	pg/g
PCB 131 (BZ)	27		20	0.68	pg/g
PCB 132 (BZ)	980	B	20	0.67	pg/g
PCB 133 (BZ)	84		20	0.66	pg/g
PCB 134 (BZ)	150	C	20	0.73	pg/g
PCB 135 (BZ)	1600	C B	20	0.62	pg/g
PCB 136 (BZ)	410		20	0.47	pg/g
PCB 137 (BZ)	32		20	0.48	pg/g
PCB 138 (BZ)	3300	C D B	200	3.7	pg/g
PCB 139 (BZ)	65	C	20	0.58	pg/g
PCB 140 (BZ)	65	C	20	0.58	pg/g
PCB 141 (BZ)	80	B	20	0.77	pg/g
PCB 142 (BZ)	ND		20	0.79	pg/g
PCB 143 (BZ)	150	C	20	0.73	pg/g
PCB 144 (BZ)	110		20	0.61	pg/g

FutureNet Group, Inc

Sample ID: DS-11-MU5

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 002	**Work Order #....:**	MNVJL1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.98
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.09 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 145 (BZ)	ND		20	0.73	pg/g
PCB 146 (BZ)	**590**		**20**	**0.49**	**pg/g**
PCB 147 (BZ)	**3100**	**C D B**	**200**	**4.0**	**pg/g**
PCB 148 (BZ)	**16**	**J**	**20**	**0.59**	**pg/g**
PCB 149 (BZ)	**3100**	**C D B**	**200**	**4.0**	**pg/g**
PCB 150 (BZ)	**8.2**	**J**	**20**	**0.45**	**pg/g**
PCB 151 (BZ)	**1600**	**C B**	**20**	**0.62**	**pg/g**
PCB 152 (BZ)	**3.3**	**J Q**	**20**	**0.43**	**pg/g**
PCB 153 (BZ)	**2900**	**C D B**	**200**	**3.2**	**pg/g**
PCB 154 (BZ)	**83**		**20**	**0.57**	**pg/g**
PCB 155 (BZ)	ND		20	0.44	pg/g
PCB 156 (BZ)	**260**	**C B**	**4.0**	**0.94**	**pg/g**
PCB 157 (BZ)	**260**	**C B**	**4.0**	**0.94**	**pg/g**
PCB 158 (BZ)	**200**		**20**	**0.48**	**pg/g**
PCB 159 (BZ)	**16**	**J**	**20**	**0.75**	**pg/g**
PCB 160 (BZ)	ND		20	0.60	pg/g
PCB 161 (BZ)	ND		20	0.60	pg/g
PCB 162 (BZ)	**12**	**J B**	**20**	**0.76**	**pg/g**
PCB 163 (BZ)	**3300**	**C D B**	**200**	**3.7**	**pg/g**
PCB 164 (BZ)	**280**		**20**	**0.61**	**pg/g**
PCB 165 (BZ)	**2.7**	**J**	**20**	**0.51**	**pg/g**
PCB 166 (BZ)	**450**	**C B**	**20**	**0.53**	**pg/g**
PCB 167 (BZ)	**91**		**2.0**	**0.70**	**pg/g**
PCB 168 (BZ)	**2900**	**C D B**	**200**	**3.2**	**pg/g**
PCB 169 (BZ)	ND		2.0	0.82	pg/g
PCB 170 (BZ)	**580**	**B**	**20**	**0.70**	**pg/g**
PCB 171 (BZ)	**270**	**C**	**20**	**0.72**	**pg/g**
PCB 172 (BZ)	**98**		**20**	**0.67**	**pg/g**
PCB 173 (BZ)	**270**	**C**	**20**	**0.72**	**pg/g**
PCB 174 (BZ)	**740**		**20**	**0.82**	**pg/g**
PCB 175 (BZ)	**28**		**20**	**0.19**	**pg/g**
PCB 176 (BZ)	**140**		**20**	**0.14**	**pg/g**
PCB 177 (BZ)	**730**		**20**	**0.70**	**pg/g**
PCB 178 (BZ)	**280**		**20**	**0.20**	**pg/g**
PCB 179 (BZ)	**540**		**20**	**0.15**	**pg/g**
PCB 180 (BZ)	**300**	**C B**	**20**	**0.57**	**pg/g**

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FutureNet Group, Inc

Sample ID: DS-11-MU5

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 002	**Work Order #....:**	MNVJL1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.98
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.09 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 181 (BZ)	ND		20	0.57	pg/g
PCB 182 (BZ)	ND		20	0.19	pg/g
PCB 183 (BZ)	**330**		**20**	**0.43**	**pg/g**
PCB 184 (BZ)	**1.7**	**J**	**20**	**0.16**	**pg/g**
PCB 185 (BZ)	**170**		**20**	**0.74**	**pg/g**
PCB 186 (BZ)	ND		20	0.15	pg/g
PCB 187 (BZ)	**2200**	**D B**	**200**	**1.6**	**pg/g**
PCB 188 (BZ)	**3.0**	**J**	**20**	**0.17**	**pg/g**
PCB 189 (BZ)	**24**		**2.0**	**0.35**	**pg/g**
PCB 190 (BZ)	**170**		**20**	**0.47**	**pg/g**
PCB 191 (BZ)	**12**	**J**	**20**	**0.51**	**pg/g**
PCB 192 (BZ)	ND		20	0.53	pg/g
PCB 193 (BZ)	**300**	**C B**	**20**	**0.57**	**pg/g**
PCB 194 (BZ)	**120**		**20**	**0.53**	**pg/g**
PCB 195 (BZ)	**160**		**20**	**0.55**	**pg/g**
PCB 196 (BZ)	**83**		**20**	**0.20**	**pg/g**
PCB 197 (BZ)	**19**	**J**	**20**	**0.14**	**pg/g**
PCB 198 (BZ)	**630**	**C**	**20**	**0.23**	**pg/g**
PCB 199 (BZ)/200 (IUPAC)	**93**		**20**	**0.22**	**pg/g**
PCB 200 (BZ)/201 (IUPAC)	**81**		**20**	**0.16**	**pg/g**
PCB 201 (BZ)/199 (IUPAC)	**630**	**C**	**20**	**0.23**	**pg/g**
PCB 202 (BZ)	**130**		**20**	**0.18**	**pg/g**
PCB 203 (BZ)	**380**		**20**	**0.23**	**pg/g**
PCB 204 (BZ)	ND		20	0.16	pg/g
PCB 205 (BZ)	**21**		**20**	**0.40**	**pg/g**
PCB 206 (BZ)	**150**		**20**	**0.39**	**pg/g**
PCB 207 (BZ)	**23**		**20**	**0.26**	**pg/g**
PCB 208 (BZ)	**81**		**20**	**0.25**	**pg/g**
PCB 209 (BZ)	**120**	**B**	**20**	**0.15**	**pg/g**

FutureNet Group, Inc

Sample ID: DS-11-MU5

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 002	**Work Order #....:**	MNVJL1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.98
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.09 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

INTERNAL STANDARDS	PERCENT RECOVERY		RECOVERY LIMITS
13C12-PCB 1	37		15 - 150
13C12-PCB 3	44		15 - 150
13C12-PCB 4	41		25 - 150
13C12-PCB 19	47		25 - 150
13C12-PCB 37	68		25 - 150
13C12-PCB 54	48		25 - 150
13C12-PCB 77	73		25 - 150
13C12-PCB 81	76		25 - 150
13C12-PCB 104	55		25 - 150
13C12-PCB 105	66		25 - 150
13C12-PCB 114	69		25 - 150
13C12-PCB 118	71		25 - 150
13C12-PCB 123	71		25 - 150
13C12-PCB 126	70		25 - 150
13C12-PCB 155	66		25 - 150
13C12-PCB 156	77	C	25 - 150
13C12-PCB 157	77	C	25 - 150
13C12-PCB 167	78		25 - 150
13C12-PCB 169	76		25 - 150
13C12-PCB 188	86		25 - 150
13C12-PCB 189	84		25 - 150
13C12-PCB 202	89		25 - 150
13C12-PCB 205	76		25 - 150
13C12-PCB 206	85		25 - 150
13C12-PCB 208	84		25 - 150
13C12-PCB 209	79		25 - 150

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C12-PCB 28	60	30 - 135
13C12-PCB 178	66	30 - 135
13C12-PCB 111	65	30 - 135

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FutureNet Group, Inc

Sample ID: DS-11-MU5

Trace Level Organic Compounds

Lot - Sample #....:	G1K090434 - 002	**Work Order #....:**	MNVJL1AA	**Matrix....:**	BIOLOGICAL
Date Sampled....:	11/04/11	**Date Received....:**	11/09/11	**Dilution Factor:**	1.98
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	10.09 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

QUALIFIERS

B Method blank contamination. The associated method blank contains the target analyte at a reportable level.

C Co-eluting isomer.

D Result was obtained from the analysis of a dilution

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

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FutureNet Group, Inc

Client Sample ID: LAB CONTROL

Trace Level Organic Compounds

Lot-Sample #...: G1K090434-001 Work Order #...: MNVJK1AC Matrix.....: BIOLOGIC
Date Sampled...: 11/04/11 Date Received..: 11/09/11
Prep Date.....: 11/15/11 Analysis Date..: 11/17/11
Prep Batch #...: 1319170
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
Percent Lipids	1.6	0.10	%	SW846 8290

FutureNet Group, Inc

Client Sample ID: DS-11-MU5

Trace Level Organic Compounds

Lot-Sample #...: G1K090434-002 Work Order #...: MNVJL1AC Matrix.....: BIOLOGIC
Date Sampled...: 11/04/11 Date Received..: 11/09/11
Prep Date.....: 11/15/11 Analysis Date..: 11/17/11
Prep Batch #...: 1319170
Dilution Factor: 1
% Moisture.....:

PARAMETER	RESULT	DETECTION LIMIT	UNITS	METHOD
Percent Lipids	1.5	0.10	%	SW846 8290

QC DATA ASSOCIATION SUMMARY

G1K090434

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	BIOLOGIC	EPA-22 1668A		1319160	
	BIOLOGIC	SW846 8290		1319170	
002	BIOLOGIC	EPA-22 1668A		1319160	
	BIOLOGIC	SW846 8290		1319170	

Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G1K150000 - 160B	**Work Order #....:**	MN1VD1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	2				
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	20 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 1 (BZ)	ND		20	0.39	pg/g
PCB 2 (BZ)	ND		20	0.26	pg/g
PCB 3 (BZ)	ND		20	0.66	pg/g
PCB 4 (BZ)	ND		20	1.6	pg/g
PCB 5 (BZ)	ND		20	1.3	pg/g
PCB 6 (BZ)	ND		20	1.4	pg/g
PCB 7 (BZ)	ND		20	1.3	pg/g
PCB 8 (BZ)	ND		20	1.4	pg/g
PCB 9 (BZ)	ND		20	1.5	pg/g
PCB 10 (BZ)	ND		20	0.79	pg/g
PCB 11 (BZ)	**12**	**J**	**20**	**1.4**	**pg/g**
PCB 12 (BZ)	ND		20	1.4	pg/g
PCB 13 (BZ)	ND		20	1.4	pg/g
PCB 14 (BZ)	ND		20	1.2	pg/g
PCB 15 (BZ)	ND		20	0.96	pg/g
PCB 16 (BZ)	ND		20	0.97	pg/g
PCB 17 (BZ)	ND		20	0.56	pg/g
PCB 18 (BZ)	**1.1**	**C J**	**20**	**0.22**	**pg/g**
PCB 19 (BZ)	ND		20	0.30	pg/g
PCB 20 (BZ)	**1.9**	**C J**	**20**	**0.27**	**pg/g**
PCB 21 (BZ)	**1.0**	**C J Q**	**20**	**0.26**	**pg/g**
PCB 22 (BZ)	**0.81**	**J Q**	**20**	**0.28**	**pg/g**
PCB 23 (BZ)	ND		20	0.26	pg/g
PCB 24 (BZ)	ND		20	0.20	pg/g
PCB 25 (BZ)	ND		20	0.27	pg/g
PCB 26 (BZ)	ND		20	0.26	pg/g
PCB 27 (BZ)	ND		20	0.19	pg/g
PCB 28 (BZ)	**1.9**	**C J**	**20**	**0.27**	**pg/g**
PCB 29 (BZ)	ND		20	0.26	pg/g
PCB 30 (BZ)	**1.1**	**C J**	**20**	**0.22**	**pg/g**
PCB 31 (BZ)	**2.0**	**J**	**20**	**0.25**	**pg/g**
PCB 32 (BZ)	ND		20	0.52	pg/g
PCB 33 (BZ)	**1.0**	**C J Q**	**20**	**0.26**	**pg/g**
PCB 34 (BZ)	ND		20	0.27	pg/g
PCB 35 (BZ)	ND		20	0.28	pg/g
PCB 36 (BZ)	ND		20	0.25	pg/g

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Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G1K150000 - 160B	**Work Order #....:**	MN1VD1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	2				
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	20 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 37 (BZ)	**0.52**	**J Q**	**20**	**0.25**	**pg/g**
PCB 38 (BZ)	ND		20	0.28	pg/g
PCB 39 (BZ)	ND		20	0.25	pg/g
PCB 40 (BZ)	**0.27**	**C J**	**20**	**0.16**	**pg/g**
PCB 41 (BZ)	ND		20	0.23	pg/g
PCB 42 (BZ)	**0.32**	**J**	**20**	**0.18**	**pg/g**
PCB 43 (BZ)	ND		20	0.21	pg/g
PCB 44 (BZ)	**5.3**	**C J**	**20**	**0.17**	**pg/g**
PCB 45 (BZ)	ND		20	0.21	pg/g
PCB 46 (BZ)	ND		20	0.21	pg/g
PCB 47 (BZ)	**5.3**	**C J**	**20**	**0.17**	**pg/g**
PCB 48 (BZ)	**0.41**	**J**	**20**	**0.18**	**pg/g**
PCB 49 (BZ)	**0.80**	**C J**	**20**	**0.14**	**pg/g**
PCB 50 (BZ)	**0.33**	**C J Q**	**20**	**0.17**	**pg/g**
PCB 51 (BZ)	**1.1**	**J**	**20**	**0.16**	**pg/g**
PCB 52 (BZ)	**1.8**	**J**	**20**	**0.18**	**pg/g**
PCB 53 (BZ)	**0.33**	**C J Q**	**20**	**0.17**	**pg/g**
PCB 54 (BZ)	ND		20	0.10	pg/g
PCB 55 (BZ)	ND		20	0.20	pg/g
PCB 56 (BZ)	**0.38**	**J**	**20**	**0.21**	**pg/g**
PCB 57 (BZ)	ND		20	0.20	pg/g
PCB 58 (BZ)	ND		20	0.19	pg/g
PCB 59 (BZ)	ND		20	0.13	pg/g
PCB 60 (BZ)	ND		20	0.20	pg/g
PCB 61 (BZ)	**1.9**	**C J Q**	**20**	**0.19**	**pg/g**
PCB 62 (BZ)	ND		20	0.13	pg/g
PCB 63 (BZ)	ND		20	0.18	pg/g
PCB 64 (BZ)	**0.41**	**J**	**20**	**0.12**	**pg/g**
PCB 65 (BZ)	**5.3**	**C J**	**20**	**0.17**	**pg/g**
PCB 66 (BZ)	**0.88**	**J**	**20**	**0.20**	**pg/g**
PCB 67 (BZ)	ND		20	0.19	pg/g
PCB 68 (BZ)	**0.64**	**J**	**20**	**0.18**	**pg/g**
PCB 69 (BZ)	**0.80**	**C J**	**20**	**0.14**	**pg/g**
PCB 70 (BZ)	**1.9**	**C J Q**	**20**	**0.19**	**pg/g**
PCB 71 (BZ)	**0.27**	**C J**	**20**	**0.16**	**pg/g**
PCB 72 (BZ)	ND		20	0.19	pg/g

Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G1K150000 - 160B	**Work Order #....:**	MN1VD1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	2				
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	20 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 73 (BZ)	ND		20	0.13	pg/g
PCB 74 (BZ)	**1.9**	**C J Q**	**20**	**0.19**	**pg/g**
PCB 75 (BZ)	ND		20	0.13	pg/g
PCB 76 (BZ)	**1.9**	**C J Q**	**20**	**0.19**	**pg/g**
PCB 77 (BZ)	ND		2.0	0.22	pg/g
PCB 78 (BZ)	ND		20	0.21	pg/g
PCB 79 (BZ)	ND		20	0.18	pg/g
PCB 80 (BZ)	ND		20	0.18	pg/g
PCB 81 (BZ)	ND		2.0	0.19	pg/g
PCB 82 (BZ)	ND		20	0.37	pg/g
PCB 83 (BZ)	ND		20	0.20	pg/g
PCB 84 (BZ)	ND		20	0.49	pg/g
PCB 85 (BZ)	ND		20	0.24	pg/g
PCB 86 (BZ)	**0.92**	**C J**	**20**	**0.18**	**pg/g**
PCB 87 (BZ)	**0.92**	**C J**	**20**	**0.18**	**pg/g**
PCB 88 (BZ)	ND		20	0.20	pg/g
PCB 89 (BZ)	ND		20	0.22	pg/g
PCB 90 (BZ)	**1.0**	**C J Q**	**20**	**0.18**	**pg/g**
PCB 91 (BZ)	ND		20	0.20	pg/g
PCB 92 (BZ)	ND		20	0.21	pg/g
PCB 93 (BZ)	ND		20	0.19	pg/g
PCB 94 (BZ)	ND		20	0.22	pg/g
PCB 95 (BZ)	**0.94**	**J**	**20**	**0.20**	**pg/g**
PCB 96 (BZ)	ND		20	0.11	pg/g
PCB 97 (BZ)	**0.92**	**C J**	**20**	**0.18**	**pg/g**
PCB 98 (BZ)	ND		20	0.21	pg/g
PCB 99 (BZ)	**0.65**	**J Q**	**20**	**0.18**	**pg/g**
PCB 100 (BZ)	ND		20	0.19	pg/g
PCB 101 (BZ)	**1.0**	**C J Q**	**20**	**0.18**	**pg/g**
PCB 102 (BZ)	ND		20	0.21	pg/g
PCB 103 (BZ)	ND		20	0.19	pg/g
PCB 104 (BZ)	ND		20	0.12	pg/g
PCB 105 (BZ)	**0.94**	**J Q**	**2.0**	**0.16**	**pg/g**
PCB 106 (BZ)	ND		20	0.19	pg/g
PCB 107 (BZ)/109 (IUPAC)	ND		20	0.13	pg/g
PCB 108 (BZ)/107 (IUPAC)	ND		20	0.16	pg/g

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Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G1K150000 - 160B	**Work Order #....:**	MN1VD1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	2				
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	20 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 109 (BZ)/108 (IUPAC)	**0.92**	**C J**	**20**	**0.18**	**pg/g**
PCB 110 (BZ)	**1.5**	**C J Q**	**20**	**0.16**	**pg/g**
PCB 111 (BZ)	ND		20	0.15	pg/g
PCB 112 (BZ)	ND		20	0.20	pg/g
PCB 113 (BZ)	**1.0**	**C J Q**	**20**	**0.18**	**pg/g**
PCB 114 (BZ)	ND		2.0	0.16	pg/g
PCB 115 (BZ)	**1.5**	**C J Q**	**20**	**0.16**	**pg/g**
PCB 116 (BZ)	ND		20	0.24	pg/g
PCB 117 (BZ)	ND		20	0.24	pg/g
PCB 118 (BZ)	**1.3**	**J**	**2.0**	**0.14**	**pg/g**
PCB 119 (BZ)	**0.92**	**C J**	**20**	**0.18**	**pg/g**
PCB 120 (BZ)	ND		20	0.15	pg/g
PCB 121 (BZ)	ND		20	0.15	pg/g
PCB 122 (BZ)	ND		20	0.16	pg/g
PCB 123 (BZ)	ND		2.0	0.13	pg/g
PCB 124 (BZ)	ND		20	0.16	pg/g
PCB 125 (BZ)	**0.92**	**C J**	**20**	**0.18**	**pg/g**
PCB 126 (BZ)	ND		2.0	0.17	pg/g
PCB 127 (BZ)	ND		20	0.16	pg/g
PCB 128 (BZ)	**0.27**	**C J**	**20**	**0.11**	**pg/g**
PCB 129 (BZ)	**1.3**	**C J Q**	**20**	**0.12**	**pg/g**
PCB 130 (BZ)	ND		20	0.15	pg/g
PCB 131 (BZ)	ND		20	0.15	pg/g
PCB 132 (BZ)	**0.41**	**J**	**20**	**0.14**	**pg/g**
PCB 133 (BZ)	ND		20	0.14	pg/g
PCB 134 (BZ)	ND		20	0.15	pg/g
PCB 135 (BZ)	**0.41**	**C J**	**20**	**0.13**	**pg/g**
PCB 136 (BZ)	ND		20	0.10	pg/g
PCB 137 (BZ)	ND		20	0.10	pg/g
PCB 138 (BZ)	**1.3**	**C J Q**	**20**	**0.12**	**pg/g**
PCB 139 (BZ)	ND		20	0.12	pg/g
PCB 140 (BZ)	ND		20	0.12	pg/g
PCB 141 (BZ)	**0.31**	**J**	**20**	**0.16**	**pg/g**
PCB 142 (BZ)	ND		20	0.17	pg/g
PCB 143 (BZ)	ND		20	0.15	pg/g
PCB 144 (BZ)	ND		20	0.13	pg/g

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Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G1K150000 - 160B	**Work Order #....:**	MN1VD1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	2				
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	20 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 145 (BZ)	ND		20	0.10	pg/g
PCB 146 (BZ)	ND		20	0.10	pg/g
PCB 147 (BZ)	**0.83**	**C J**	**20**	**0.13**	**pg/g**
PCB 148 (BZ)	ND		20	0.13	pg/g
PCB 149 (BZ)	**0.83**	**C J**	**20**	**0.13**	**pg/g**
PCB 150 (BZ)	ND		20	0.097	pg/g
PCB 151 (BZ)	**0.41**	**C J**	**20**	**0.13**	**pg/g**
PCB 152 (BZ)	ND		20	0.093	pg/g
PCB 153 (BZ)	**1.0**	**C J**	**20**	**0.10**	**pg/g**
PCB 154 (BZ)	ND		20	0.12	pg/g
PCB 155 (BZ)	ND		20	0.087	pg/g
PCB 156 (BZ)	**0.37**	**C J**	**4.0**	**0.16**	**pg/g**
PCB 157 (BZ)	**0.37**	**C J**	**4.0**	**0.16**	**pg/g**
PCB 158 (BZ)	ND		20	0.10	pg/g
PCB 159 (BZ)	ND		20	0.13	pg/g
PCB 160 (BZ)	ND		20	0.13	pg/g
PCB 161 (BZ)	ND		20	0.13	pg/g
PCB 162 (BZ)	**0.50**	**J**	**20**	**0.13**	**pg/g**
PCB 163 (BZ)	**1.3**	**C J Q**	**20**	**0.12**	**pg/g**
PCB 164 (BZ)	ND		20	0.13	pg/g
PCB 165 (BZ)	ND		20	0.11	pg/g
PCB 166 (BZ)	**0.27**	**C J**	**20**	**0.11**	**pg/g**
PCB 167 (BZ)	ND		2.0	0.12	pg/g
PCB 168 (BZ)	**1.0**	**C J**	**20**	**0.10**	**pg/g**
PCB 169 (BZ)	ND		2.0	0.16	pg/g
PCB 170 (BZ)	**0.75**	**J Q**	**20**	**0.16**	**pg/g**
PCB 171 (BZ)	ND		20	0.16	pg/g
PCB 172 (BZ)	ND		20	0.15	pg/g
PCB 173 (BZ)	ND		20	0.16	pg/g
PCB 174 (BZ)	ND		20	0.18	pg/g
PCB 175 (BZ)	ND		20	0.092	pg/g
PCB 176 (BZ)	ND		20	0.068	pg/g
PCB 177 (BZ)	ND		20	0.15	pg/g
PCB 178 (BZ)	ND		20	0.096	pg/g
PCB 179 (BZ)	ND		20	0.073	pg/g
PCB 180 (BZ)	**0.57**	**C J Q**	**20**	**0.12**	**pg/g**

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Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G1K150000 - 160B	**Work Order #....:**	MN1VD1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	2				
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	20 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

PARAMETER	RESULT		MINIMUM LEVEL	ESTIMATED DETECTION LIMIT	UNITS
PCB 181 (BZ)	ND		20	0.13	pg/g
PCB 182 (BZ)	ND		20	0.093	pg/g
PCB 183 (BZ)	ND		20	0.095	pg/g
PCB 184 (BZ)	ND		20	0.076	pg/g
PCB 185 (BZ)	ND		20	0.16	pg/g
PCB 186 (BZ)	ND		20	0.070	pg/g
PCB 187 (BZ)	**0.41**	**J**	**20**	**0.080**	**pg/g**
PCB 188 (BZ)	ND		20	0.080	pg/g
PCB 189 (BZ)	ND		2.0	0.12	pg/g
PCB 190 (BZ)	ND		20	0.10	pg/g
PCB 191 (BZ)	ND		20	0.11	pg/g
PCB 192 (BZ)	ND		20	0.12	pg/g
PCB 193 (BZ)	**0.57**	**C J Q**	**20**	**0.12**	**pg/g**
PCB 194 (BZ)	ND		20	0.13	pg/g
PCB 195 (BZ)	ND		20	0.13	pg/g
PCB 196 (BZ)	ND		20	0.072	pg/g
PCB 197 (BZ)	ND		20	0.048	pg/g
PCB 198 (BZ)	ND		20	0.082	pg/g
PCB 199 (BZ)/200 (IUPAC)	ND		20	0.077	pg/g
PCB 200 (BZ)/201 (IUPAC)	ND		20	0.057	pg/g
PCB 201 (BZ)/199 (IUPAC)	ND		20	0.082	pg/g
PCB 202 (BZ)	ND		20	0.057	pg/g
PCB 203 (BZ)	ND		20	0.081	pg/g
PCB 204 (BZ)	ND		20	0.058	pg/g
PCB 205 (BZ)	ND		20	0.11	pg/g
PCB 206 (BZ)	ND		20	0.21	pg/g
PCB 207 (BZ)	ND		20	0.13	pg/g
PCB 208 (BZ)	ND		20	0.084	pg/g
PCB 209 (BZ)	**0.66**	**J**	**20**	**0.10**	**pg/g**

Method Blank Report

Trace Level Organic Compounds

Lot - Sample #....:	G1K150000 - 160B	**Work Order #....:**	MN1VD1AA	**Matrix....:**	BIOLOGICAL
Dilution Factor:	2				
Prep Date....:	11/15/11	**Analysis Date....:**	11/17/11		
Prep Batch # ....:	1319160				
Initial Wgt/Vol :	20 g	**Instrument ID....:**	12D8	**Method:**	EPA-22 1668A
Analyst ID....:	Lisa L. Hernandez				

INTERNAL STANDARDS	PERCENT RECOVERY		RECOVERY LIMITS
13C12-PCB 1	30		15 - 150
13C12-PCB 3	35		15 - 150
13C12-PCB 4	36		25 - 150
13C12-PCB 19	53		25 - 150
13C12-PCB 37	67		25 - 150
13C12-PCB 54	56		25 - 150
13C12-PCB 77	72		25 - 150
13C12-PCB 81	79		25 - 150
13C12-PCB 104	50		25 - 150
13C12-PCB 105	70		25 - 150
13C12-PCB 114	70		25 - 150
13C12-PCB 118	74		25 - 150
13C12-PCB 123	83		25 - 150
13C12-PCB 126	74		25 - 150
13C12-PCB 155	77		25 - 150
13C12-PCB 156	86	C	25 - 150
13C12-PCB 157	86	C	25 - 150
13C12-PCB 167	87		25 - 150
13C12-PCB 169	75		25 - 150
13C12-PCB 188	92		25 - 150
13C12-PCB 189	87		25 - 150
13C12-PCB 202	105		25 - 150
13C12-PCB 205	75		25 - 150
13C12-PCB 206	68		25 - 150
13C12-PCB 208	89		25 - 150
13C12-PCB 209	65		25 - 150

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C12-PCB 28	66	30 - 135
13C12-PCB 178	73	30 - 135
13C12-PCB 111	86	30 - 135

QUALIFIERS

C Co-eluting isomer.

J Estimated Result.

Q Estimated maximum possible concentration (EMPC).

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LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...:	G1K090434	**Work Order # ...:**	MN1VD1AC-LCS	**Matrix .....:**	BIOLOGICAI
LCS Lot-Sample# :	G1K150000 - 160				
Prep Date .....:	11/15/11	**Analysis Date ..:**	11/17/11		
Prep Batch # ...:	1319160				
Dilution Factor :	2				
Analyst ID.....:	Lisa L. Hernandez	**Instrument ID..:**	12D8	**Method.....:**	EPA-22 1668A
Initial Wgt/Vol:	20 g				

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY		RECOVERY LIMITS
PCB 1 (BZ)	**200**	**216**	**pg/g**	**108**		**(50 - 150)**
PCB 3 (BZ)	**200**	**212**	**pg/g**	**106**		**(50 - 150)**
PCB 4 (BZ)	**200**	**203**	**pg/g**	**102**		**(50 - 150)**
PCB 15 (BZ)	**200**	**207**	**pg/g**	**103**		**(50 - 150)**
PCB 19 (BZ)	**200**	**194**	**pg/g**	**97**		**(50 - 150)**
PCB 37 (BZ)	**200**	**189**	**pg/g**	**94**		**(50 - 150)**
PCB 54 (BZ)	**200**	**196**	**pg/g**	**98**		**(50 - 150)**
PCB 77 (BZ)	**200**	**201**	**pg/g**	**100**		**(50 - 150)**
PCB 81 (BZ)	**200**	**197**	**pg/g**	**99**		**(50 - 150)**
PCB 104 (BZ)	**200**	**188**	**pg/g**	**94**		**(50 - 150)**
PCB 105 (BZ)	**200**	**189**	**pg/g**	**94**		**(50 - 150)**
PCB 114 (BZ)	**200**	**193**	**pg/g**	**96**		**(50 - 150)**
PCB 118 (BZ)	**200**	**185**	**pg/g**	**92**		**(50 - 150)**
PCB 123 (BZ)	**200**	**191**	**pg/g**	**95**		**(50 - 150)**
PCB 126 (BZ)	**200**	**192**	**pg/g**	**96**		**(50 - 150)**
PCB 155 (BZ)	**200**	**197**	**pg/g**	**98**		**(50 - 150)**
PCB 156 (BZ)	**400**	**404**	**pg/g**	**101**	**C**	**(50 - 150)**
PCB 157 (BZ)	**400**	**404**	**pg/g**	**101**	**C**	**(50 - 150)**
PCB 167 (BZ)	**200**	**203**	**pg/g**	**102**		**(50 - 150)**
PCB 169 (BZ)	**200**	**207**	**pg/g**	**103**		**(50 - 150)**
PCB 188 (BZ)	**200**	**199**	**pg/g**	**99**		**(50 - 150)**
PCB 189 (BZ)	**200**	**203**	**pg/g**	**102**		**(50 - 150)**
PCB 202 (BZ)	**200**	**209**	**pg/g**	**104**		**(50 - 150)**
PCB 205 (BZ)	**200**	**199**	**pg/g**	**100**		**(50 - 150)**
PCB 206 (BZ)	**200**	**193**	**pg/g**	**96**		**(50 - 150)**
PCB 208 (BZ)	**200**	**196**	**pg/g**	**98**		**(50 - 150)**
PCB 209 (BZ)	**200**	**196**	**pg/g**	**98**		**(50 - 150)**

INTERNAL STANDARD	PERCENT RECOVERY	RECOVERY LIMITS
13C12-PCB 1	35	(15 - 150)
13C12-PCB 3	36	(15 - 150)
13C12-PCB 4	38	(25 - 150)
13C12-PCB 19	51	(25 - 150)
13C12-PCB 37	73	(25 - 150)
13C12-PCB 54	56	(25 - 150)
13C12-PCB 77	73	(25 - 150)
13C12-PCB 81	76	(25 - 150)
13C12-PCB 104	47	(25 - 150)
13C12-PCB 105	72	(25 - 150)
13C12-PCB 114	73	(25 - 150)

LABORATORY CONTROL SAMPLE DATA REPORT

Trace Level Organic Compounds

Client Lot # ...: G1K090434 **Work Order # ...:** MN1VD1AC-LCS **Matrix .....:** BIOLOGICAI
LCS Lot-Sample# : G1K150000 - 160

INTERNAL STANDARD	PERCENT RECOVERY		RECOVERY LIMITS
13C12-PCB 118	73		(25 - 150)
13C12-PCB 123	78		(25 - 150)
13C12-PCB 126	72		(25 - 150)
13C12-PCB 155	69		(25 - 150)
13C12-PCB 156	83	**C**	(25 - 150)
13C12-PCB 157	83	**C**	(25 - 150)
13C12-PCB 167	78		(25 - 150)
13C12-PCB 169	78		(25 - 150)
13C12-PCB 188	90		(25 - 150)
13C12-PCB 189	82		(25 - 150)
13C12-PCB 202	89		(25 - 150)
13C12-PCB 205	71		(25 - 150)
13C12-PCB 206	72		(25 - 150)
13C12-PCB 208	84		(25 - 150)
13C12-PCB 209	71		(25 - 150)

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C12-PCB 28	71	(30 - 135)
13C12-PCB 178	74	(30 - 135)
13C12-PCB 111	80	(30 - 135)

Notes:

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

C Co-eluting isomer.

Appendix O

Statistical Analysis of Lumbriculus Tissue PCB Data

Table of Contents

Sample Methodology: 3
26 PCB Congeners Analysis Results: 4
209 PCB Congeners Analysis Results: 4
22 PCB Congeners Analysis Statistical Results: 4
22 PCB Congeners Analysis Results Compared to 209 PCB Congeners Analysis Results : 11
22 PCB Congeners Box and Whisker Plots and Multiple Range Tests Results: 12

Table of Tables

Table 1: Sample Analysis Date 3
Table 2: Total 22 PCB Statistical Summary Results (ND=MDL) 6
Table 3: Total 22 PCB Statistical Summary Results (ND=0) 8
Table 4: Normalized 22 PCBs Difference Between ND = MDL and ND = 0 10
Table 5: Difference Between Methods 1668 and 8082 and Between 209 Congeners and 2x22 Congeners 11
Table 6: Accuracy Between Methods 1668 and 8082 and Between 209 Congeners and 2x26 Congeners 12
Table 7: Averaged Total PCB Congeners Statistical Summary Results ND=MDL 13
Table 8: Averaged Normalized Total PCB Congeners Statistical Summary Results ND=MDL 13
Table 9: Average Total PCB Congeners Statistical Summary Results ND=0 14
Table 10: Average Normalized Total PCB Congeners Statistical Summary Results ND=0 14

Table of Attachments

Attachment A – Tables

Table O-1: Lumbriculus 26 PCB Congeners Analysis Results Summary
Table O-2: Management Units Lumbriculus Statistical Analysis ND=MDL
Table O-3: Placement Units Lumbriculus Statistical Analysis ND=MDL
Table O-4: Management Units Lumbriculus Statistical Analysis ND=0
Table O-5: Placement Units Lumbriculus Statistical Analysis ND=0

Attachment B – Box Plots and Multiple Range Tests

This Appendix documents the PCB statistical analysis results for the Duluth-Superior Harbor Lumbriculus Tissue samples for 26 PCB congeners. The purpose of this statistical comparison is to determine if the sediment located in the six (6) management units can be deposited in any of the open water placement units.

Sample Methodology:

A single composite sample was collected and analyzed for each management unit and each placement unit. Each sample analyzed was composited of five sample locations. Each sample location is a composite sample based on sediments collected by either ponar sampler or gravity core sampler.

Each placement unit (MOPU, WOPU, HIPU and IIPU) were collected only using the ponar sampler. The six (6) management units (MU1, MU2, MU3, MU4, MU5 and MU6) were sampled using both types of equipment.

- MU-1 ponar only
- MU-2 gravity only
- MU-3 3-ponar, 2 gravity
- MU-4, 2 ponar, 3 gravity
- MU-5 3 ponar, 2 gravity
- MU-6 3 ponar, 2 gravity

Each composite sample was sent to GLEC (Traverse City, Michigan) to grow, manage, and harvest Lumbriculus worms. Each sample was grown in groups of five (5) sets for analysis and determination of PCB congener impacts and statistical data analysis. Information concerning the GLEC procedures and protocols for the Lumbriculus test are included in the Duluth-Superior, Minnesota-Wisconsin Open Water Evaluation Sediment Sampling, Analysis and Biological Testing Report **Appendix L**.

The harvested organisms were then sent to RTI Laboratories Inc. (Livonia, Michigan) or Test America (West Sacramento, California) for PCB congener analysis of tissue samples. Laboratory reports test are included in the Duluth-Superior, Minnesota-Wisconsin Open Water Evaluation Sediment Sampling, Analysis and Biological Testing Report **Appendices M and N.**

Due to the size of the project, the samples were exposed in two batches. Each batch contained two placement units (PU) and three management units (MU). The first batch was harvested in October and the second batch was harvested in November.

Table 1: Sample Analysis Date

October	November
DS-11-MOPU	DS-11-WOPU
DS-11-HIPU	DS-11-IIPU
DS-11- MU2	DS-11-MU1
DS-11-MU3	DS-11-MU5
DS-11-MU4	DS-11-MU6

26 PCB Congeners Analysis Results:

Fifty-six (56) Lumbriculus samples were sent by GLEC to RTI for PCB analysis of 26 congeners using EPA Method 8082. The samples included:

- two (2) Day 0 sample (no exposure),
- two (2) sets of four (4) replicates of a laboratory control sample,
- five (5) replicates of samples DS-11-MU1, DS-11-MU2, DS-11-MU3, DS-11-MU4, DS-11-MU6, DS-11-WOPU, DS-11-HIPU, and DS-11-IIPU, and
- four (4) replicates of the DS-11-MU5 and DS-11-MOPU samples.

This data is summarized in test are included in the Duluth-Superior, Minnesota-Wisconsin Open Water Evaluation Sediment Sampling, Analysis and Biological Testing Report **Appendix C Tables 7 and 8.** The results indicated:

- Sample DS-11-MU6 and Sample DS-11-WOPU did not have detectable levels of PCBs.
- DS-11-MU1 had 6 detected congeners, DS-11-MU2 and DS-11-MU4 had 13 detected congeners, DS-11-MU3 had 11 detected congeners, and DS-11-MU5 had 7 detected congeners.
- DS-11-IIPU had 6 detected congeners, DS-11-HIPU had 9 detected congeners, and DS-11-MOPU had 7 detected congeners.

Total PCBs were calculated for each sample for both non-detect (ND) equals to the method detection limit (MDL) and to zero (0) (**Appendix C Tables 7 and 8)**. A summary table of all Total PCBs and Normalized PCBs (both 22 PCBs and 26 PCBs) is included in **Attachment 1 Table O1**.

209 PCB Congeners Analysis Results:

Four (4) Lumbriculus samples were sent to Test America by GLEC for PCB analysis of the 209 PCB congeners using EPA method 1668. One (1) replicate was sent of DS-11-MU5 and DS-11-MOPU. The other two samples were laboratory control samples (LCS). One LCS was associated with each sample batch (October and November). The LCS sample was submitted for analysis to confirm the GLEC laboratory methods. This data is summarized in **Appendix C Tables 9 and 10,** and included total PCBs calculated for each sample for both ND=MDL and ND=0**.**

22 PCB Congeners Analysis Statistical Results:

It was decided to perform all the statistics on 22 congeners and not all 26 analyzed. The 22 congener numbers included 8, 18, 28, 44, 49, 52, 66, 87, 101, 105, 118, 128, 138, 153, 170, 180,183,184, 187, 195, 206 and 209. The four PCB congeners excluded include 77, 110, 126, and 169. Originally all statistics were performed on the data using ND=MDL (Table 2 and **Attachment 1 Table O2 and Attachment Table O3**). The following procedure was followed:

- Total the results of the 22 PCB congeners using ND=MDL.
- Divide Total PCBs by the lipids to determine the total Normalized values.

- Calculate the Normalized Average and Standard Deviation.
- To determine normality and symmetry, the Coefficient of Variation (CV), Skew, and Shapiro Wilk (SW) tests were performed
- The lognormal of each data set was also tested for normality and symmetry.
- The k for the Shapiro-Wilks test was 2 (either 5/2 or 4/2)
- Box Plots were determined for each data set.

The normalized data was calculated by the following equation.

Normalized PCBs = Total 22 PCBs / % Lipids.

Table 2: Total 22 PCB Statistical Summary Results (ND=MDL)

Sample ID	22 Total PCBs * (ppb)	% Lipids	Total Normalized PCBs (ppb)	Normalized PCBs Average	Normalized PCBs Standard Deviation	Normalized PCBs CV	Normalized PCBs Skew	Normalized PCBs SW
DS-11-MU1	8.6 9.3 8.9 10.1 9.2	3.6 3.7 3.7 4.6 3.9	238.2 251.9 241.6 220.2 234.6	237.3	11.5	0.05 0.009 (ln)	-0.49 -0.60 (ln)	0.94 0.94 (ln)
DS-11-MU2	25.0 21.8 19.5 31.1 22.1	3.7 3.3 3.5 4.0 3.7	675.7 659.1 557.4 778.5 597.3	653.6	84.5	0.13 0.02 (ln)	0.62 0.38 (ln)	0.86 0.86 (ln)
DS-11-MU3	21.6 23.6 20.7 18.6 29.0	2.8 3.8 4.1 3.8 2.7	772.1 622.1 504.2 489.0 704.1	618.3	123.3	0.20 0.03 (ln)	0.14 -0.02 (ln)	0.66 0.65 (ln)
DS-11-MU4	11.1 12.8 22.4 22.0 23.3	4.0 2.8 3.9 3.6 4.5	276.8 457.1 575.1 612.2 517.3	487.7	131.8	0.27 0.05 (ln)	-1.24 -1.60 (ln)	0.81 0.79 (ln)
DS-11-MU5	17.8 17.0 16.0 15.9	5.3 3.2 3.4 3.5	335.5 532.2 470.6 454.3	448.1	82.3	0.18 0.03 (ln)	-0.99 -1.27 (ln)	1.91 1.85 (ln)
DS-11-MU6	5.5 5.6 5.5 5.5 5.3	3.3 2.7 3.0 3.5 3.6	166.4 206.3 183.3 158.0 147.8	172.4	23.0	0.13 0.03 (ln)	0.77 0.58 (ln)	0.81 0.81 (ln)

Sample ID	22 Total PCBs * (ppb)	% Lipids	Total Normalized PCBs (ppb)	Normalized PCBs Average	Normalized PCBs Standard Deviation	Normalized PCBs CV	Normalized PCBs Skew	Normalized PCBs SW
DS-11-MOPU	13.1 10.9 11.2 11.0	3.2 3.1 3.6 3.9	410.0 350.0 311.7 282.3	338.5	55.14	0.16 0.03 (ln)	0.68 0.45 (ln)	0.89 0.90 (ln)
DS-11-WOPU	5.5 5.5 5.5 5.7 5.6	3.6 4.1 3.3 3.5 4.0	152.5 133.2 167.3 161.4 139.8	150.8	14.3	0.09 0.02 (ln)	-0.17 -0.26 (ln)	0.71 0.71 (ln)
DS-11-HIPU	17.8 20.2 17.4 16.9 16.9	3.0 2.9 2.6 2.8 2.8	593.3 695.9 670.0 602.9 604.6	633.3	46.4	0.07 0.01 (ln)	0.74 0.72 (ln)	0.61 0.61 (ln)
DS-11-IIPU	9.7 10.2 10.7 11.8 11.0	4.3 3.2 3.9 3.6 4.7	226.5 318.4 274.4 328.1 234.7	276.4	46.6	0.17 0.03 (ln)	0.06 -0.04 (ln)	0.50 0.60 (ln)

* Total PCBs were calculated using the method detection limit (MDL) value for all non-detects.

It was decided to then run the same tests with using zero (0) for all Non-detects (Table 3 and **Attachment 1 Table O4 and Attachment 1 Table O5**).

Table 3: Total 22 PCB Statistical Summary Results (ND=0)

Sample ID	22 Total PCBs * (ppb)	% Lipids	Total Normalized PCBs (ppb)	Normalized PCBs Average	Normalized PCBs Standard Deviation	Normalized PCBs CV	Normalized PCBs Skew	Normalized PCBs SW
DS-11-MU1	4.4 5.1 4.9 6.0 5.0	3.6 3.7 3.7 4.6 3.9	122.5 137.3 131.6 130.9 128.5	130.1	5.3	0.04 0.008 (ln)	-0.30 -0.40 (ln)	0.95 0.95 (ln)
DS-11-MU2	22.4 18.9 16.7 28.9 19.3	3.7 3.3 3.5 4.0 3.7	604.3 573.3 476.6 723.0 520.8	579.6	93.9	0.16 0.02 (ln)	0.84 0.55 (ln)	0.86 0.87 (ln)
DS-11-MU3	18.6 20.7 17.7 15.4 15.4	2.8 3.8 4.1 3.8 2.7	665.0 544.5 431.0 407.6 570.4	523.7	105.7	0.20 0.03 (ln)	0.20 -0.03 (ln)	0.74 0.72 (ln)
DS-11-MU4	7.5 9.6 19.5 19.0 20.8	4.0 2.8 3.9 3.6 4.5	187.5 341.1 500.0 528.9 462.0	403.9	140.5	0.35 0.07 (ln)	-1.10 -1.50 (ln)	0.74 0.73 (ln)
DS-11-MU5	13.8 13.1 12.0 11.9	5.3 3.2 3.4 3.5	260.4 409.4 352.9 339.1	340.5	61.4	0.18 0.03 (ln)	-0.53 -0.88 (ln)	0.98 0.96 (ln)
DS-11-MU6	0.0 0.0 0.0 0.0 0.0	3.3 2.7 3.0 3.5 3.6	0.0 0.0 0.0 0.0 0.0	0.0	0.0	NC	NC	NC

Sample ID	22 Total PCBs * (ppb)	% Lipids	Total Normalized PCBs (ppb)	Normalized PCBs Average	Normalized PCBs Standard Deviation	Normalized PCBs CV	Normalized PCBs Skew	Normalized PCBs SW
DS-11-MOPU	9.1 6.7 7.1 6.5	3.2 3.1 3.6 3.9	285.6 214.8 196.1 165.9	215.6	50.8	0.24 0.04 (ln)	1.08 0.72 (ln)	0.92 0.95 (ln)
DS-11-WOPU	0.0 0.0 0.0 0.0 0.0	3.6 4.1 3.3 3.5 4.0	0.0 0.0 0.0 0.0 0.0	0.0	0.0	NC	NC	NC
DS-11-HIPU	14.5 16.9 14.2 13.5 13.6	3.0 2.9 2.6 2.8 2.8	484.0 583.8 547.3 480.7 485.4	516.2	46.9	0.09 0.01 (ln)	0.93 0.89 (ln)	0.55 0.54 (ln)
DS-11-IIPU	5.6 6.1 6.5 7.8 6.9	4.3 3.2 3.9 3.6 4.7	130.9 189.1 165.6 215.6 146.8	169.6	33.6	0.20 0.04 (ln)	0.38 0.11 (ln)	0.79 0.79 (ln)

* Total PCBs were calculated using zero (0) value for all non-detects.
NC – Not Calculable

Table 4 summarizes the difference between using the method detection limit (MDL) versus zero (0) for the non-detected laboratory value in the calculation of Average Total Normalized (ATN) PCBs value for each composite sample location. This table indicates that there was no obvious pattern in the reduction of the ATN PCB value. These ATN PCB values are calculated in parts per billion (ppb) or ug/kg.

Table 4: Normalized 22 PCBs Difference Between ND = MDL and ND = 0

Placement Unit Normalized 22 PCBs Average				Management Unit Normalized 22 PCBs Average			
ppb	**ND=MDL**	**ND=0**	**Decrease**	**ppb**	**ND=MDL**	**ND=0**	**Decrease**
MOPU	338.5	215.6	36%	**MU-1**	237.3	130.1	45%
WOPU	150.8	0.0	100%	**MU-2**	653.6	579.6	11%
HIPU	633.3	516.2	18%	**MU-3**	618.3	523.7	15%
IIPU	276.4	169.6	39%	**MU-4**	487.7	403.9	17%
				MU-5	448.1	340.5	24%
				MU-6	172.4	0.0	100%

22 PCB Congeners Analysis Results Compared to 209 PCB Congeners Analysis Results :

Table 5 summarized the theory of ATN of PCBs between the two methods 1668 (209 congeners) and 8082 (26 congeners). The MOPU sample indicates there is little difference between the ND-MDL and the ND=0 for the 1668 method, but a larger difference for the 8082 method. The 1668 method detection limits are in parts per trillion (ppt) or pg/g. The 8082 method detection limits are in ppb or ug/kg. The MU-5 sample appears to have more non-detectable results than the MOPU sample.

The 1668 Average Total PCBs was calculated directly from the laboratory report. The 1668 Average Total PCBs co-eluted values were calculated using each co-eluted value only once, as the laboratory reports the total co-eluted value for each congener. Comparing the 1668 co-eluted value to two times the 26 congeners indicate that for this method, the theory may be correct that utilizing the 26 congeners times 2 will provide a statistically similar value to the 209 congeners co-eluted. However this does not seem to be the case for the 8082 method. Three times the 8082 method provides a statistical similar value to the 209 congeners co-eluted value. Table 6 summarized the accuracy between the various calculations.

Table 5: Difference Between Methods 1668 and 8082 and Between 209 Congeners and 2x22 Congeners

PPB	MOPU ND=MDL	MOPU ND=0	Change	MU-5 ND=MDL	MU-5 ND=0	Change
1668 Average Total PCBs 209 congeners	47.4	47.3	0%	78.0	78.0	0%
1668 Average Total PCBs 209 congeners co-eluted	25.4	25.4	0%	42.2	42.2	0%
1668 Average Total 22 Congeners x 2	22.4	22.4	0%	36.0	36.0	0%
8082 Average Total 22 Congeners x2	23.1	14.7	36%	33.3	25.4	24%
1668 ATN PCBs 209 congeners	2,786	2,784	0%	5,203	5,200	0%
1668 ATN PCBs 209 congeners co-eluted	1,495	1,492	0%	2,813	2,811	0%
1668 ATN PCBs 22 congeners x 2	1,319	1,319	0%	2,401	2,401	0%
8082 ATN PCBs 22 Congeners x2	677	431	36%	896	681	24%

Table 6: Accuracy Between Methods 1668 and 8082 and Between 209 Congeners and 2x26 Congeners

PPB	MOPU ND=MDL	MOPU ND=0	MU-5 ND=MDL	MU-5 ND=0
Accuracy Total 1668 vs 2x22 – 1668	52.7%	52.7%	53.9%	53.9%
Accuracy Co-elutrate 1668 vs 2x22 – 1668	11.8%	11.7%	14.7%	14.6%
Accuracy Total 1668 vs 2x22 – 8082	51.2%	68.9%	57.3%	67.4%
Accuracy Co-elutrate 1668 vs 2x22 – 8082	9.1%	42.1%	21.1%	39.8%
Accuracy 2x22 – 1668 vs 2x22 – 8082	3.0%	-52.4%	-8.1%	-41.7%
Accuracy Normalized 1668 vs 2x22 – 1668	52.7%	52.6%	53.9%	53.8%
Accuracy Normalized Co-elutriate 1668 vs 2x22 1668	11.8%	11.6%	14.6%	14.6%
Accuracy Normalized 1668 vs 2x22 – 8082	75.7%	84.5%	82.8%	86.9%
Accuracy Normalized Co-elutriate 1668 vs 2x22 8082	11.8%	11.6%	14.6%	14.6%
Accuracy Normalized 2x22 – 1668 vs2x22 - 8082	48.7%	67.3%	62.7%	71.6%

22 PCB Congeners Box and Whisker Plots and Multiple Range Tests Results:

The total and normalized total 22 congener PCB Lumbriculus data (ND=MDL and ND=0) was run through box and whisker plots and multiple range tests. Both represent means comparisons; the former is a commonly-used graphical representation, while the latter is an analytical summary that employs all possible pairwise t-tests with results reported at the 95% confidence level. The summary table of total PCB data and the complete report are located in **Attachment 2.** Table 7 is Average Total PCBs for ND=MDL, Table 8 is Average Normalized Total PCBs for ND=MDL, Table 9 is Average Total PCBs for ND=0, Table 10 is Average Normalized Total PCBs for ND=0

S Statistically Significant difference between Placement Unit and Management Unit

H Management Unit sample is statistically different higher from the Placement Unit sample. This Placement Unit is not a recommended location for open water disposal location for the Management Unit.

Table 7: Averaged Total PCB Congeners Statistical Summary Results ND=MDL

Statistical Summary		Placement Unit			
		DS-11-MOPU 11.6 ug/kg	DS-11-WOPU 5.5 ug/kg	DS-11-HIPU 17.8 ug/kg	DS-11-IIPU 10.7 ug/kg
Management Unit	DS-11-MU1 9.2 ug/kg		H		
	DS-11-MU2 23.9 ug/kg	H	H	H	H
	DS-11-MU3 20.7 ug/kg	H	H		H
	DS-11-MU4 18.3 ug/kg	H	H		H
	DS-11-MU5 16.7 ug/kg	H	H		H
	DS-11-MU6 5.5 ug/kg				

Table 8: Averaged Normalized Total PCB Congeners Statistical Summary Results ND=MDL

Statistical Summary		Placement Unit			
		DS-11-MOPU 338.5 ug/kg	DS-11-WOPU 150.8 ug/kg	DS-11-HIPU 633.3 ug/kg	DS-11-IIPU 276.4 ug/kg
Management Unit	DS-11-MU1 237.3 ug/kg				
	DS-11-MU2 653.6 ug/kg	H	H		H
	DS-11-MU3 618.3 ug/kg	H	H		H
	DS-11-MU4 487.7 ug/kg	H	H		H
	DS-11-MU5 448.1 ug/kg	H	H		H
	DS-11-MU6 172.3 ug/kg				

Table 9: Average Total PCB Congeners Statistical Summary Results ND=0

Statistical Summary		Placement Unit			
		DS-11-MOPU 7.3 ug/kg	DS-11-WOPU 0.0 ug/kg	DS-11-HIPU 14.6 ug/kg	DS-11-IIPU 6.6 ug/kg
Management Unit	DS-11-MU1 5.1 ug/kg		H		
	DS-11-MU2 21.2 ug/kg	H	H	H	H
	DS-11-MU3 17.5 ug/kg	H	H		H
	DS-11-MU4 15.3 ug/kg	H	H		H
	DS-11-MU5 12.7 ug/kg	H	H		H
	DS-11-MU6 0.0 ug/kg				

Table 10: Average Normalized Total PCB Congeners Statistical Summary Results ND=0

Statistical Summary		Placement Unit			
		DS-11-MOPU 215.6 ug/kg	DS-11-WOPU 0.0 ug/kg	DS-11-HIPU 516.2 ug/kg	DS-11-IIPU 169.6 ug/kg
Management Unit	DS-11-MU1 130.1 ug/kg		H		
	DS-11-MU2 579.6 ug/kg	H	H		H
	DS-11-MU3 523.7 ug/kg	H	H		H
	DS-11-MU4 403.9 ug/kg	H	H		H
	DS-11-MU5 340.5 ug/kg	H	H		H
	DS-11-MU6 0.0 ug/kg				

ATTACHMENT 1 – TABLES

Table O-1: Lumbriculus Analysis Results Summary

Management Unit		Management Unit 1					Management Unit 2					Management Unit 3				
Parameter	Sample Name	DS-11-MU1-1	DS-11-MU1-2	DS-11-MU1-3	DS-11-MU1-4	DS-11-MU1-5	DS-11-MU2 - 1	DS-11-MU2 - 2	DS-11-MU2 - 3	DS-11-MU2 - 4	DS-11-MU2 - 5	DS-11-MU3 - 1	DS-11-MU3 - 2	DS-11-MU3 - 3	DS-11-MU3 - 4	DS-11-MU3 - 5
Total Lipids	%	3.6	3.7	3.7	4.6	3.9	3.7	3.3	3.5	4.0	3.7	2.8	3.8	4.1	3.8	2.7
Total PCBs ND = MDL	µg/Kg	8.6	9.3	8.9	10.1	9.2	25.0	21.8	19.5	31.1	22.1	21.6	23.6	20.7	18.6	19.0
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL	µg/Kg	238.1	251.9	241.6	220.2	234.6	675.7	659.1	557.4	778.5	597.3	772.1	622.1	504.1	488.9	704.1
Total PCBs ND = 0	µg/Kg	4.4	5.1	4.9	6.0	5.0	22.4	18.9	16.7	28.9	19.3	18.6	20.7	17.7	15.5	15.4
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0	µg/Kg	122.5	137.0	131.6	130.9	128.5	604.3	573.3	476.6	723.0	520.8	665.0	544.5	431.0	407.6	570.4

Placement Unit		Wisconsin Open Water Placement Unit					Hearding Island Placement Unit					Interstate Island Placement Unit				
Parameter	Sample Name	DS-11-WOPU-1	DS-11-WOPU-2	DS-11-WOPU-3	DS-11-WOPU-4	DS-11-WOPU-5	DS-11-HIPU - 1	DS-11-HIPU - 2	DS-11-HIPU - 3	DS-11-HIPU - 4	DS-11-HIPU - 5	DS-11-IIPU-1	DS-11-IIPU-2	DS-11-IIPU-3	DS-11-IIPU-4	DS-11-IIPU-5
Total Lipids	%	3.6	4.1	3.3	3.5	4	3	2.9	2.6	2.8	2.8	4.3	3.2	3.9	3.6	4.7
Total PCBs ND = MDL	µg/Kg	5.49	5.46	5.52	5.65	5.59	17.8	20.18	17.42	16.88	16.93	9.74	10.19	10.7	11.81	11.03
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL	µg/Kg	152.5	133.2	167.3	161.4	139.8	593.3	695.9	670.0	602.9	604.6	226.5	318.4	274.4	328.1	234.7
Total PCBs ND = 0	µg/Kg	0.0	0.0	0.0	0.0	0.0	14.5	16.9	14.2	13.5	13.6	5.6	6.1	6.5	7.8	6.9
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0	µg/Kg	0.0	0.0	0.0	0.0	0.0	484.0	583.8	547.3	480.7	485.4	130.9	189.1	165.6	215.6	146.8

Table O-1: Lumbriculus Analysis Results Summary

Management Unit		Management Unit 4					Management Unit 5				Management Unit 6				
Parameter	Sample Name	DS-11-MU4 - 1	DS-11-MU4 - 2	DS-11-MU4 - 3	DS-11-MU4 - 4	DS-11-MU4 - 5	DS-11-MU5-1	DS-11-MU5-2	DS-11-MU5-4	DS-11-MU5-5	DS-11-MU6-1	DS-11-MU6-2	DS-11-MU6-3	DS-11-MU6-4	DS-11-MU6-5
Total Lipids	%	4.0	2.8	3.9	3.6	4.5	5.3	3.2	3.4	3.5	3.3	2.7	3.0	3.5	3.6
Total PCBs ND = MDL	µg/Kg	11.1	12.8	22.4	22.0	23.3	17.8	17.0	16.0	15.9	5.5	5.6	5.5	5.5	5.3
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL	µg/Kg	276.8	457.1	575.1	612.2	517.3	335.5	532.2	470.6	454.3	166.4	206.3	183.3	158.0	147.8
Total PCBs ND = 0	µg/Kg	7.5	9.6	19.5	19.0	20.8	13.8	13.1	12.0	11.9	0.0	0.0	0.0	0.0	0.0
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0	µg/Kg	187.5	341.1	500.0	528.9	462.0	260.4	409.4	352.9	339.1	0.0	0.0	0.0	0.0	0.0

Placement Unit		Minnesota Open Water Placement Unit				Laboratory Control - 10-21-11					Laboratory Control - 11-4-11				
Parameter	Sample Name	DS-11-MOPU - 2	DS-11-MOPU - 3	DS-11-MOPU - 4	DS-11-MOPU - 5	Lab Control 1	Lab Control 2	Lab Control 3	Lab Control 4	Day 0, Background	Lab Control 1	Lab Control 3	Lab Control 4	Lab Control 5	Background
Total Lipids	%	3.2	3.1	3.6	3.9	3.6	3.2	3.5	3.8	3.4	3.9	3.1	3.4	3.7	4.5
Total PCBs ND = MDL	µg/Kg	13.12	10.85	11.22	11.01	5.26	5.53	5.36	5.27	8.5	5.44	5.61	5.45	5.52	5.5
Normalized PCBs Total PCBs x2 / Total Lipids ND = MDL	µg/Kg	410.0	350.0	311.7	282.3	146.1	172.8	153.1	138.7	250.0	139.5	181.0	160.3	149.2	122.2
Total PCBs ND = 0	µg/Kg	9.1	6.7	7.1	6.5	0.0	0.0	0.0	0.0	4.0	0.0	0.0	0.0	0.0	0.0
Normalized PCBs Total PCBs x2 / Total Lipids ND = 0	µg/Kg	285.6	214.8	196.1	165.9	0.0	0.0	0.0	0.0	117.6	0.0	0.0	0.0	0.0	0.0

APPENDIX O - ATTACHMENT 1

Table O-2: Management Units 22 PCB Congeners Statistical Analysis

Management Unit ND = MDL															
Congener	**Congener Number**	**DS-11-MU1-1**	**DS-11-MU1-2**	**DS-11-MU1-3**	**DS-11-MU1-4**	**DS-11-MU1-5**	**Median**	**Average**	**Std. Dev.**	**CV**	**% CV**	**Skew**	**X(n-i+1) - x(i)**	**b**	**SW**
								x	s	s/x	s/x		0.7071		
Total PCBs	**ppb**	**8.57**	**9.32**	**8.94**	**10.13**	**9.15**	9.15	**9.22**	**0.58**	0.0629	6.29	0.96	1.68	1.19	1.05
Lipids fraction	**ppb**	**0.036**	**0.037**	**0.037**	**0.046**	**0.039**									
Normalized PCBs	**ppb**	**238.06**	**251.89**	**241.62**	**220.22**	**234.62**	238.06	**237.28**	**11.52**	0.0486	4.86	-0.49	31.67	22.40	0.94
Ln of Normalized PCBs	**ppb**	**5.47**	**5.53**	**5.49**	**5.39**	**5.46**	5.47	**5.47**	**0.05**	0.0090	0.90	-0.60	0.13	0.10	0.94
2,4´-DiCB	**8**	0.47	0.48	0.46	0.46	0.46	0.46	0.47	0.01						
2,2´,5-TrCB	**18**	0.34	0.35	0.33	0.34	0.34	0.34	0.34	0.01						
2,4,4´-TrCB	**28**	0.15	0.15	0.14	0.14	0.14	0.14	0.14	0.01						
2,2´,3,5´-TeCB	**44**	0.29	0.3	0.28	0.29	0.29	0.29	0.29	0.01						
2,2´,4,5´-TeCB	**49**	0.32	0.32	0.31	0.31	0.32	0.32	0.32	0.01						
2,2´,5,5´-TeCB	**52**	0.38	0.39	0.37	0.38	0.38	0.38	0.38	0.01						
2,3´,4,4´-TeCB	**66**	0.23	0.24	0.23	0.23	0.23	0.23	0.23	0.00						
2,2´,3,4,5´-PeCB	**87**	0.17	0.18	0.17	0.17	0.17	0.17	0.17	0.00						
2,2´,4,5,5´-PeCB	**101**	**0.67**	**0.74**	**0.7**	**0.88**	**0.71**	0.71	**0.74**	**0.08**						
2,3,3´,4,4´-PeCB	**105**	0.18	0.19	0.18	0.18	0.18	0.18	0.18	0.00						
2,3´,4,4´,5-PeCB	**118**	**0.29**	**0.43**	**0.38**	**0.44**	**0.4**	0.40	**0.39**	**0.06**						
2,2´,3,3´,4,4´-HxCB	**128**	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,4,4´,5´-HxCB	**138**	**0.83**	**0.9**	**0.89**	**1.2**	**0.9**	0.90	**0.94**	**0.15**						
2,2´,4,4´,5,5´-HxCB	**153**	**1.7**	**2**	**1.9**	**2.3**	**2**	2.00	**1.98**	**0.22**						
2,2´,3,3´,4,4´,5-HpCB	**170**	0.16	0.17	0.16	0.16	0.16	0.16	0.16	0.00						
2,2´,3,4,4´,5,5´-HpCB	**180**	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.00						
2,2´,3,4,4´,5´,6-HpCB	**183**	0.29	0.29	0.28	0.28	0.29	0.29	0.29	0.01						
2,2´,3,4,4´,6,6´-HpCB	**184**	0.25	0.25	0.24	0.24	0.25	0.25	0.25	0.01						
2,2´,3,4´,5,5´,6-HpCB	**187**	**0.92**	**1**	**1**	**1.2**	**1**	1.00	**1.02**	**0.10**						
2,2´,3,3´,4,4´,5,6-OcCB	**195**	0.2	0.21	0.2	0.2	0.2	0.20	0.20	0.00						
2,2',3,3',4,4',5,5',6-NoCB	**206**	0.18	0.18	0.17	0.18	0.18	0.18	0.18	0.00						
DeCB	**209**	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.00						

APPENDIX O - ATTACHMENT 1

Table O-2: Management Units 22 PCB Congeners Statistical Analysis

Management Unit ND = MDL															
Congener	Congener Number	DS-11-MU2 - 1	DS-11-MU2 - 2	DS-11-MU2 - 3	DS-11-MU2 - 4	DS-11-MU2 - 5	Median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
								x	s	s/x	s/x		0.7071		
Total PCBs	ppb	25	21.75	19.51	31.14	22.1	22.10	23.90	4.49	0.1880	18.80	1.29	12.34	8.73	0.94
% Lipids	ppb	0.037	0.033	0.035	0.04	0.037									
Normalized PCBs	ppb	675.68	659.09	557.43	778.50	597.30	659.09	653.60	84.46	0.1292	12.92	0.62	221.07	156.32	0.86
Ln of Normalized PCBs	ppb	6.52	6.49	6.32	6.66	6.39	6.49	6.48	0.13	0.0197	1.97	0.38	0.33	0.24	0.86
2,4´-DiCB	8	0.46	0.47	0.47	6.6	0.47	0.47	1.69	2.74						
2,2´,5-TrCB	18	0.34	0.34	0.34	0.35	0.34	0.34	0.34	0.00						
2,4,4´-TrCB	28	0.14	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,5´-TeCB	44	0.47	0.42	0.4	0.53	0.41	0.42	0.45	0.05						
2,2´,4,5´-TeCB	49	0.69	0.6	0.49	0.69	0.56	0.60	0.61	0.09						
2,2´,5,5´-TeCB	52	1.4	1.2	1	1.4	1.2	1.20	1.24	0.17						
2,3´,4,4´-TeCB	66	0.23	0.24	0.24	0.24	0.24	0.24	0.24	0.00						
2,2´,3,4,5´-PeCB	87	2.2	1.9	1.7	2.2	1.9	1.90	1.98	0.22						
2,2´,4,5,5´-PeCB	101	3.7	3.3	2.9	3.7	3.3	3.30	3.38	0.33						
2,3,3´,4,4´-PeCB	105	1.2	1.1	0.99	1.2	1.1	1.10	1.12	0.09						
2,3´,4,4´,5-PeCB	118	2	1.8	1.6	2	1.8	1.80	1.84	0.17						
2,2´,3,3´,4,4´-HxCB	128	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,4,4´,5´-HxCB	138	4.4	3.9	3.4	4.4	4.1	4.10	4.04	0.42						
2,2´,4,4´,5,5´-HxCB	153	3.7	3.3	2.9	3.7	3.5	3.50	3.42	0.33						
2,2´,3,3´,4,4´,5-HpCB	170	1.1	0.16	0.16	1	0.16	0.16	0.52	0.49						
2,2´,3,4,4´,5,5´-HpCB	180	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.00						
2,2´,3,4,4´,5´,6-HpCB	183	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.00						
2,2´,3,4,4´,6,6´-HpCB	184	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.00						
2,2´,3,4´,5,5´,6-HpCB	187	1.5	1.4	1.3	1.5	1.4	1.40	1.42	0.08						
2,2´,3,3´,4,4´,5,6-OcCB	195	0.2	0.2	0.2	0.21	0.2	0.20	0.20	0.00						
2,2',3,3',4,4',5,5',6-NoCB	206	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.00						
DeCB	209	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.00						

APPENDIX O - ATTACHMENT 1

Table O-2: Management Units 22 PCB Congeners Statistical Analysis

Management Unit ND = MDL															
Congener	Congener Number	DS-11-MU3 - 1	DS-11-MU3 - 2	DS-11-MU3 - 3	DS-11-MU3 - 4	DS-11-MU3 - 5	Median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
								x	s	s/x	s/x		0.7071		
Total PCBs	ppb	21.62	23.64	20.67	18.58	19.01	20.67	20.70	2.05	0.0991	9.91	0.56	5.76	4.07	0.98
% Lipids	ppb	0.028	0.038	0.041	0.038	0.027									
Normalized PCBs	ppb	772.14	622.11	504.15	488.95	704.07	622.11	618.28	123.29	0.1994	19.94	0.14	283.20	200.25	0.66
Ln of Normalized PCBs	ppb	6.65	6.43	6.22	6.19	6.56	6.43	6.41	0.20	0.0314	3.14	-0.02	0.46	0.32	0.65
2,4´-DiCB	8	0.47	0.46	0.47	1.4	0.47	0.47	0.65	0.42						
2,2´,5-TrCB	18	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.00						
2,4,4´-TrCB	28	0.15	0.14	0.15	0.14	0.15	0.15	0.15	0.01						
2,2´,3,5´-TeCB	44	0.55	0.59	0.48	0.29	0.29	0.48	0.44	0.14						
2,2´,4,5´-TeCB	49	0.77	0.9	0.69	0.31	0.32	0.69	0.60	0.27						
2,2´,5,5´-TeCB	52	1.3	1.4	1.1	0.99	1.2	1.20	1.20	0.16						
2,3´,4,4´-TeCB	66	0.24	0.23	0.24	0.23	0.24	0.24	0.24	0.01						
2,2´,3,4,5´-PeCB	87	0.17	0.17	0.17	0.17	0.17	0.17	0.17	0.00						
2,2´,4,5,5´-PeCB	101	3.7	4	3.6	3.2	3.3	3.60	3.56	0.32						
2,3,3´,4,4´-PeCB	105	1.4	1.6	1.1	1.3	1	1.30	1.28	0.24						
2,3´,4,4´,5-PeCB	118	2.1	2.3	2	1.8	1.9	2.00	2.02	0.19						
2,2´,3,3´,4,4´-HxCB	128	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,4,4´,5´-HxCB	138	4	4.5	4	2.6	3.7	4.00	3.76	0.71						
2,2´,4,4´,5,5´-HxCB	153	3.6	4.1	3.5	3.2	3.2	3.50	3.52	0.37						
2,2´,3,3´,4,4´,5-HpCB	170	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.00						
2,2´,3,4,4´,5,5´-HpCB	180	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.00						
2,2´,3,4,4´,5´,6-HpCB	183	0.29	0.28	0.29	0.28	0.29	0.29	0.29	0.01						
2,2´,3,4,4´,6,6´-HpCB	184	0.25	0.24	0.25	0.24	0.25	0.25	0.25	0.01						
2,2´,3,4´,5,5´,6-HpCB	187	1.2	1.3	1.2	1	1.1	1.20	1.16	0.11						
2,2´,3,3´,4,4´,5,6-OcCB	195	0.2	0.2	0.2	0.2	0.2	0.20	0.20	0.00						
2,2',3,3',4,4',5,5',6-NoCB	206	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.00						
DeCB	209	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.00						

APPENDIX O - ATTACHMENT 1

Table O-2: Management Units 22 PCB Congeners Statistical Analysis

Management Unit ND = MDL															
Congener	**Congener Number**	**DS-11-MU4 - 1**	**DS-11-MU4 - 2**	**DS-11-MU4 - 3**	**DS-11-MU4 - 4**	**DS-11-MU4 - 5**	**Median**	**Average**	**Std. Dev.**	**CV**	**% CV**	**Skew**	**X(n-i+1) - x(i)**	**b**	**SW**
								x	s	s/x	s/x		0.7071		
Total PCBs	**ppb**	**11.07**	**12.8**	**22.43**	**22.04**	**23.28**	22.04	**18.32**	**5.88**	0.3210	32.10	-0.63	13.86	9.80	0.69
% Lipids	**ppb**	**0.04**	**0.028**	**0.039**	**0.036**	**0.045**									
Normalized PCBs	**ppb**	**276.75**	**457.14**	**575.13**	**612.22**	**517.33**	517.33	**487.72**	**131.78**	0.2702	27.02	-1.24	335.47	237.21	0.81
Ln of Normalized PCBs	**ppb**	**5.62**	**6.12**	**6.35**	**6.42**	**6.25**	6.25	**6.15**	**0.32**	0.0515	5.15	-1.60	0.79	0.56	0.79
2,4´-DiCB	**8**	0.46	0.46	0.46	0.47	0.47	0.46	0.46	0.01						
2,2´,5-TrCB	**18**	0.34	0.34	0.33	0.34	**1.6**	0.34	**0.59**	**0.56**						
2,4,4´-TrCB	**28**	0.14	0.14	0.14	0.15	0.15	0.14	0.14	0.01						
2,2´,3,5´-TeCB	**44**	0.29	0.29	**0.75**	**0.74**	**0.84**	0.74	**0.58**	**0.27**						
2,2´,4,5´-TeCB	**49**	0.32	**0.4**	**0.85**	**0.8**	**0.97**	0.80	**0.67**	**0.29**						
2,2´,5,5´-TeCB	**52**	**0.49**	**0.63**	**1.4**	**1.4**	**1.6**	1.40	**1.10**	**0.51**						
2,3´,4,4´-TeCB	**66**	0.23	0.23	0.23	0.24	0.24	0.23	0.23	0.01						
2,2´,3,4,5´-PeCB	**87**	0.17	0.17	0.17	0.17	**0.28**	0.17	**0.19**	**0.05**						
2,2´,4,5,5´-PeCB	**101**	**1.5**	**1.8**	**3.6**	**3.5**	**4**	3.50	**2.88**	**1.14**						
2,3,3´,4,4´-PeCB	**105**	**0.59**	**0.65**	**1.5**	**1.4**	**1.8**	1.40	**1.19**	**0.54**						
2,3´,4,4´,5-PeCB	**118**	**0.85**	**0.98**	**2.1**	**2**	**2.3**	2.00	**1.65**	**0.68**						
2,2´,3,3´,4,4´-HxCB	**128**	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,4,4´,5´-HxCB	**138**	**1.6**	**2.3**	**4.2**	**4.2**	**1.7**	2.30	**2.80**	**1.31**						
2,2´,4,4´,5,5´-HxCB	**153**	**1.8**	**2.1**	**3.8**	**3.7**	**4.2**	3.70	**3.12**	**1.09**						
2,2´,3,3´,4,4´,5-HpCB	**170**	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.00						
2,2´,3,4,4´,5,5´-HpCB	**180**	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.00						
2,2´,3,4,4´,5´,6-HpCB	**183**	0.29	0.29	0.28	0.29	0.29	0.29	0.29	0.00						
2,2´,3,4,4´,6,6´-HpCB	**184**	0.24	0.24	0.24	0.25	0.25	0.24	0.24	0.01						
2,2´,3,4´,5,5´,6-HpCB	**187**	**0.67**	**0.69**	**1.3**	**1.3**	**1.5**	1.30	**1.09**	**0.38**						
2,2´,3,3´,4,4´,5,6-OcCB	**195**	0.2	0.2	0.2	0.2	0.2	0.20	0.20	0.00						
2,2',3,3',4,4',5,5',6-NoCB	**206**	0.18	0.18	0.17	0.18	0.18	0.18	0.18	0.00						
DeCB	**209**	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.00						

APPENDIX O - ATTACHMENT 1

Table O-2: Management Units 22 PCB Congeners Statistical Analysis

Management Unit ND = MDL														
Congener	Congener Number	DS-11-MU5-1	DS-11-MU5-2	DS-11-MU5-4	DS-11-MU5-5	Median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
							x	s	s/x	s/x		0.7071		
Total PCBs	**ppb**	**17.78**	**17.03**	**16**	**15.9**	16.52	16.68	0.90	0.0537	5.37	0.56	2.38	1.68	1.18
% Lipids	**ppb**	**0.053**	**0.032**	**0.034**	**0.035**									
Normalized PCBs	**ppb**	**335.47**	**532.19**	**470.59**	**454.29**	462.44	448.13	82.26	0.1836	18.36	-0.99	4.70	196.72	1.91
Ln of Normalized PCBs	**ppb**	**5.82**	**6.28**	**6.15**	**6.12**	6.14	6.09	0.20	0.0322	3.22	-1.27	0.46	0.46	1.85
2,4´-DiCB	**8**	0.46	0.46	0.47	0.47	0.47	0.47	0.01						
2,2´,5-TrCB	**18**	0.34	0.33	0.34	0.34	0.34	0.34	0.01						
2,4,4´-TrCB	**28**	0.14	0.14	0.15	0.15	0.15	0.15	0.01						
2,2´,3,5´-TeCB	**44**	0.29	0.29	0.29	0.29	0.29	0.29	0.00						
2,2´,4,5´-TeCB	**49**	0.32	0.31	0.32	0.32	0.32	0.32	0.01						
2,2´,5,5´-TeCB	**52**	0.38	0.38	0.38	0.39	0.38	0.38	0.01						
2,3´,4,4´-TeCB	**66**	0.23	0.23	0.23	0.24	0.23	0.23	0.00						
2,2´,3,4,5´-PeCB	**87**	0.17	0.17	0.17	0.17	0.17	0.17	0.00						
2,2´,4,5,5´-PeCB	**101**	**2.9**	**2.8**	**2.5**	**2.4**	2.65	**2.65**	**0.24**						
2,3,3´,4,4´-PeCB	**105**	0.18	0.18	0.18	0.19	0.18	0.18	0.01						
2,3´,4,4´,5-PeCB	**118**	**1.6**	**1.5**	**1.4**	**1.4**	1.45	**1.48**	**0.10**						
2,2´,3,3´,4,4´-HxCB	**128**	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,4,4´,5´-HxCB	**138**	**2.9**	**2.7**	**2.5**	**2.4**	2.60	**2.63**	**0.22**						
2,2´,4,4´,5,5´-HxCB	**153**	**3.7**	**3.5**	**3.2**	**3.3**	3.40	**3.43**	**0.22**						
2,2´,3,3´,4,4´,5-HpCB	**170**	**1.1**	**1.1**	**1**	**0.97**	1.05	**1.04**	**0.07**						
2,2´,3,4,4´,5,5´-HpCB	**180**	0.19	0.19	0.19	0.19	0.19	0.19	0.00						
2,2´,3,4,4´,5´,6-HpCB	**183**	0.29	0.28	0.29	0.29	0.29	0.29	0.00						
2,2´,3,4,4´,6,6´-HpCB	**184**	0.25	0.24	0.25	0.25	0.25	0.25	0.01						
2,2´,3,4´,5,5´,6-HpCB	**187**	**1.6**	**1.5**	**1.4**	**1.4**	1.45	**1.48**	**0.10**						
2,2´,3,3´,4,4´,5,6-OcCB	**195**	0.2	0.2	0.2	0.2	0.20	0.20	0.00						
2,2',3,3',4,4',5,5',6-NoCB	**206**	0.18	0.17	0.18	0.18	0.18	0.18	0.00						
DeCB	**209**	0.21	0.21	0.21	0.21	0.21	0.21	0.00						

APPENDIX O - ATTACHMENT 1

Table O-2: Management Units 22 PCB Congeners Statistical Analysis

Management Unit ND = MDL															
Congener	**Congener Number**	**DS-11-MU6-1**	**DS-11-MU6-2**	**DS-11-MU6-3**	**DS-11-MU6-4**	**DS-11-MU6-5**	**Median**	**Average**	**Std. Dev.**	**CV**	**% CV**	**Skew**	**X(n-i+1) - x(i)**	**b**	**SW**
								x	s	s/x	s/x		0.7071		
Total PCBs	**ppb**	5.49	5.57	5.5	5.53	5.32	5.50	**5.48**	**0.10**	0.0175	1.75	-1.64	0.31	0.22	1.31
% Lipids	**ppb**	**0.033**	**0.027**	**0.03**	**0.035**	**0.036**									
Normalized PCBs	**ppb**	**166.36**	**206.30**	**183.33**	**158.00**	**147.78**	166.36	**172.35**	**23.01**	0.1335	13.35	0.77	58.52	41.38	0.81
Ln of Normalized PCBs	**ppb**	**5.11**	**5.33**	**5.21**	**5.06**	**5.00**	5.11	**5.14**	**0.13**	0.0254	2.54	0.58	0.33	0.24	0.81
2,4´-DiCB	**8**	0.46	0.47	0.46	0.47	0.45	0.46	0.46	0.01						
2,2´,5-TrCB	**18**	0.34	0.34	0.34	0.34	0.33	0.34	0.34	0.00						
2,4,4´-TrCB	**28**	0.14	0.15	0.14	0.15	0.14	0.14	0.14	0.01						
2,2´,3,5´-TeCB	**44**	0.29	0.29	0.29	0.29	0.28	0.29	0.29	0.00						
2,2´,4,5´-TeCB	**49**	0.32	0.32	0.32	0.32	0.3	0.32	0.32	0.01						
2,2´,5,5´-TeCB	**52**	0.38	0.39	0.38	0.38	0.37	0.38	0.38	0.01						
2,3´,4,4´-TeCB	**66**	0.23	0.24	0.23	0.23	0.22	0.23	0.23	0.01						
2,2´,3,4,5´-PeCB	**87**	0.17	0.17	0.17	0.17	0.16	0.17	0.17	0.00						
2,2´,4,5,5´-PeCB	**101**	0.33	0.33	0.33	0.33	0.32	0.33	0.33	0.00						
2,3,3´,4,4´-PeCB	**105**	0.18	0.19	0.18	0.18	0.18	0.18	0.18	0.00						
2,3´,4,4´,5-PeCB	**118**	0.27	0.28	0.27	0.28	0.26	0.27	0.27	0.01						
2,2´,3,3´,4,4´-HxCB	**128**	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,4,4´,5´-HxCB	**138**	0.18	0.19	0.18	0.18	0.18	0.18	0.18	0.00						
2,2´,4,4´,5,5´-HxCB	**153**	0.29	0.29	0.29	0.29	0.28	0.29	0.29	0.00						
2,2´,3,3´,4,4´,5-HpCB	**170**	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.00						
2,2´,3,4,4´,5,5´-HpCB	**180**	0.19	0.19	0.19	0.19	0.18	0.19	0.19	0.00						
2,2´,3,4,4´,5´,6-HpCB	**183**	0.29	0.29	0.29	0.29	0.28	0.29	0.29	0.00						
2,2´,3,4,4´,6,6´-HpCB	**184**	0.24	0.25	0.25	0.25	0.24	0.25	0.25	0.01						
2,2´,3,4´,5,5´,6-HpCB	**187**	0.29	0.29	0.29	0.29	0.28	0.29	0.29	0.00						
2,2´,3,3´,4,4´,5,6-OcCB	**195**	0.2	0.2	0.2	0.2	0.19	0.20	0.20	0.00						
2,2',3,3',4,4',5,5',6-NoCB	**206**	0.18	0.18	0.18	0.18	0.17	0.18	0.18	0.00						
DeCB	**209**	0.21	0.21	0.21	0.21	0.2	0.21	0.21	0.00						

APPENDIX O - ATTACHMENT 1

Table O3: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = MDL

Congener	Congener Number	DS-11-MOPU - 2	DS-11-MOPU - 3	DS-11-MOPU - 4	DS-11-MOPU - 5	median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
							x	s	s/x	s/x		0.7071		
Total PCBs	**ppb**	**13.12**	**10.85**	**11.22**	**11.01**	11.12	**11.55**	**1.06**	0.0916	9.16	1.88	2.56	1.81	0.98
% Lipids	**ppb**	**0.032**	**0.031**	**0.036**	**0.039**									
Normalized PCBs	**ppb**	**410.00**	**350.00**	**311.67**	**282.31**	330.83	338.49	55.14	0.1629	16.29	0.68	127.69	90.29	0.89
Ln of Normalized PCBs	**ppb**	**6.02**	**5.86**	**5.74**	**5.64**	5.80	5.81	0.16	0.0276	2.76	0.45	0.37	0.26	0.90
2,4´-DiCB	**8**	0.47	0.47	0.47	0.48	0.47	0.47	0.01						
2,2´,5-TrCB	**18**	0.34	0.34	0.34	0.35	0.34	0.34	0.00						
2,4,4´-TrCB	**28**	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,5´-TeCB	**44**	0.29	0.29	0.29	0.3	0.29	0.29	0.01						
2,2´,4,5´-TeCB	**49**	0.32	0.32	0.32	0.32	0.32	0.32	0.00						
2,2´,5,5´-TeCB	**52**	0.38	0.39	0.38	0.39	0.39	0.39	0.01						
2,3´,4,4´-TeCB	**66**	0.23	0.24	0.23	0.24	0.24	0.24	0.01						
2,2´,3,4,5´-PeCB	**87**	0.17	0.17	0.17	0.18	0.17	0.17	0.00						
2,2´,4,5,5´-PeCB	**101**	**2.1**	**1.7**	**1.7**	**1.7**	1.70	**1.80**	**0.20**						
2,3,3´,4,4´-PeCB	**105**	**0.77**	0.19	0.18	0.19	0.19	**0.33**	**0.29**						
2,3´,4,4´,5-PeCB	**118**	**1.2**	**1**	**1**	**0.97**	1.00	**1.04**	**0.11**						
2,2´,3,3´,4,4´-HxCB	**128**	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,4,4´,5´-HxCB	**138**	**1.8**	**1.4**	**1.5**	**2**	1.65	**1.68**	**0.28**						
2,2´,4,4´,5,5´-HxCB	**153**	**2.4**	**1.9**	**2.2**	**1.8**	2.05	**2.08**	**0.28**						
2,2´,3,3´,4,4´,5-HpCB	**170**	0.16	0.16	0.16	0.17	0.16	0.16	0.01						
2,2´,3,4,4´,5,5´-HpCB	**180**	0.19	0.19	0.19	0.19	0.19	0.19	0.00						
2,2´,3,4,4´,5´,6-HpCB	**183**	0.29	0.29	0.29	0.29	0.29	0.29	0.00						
2,2´,3,4,4´,6,6´-HpCB	**184**	0.25	0.25	0.25	0.25	0.25	0.25	0.00						
2,2´,3,4´,5,5´,6-HpCB	**187**	**0.87**	**0.66**	**0.66**	0.29	0.66	**0.62**	**0.24**						
2,2´,3,3´,4,4´,5,6-OcCB	**195**	0.2	0.2	0.2	0.21	0.20	0.20	0.00						
2,2',3,3',4,4',5,5',6-NoCB	**206**	0.18	0.18	0.18	0.18	0.18	0.18	0.00						
DeCB	**209**	0.21	0.21	0.21	0.21	0.21	0.21	0.00						

APPENDIX O - ATTACHMENT 1

Table O3: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = MDL															
Congener	Congener Number	DS-11-WOPU-1	DS-11-WOPU-2	DS-11-WOPU-3	DS-11-WOPU-4	DS-11-WOPU-5	median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
								x	s	s/x	s/x		0.7071		
Total PCBs	ppb	5.49	5.46	5.52	5.65	5.59	5.52	5.54	0.08	0.0139	1.39	0.60	0.23	0.16	1.11
% Lipids	ppb	**0.036**	**0.041**	**0.033**	**0.035**	**0.04**									
Normalized PCBs	ppb	**152.50**	**133.17**	**167.27**	**161.43**	**139.75**	152.50	150.82	14.32	0.0949	9.49	-0.17	34.10	24.11	0.71
Ln of Normalized PCBs	ppb	5.03	4.89	5.12	5.08	4.94	5.03	5.01	0.10	0.0191	1.91	-0.26	0.23	0.16	0.71
2,4´-DiCB	8	0.46	0.46	0.46	0.48	0.47	0.46	0.47	0.01						
2,2´,5-TrCB	18	0.34	0.34	0.34	0.35	0.35	0.34	0.34	0.01						
2,4,4´-TrCB	28	0.14	0.14	0.15	0.15	0.15	0.15	0.15	0.01						
2,2´,3,5´-TeCB	44	0.29	0.29	0.29	0.3	0.29	0.29	0.29	0.00						
2,2´,4,5´-TeCB	49	0.32	0.31	0.32	0.32	0.32	0.32	0.32	0.00						
2,2´,5,5´-TeCB	52	0.38	0.38	0.38	0.39	0.39	0.38	0.38	0.01						
2,3´,4,4´-TeCB	66	0.23	0.23	0.23	0.24	0.24	0.23	0.23	0.01						
2,2´,3,4,5´-PeCB	87	0.17	0.17	0.17	0.18	0.17	0.17	0.17	0.00						
2,2´,4,5,5´-PeCB	101	0.33	0.33	0.33	0.34	0.33	0.33	0.33	0.00						
2,3,3´,4,4´-PeCB	105	0.18	0.18	0.18	0.19	0.19	0.18	0.18	0.01						
2,3´,4,4´,5-PeCB	118	0.27	0.27	0.28	0.28	0.28	0.28	0.28	0.01						
2,2´,3,3´,4,4´-HxCB	128	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,4,4´,5´-HxCB	138	0.18	0.18	0.18	0.19	0.19	0.18	0.18	0.01						
2,2´,4,4´,5,5´-HxCB	153	0.29	0.29	0.29	0.3	0.29	0.29	0.29	0.00						
2,2´,3,3´,4,4´,5-HpCB	170	0.16	0.16	0.16	0.17	0.17	0.16	0.16	0.01						
2,2´,3,4,4´,5,5´-HpCB	180	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.00						
2,2´,3,4,4´,5´,6-HpCB	183	0.29	0.28	0.29	0.29	0.29	0.29	0.29	0.00						
2,2´,3,4,4´,6,6´-HpCB	184	0.24	0.24	0.25	0.25	0.25	0.25	0.25	0.01						
2,2´,3,4´,5,5´,6-HpCB	187	0.29	0.28	0.29	0.29	0.29	0.29	0.29	0.00						
2,2´,3,3´,4,4´,5,6-OcCB	195	0.2	0.2	0.2	0.21	0.2	0.20	0.20	0.00						
2,2',3,3',4,4',5,5',6-NoCB	206	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.00						
DeCB	209	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.00						

APPENDIX O - ATTACHMENT 1

Table O3: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = MDL															
Congener	Congener Number	DS-11-HIPU - 1	DS-11-HIPU - 2	DS-11-HIPU - 3	DS-11-HIPU - 4	DS-11-HIPU - 5	Median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
								x	s	s/x	s/x		0.7071		
Total PCBs	ppb	**17.8**	**20.18**	**17.42**	**16.88**	**16.93**	17.42	**17.84**	**1.36**	0.0762	7.62	1.83	3.73	2.64	0.94
% Lipids	ppb	**0.03**	**0.029**	**0.026**	**0.028**	**0.028**									
Normalized PCBs	ppb	**593.33**	**695.86**	**670.00**	**602.86**	**604.64**	604.64	633.34	46.38	0.0732	7.32	0.74	102.53	72.50	0.61
Ln of Normalized PCBs	ppb	**6.39**	**6.55**	**6.51**	**6.40**	**6.40**	6.40	6.45	0.07	0.0112	1.12	0.72	0.16	0.11	0.61
2,4´-DiCB	8	0.47	0.46	0.45	0.46	0.47	0.46	0.46	0.01						
2,2´,5-TrCB	18	0.34	0.34	0.33	0.34	0.35	0.34	0.34	0.01						
2,4,4´-TrCB	28	0.15	0.14	0.14	0.14	0.15	0.14	0.14	0.01						
2,2´,3,5´-TeCB	44	0.29	0.29	0.28	0.29	0.3	0.29	0.29	0.01						
2,2´,4,5´-TeCB	49	**0.49**	**0.59**	**0.45**	**0.55**	**0.45**	0.49	**0.51**	**0.06**						
2,2´,5,5´-TeCB	52	**0.73**	**0.84**	**0.58**	**0.81**	**0.64**	0.73	**0.72**	**0.11**						
2,3´,4,4´-TeCB	66	0.23	0.23	0.23	0.23	0.24	0.23	0.23	0.00						
2,2´,3,4,5´-PeCB	87	0.17	0.17	0.17	0.17	0.18	0.17	0.17	0.00						
2,2´,4,5,5´-PeCB	101	**2.8**	**3.2**	**2.7**	**2.8**	**2.6**	2.80	**2.82**	**0.23**						
2,3,3´,4,4´-PeCB	105	**1.4**	**1.8**	**1.5**	0.18	**1.4**	1.40	**1.26**	**0.62**						
2,3´,4,4´,5-PeCB	118	**1.4**	**1.7**	**1.4**	**1.5**	**1.3**	1.40	**1.46**	**0.15**						
2,2´,3,3´,4,4´-HxCB	128	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,4,4´,5´-HxCB	138	**2.7**	**3**	**2.6**	**2.7**	**2.4**	2.70	**2.68**	**0.22**						
2,2´,4,4´,5,5´-HxCB	153	**3.6**	**4.2**	**3.5**	**3.6**	**3.4**	3.60	**3.66**	**0.31**						
2,2´,3,3´,4,4´,5-HpCB	170	0.16	0.16	0.16	0.16	0.17	0.16	0.16	0.00						
2,2´,3,4,4´,5,5´-HpCB	180	0.19	0.19	0.18	0.19	0.19	0.19	0.19	0.00						
2,2´,3,4,4´,5´,6-HpCB	183	0.29	0.29	0.28	0.28	0.29	0.29	0.29	0.01						
2,2´,3,4,4´,6,6´-HpCB	184	0.25	0.24	0.24	0.24	0.25	0.24	0.24	0.01						
2,2´,3,4´,5,5´,6-HpCB	187	**1.4**	**1.6**	**1.5**	**1.5**	**1.4**	1.50	**1.48**	**0.08**						
2,2´,3,3´,4,4´,5,6-OcCB	195	0.2	0.2	0.2	0.2	0.21	0.20	0.20	0.00						
2,2',3,3',4,4',5,5',6-NoCB	206	0.18	0.18	0.17	0.18	0.18	0.18	0.18	0.00						
DeCB	209	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.00						

APPENDIX O - ATTACHMENT 1

Table O3: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = MDL															
Congener	Congener Number	DS-11-IIPU-1	DS-11-IIPU-2	DS-11-IIPU-3	DS-11-IIPU-4	DS-11-IIPU-5	median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
								x	s	s/x	s/x		0.7071		
Total PCBs	ppb	9.74	10.19	10.7	11.81	11.03	10.70	10.69	0.79	0.0743	7.43	0.36	2.35	1.66	1.09
% Lipids	ppb	0.043	0.032	0.039	0.036	0.047									
Normalized PCBs	ppb	226.51	318.44	274.36	328.06	234.68	274.36	276.41	46.55	0.1684	16.84	0.06	101.54	71.80	0.59
Ln of Normalized PCBs	ppb	5.42	5.76	5.61	5.79	5.46	5.61	5.61	0.17	0.0302	3.02	-0.04	0.37	0.26	0.60
2,4´-DiCB	8	0.46	0.46	0.47	0.45	0.46	0.46	0.46	0.01						
2,2´,5-TrCB	18	0.34	0.34	0.35	0.33	0.34	0.34	0.34	0.01						
2,4,4´-TrCB	28	0.14	0.14	0.15	0.14	0.14	0.14	0.14	0.00						
2,2´,3,5´-TeCB	44	0.29	0.29	0.3	0.28	0.29	0.29	0.29	0.01						
2,2´,4,5´-TeCB	49	0.31	0.32	0.32	0.31	0.32	0.32	0.32	0.01						
2,2´,5,5´-TeCB	52	0.38	0.38	0.39	0.37	0.38	0.38	0.38	0.01						
2,3´,4,4´-TeCB	66	0.23	0.23	0.24	0.23	0.23	0.23	0.23	0.00						
2,2´,3,4,5´-PeCB	87	0.17	0.17	0.18	0.17	0.17	0.17	0.17	0.00						
2,2´,4,5,5´-PeCB	101	1.1	1.2	1.3	1.5	1.3	1.30	1.28	0.15						
2,3,3´,4,4´-PeCB	105	0.18	0.18	0.19	0.18	0.18	0.18	0.18	0.00						
2,3´,4,4´,5-PeCB	118	0.58	0.65	0.66	0.86	0.8	0.66	0.71	0.12						
2,2´,3,3´,4,4´-HxCB	128	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,4,4´,5´-HxCB	138	1.3	1.4	1.5	1.6	1.4	1.40	1.44	0.11						
2,2´,4,4´,5,5´-HxCB	153	1.7	1.8	2	2.6	2.3	2.00	2.08	0.37						
2,2´,3,3´,4,4´,5-HpCB	170	0.16	0.16	0.17	0.16	0.16	0.16	0.16	0.00						
2,2´,3,4,4´,5,5´-HpCB	180	0.19	0.19	0.19	0.18	0.19	0.19	0.19	0.00						
2,2´,3,4,4´,5´,6-HpCB	183	0.28	0.29	0.29	0.28	0.29	0.29	0.29	0.01						
2,2´,3,4,4´,6,6´-HpCB	184	0.24	0.25	0.25	0.24	0.24	0.24	0.24	0.01						
2,2´,3,4´,5,5´,6-HpCB	187	0.95	1	1	1.2	1.1	1.00	1.05	0.10						
2,2´,3,3´,4,4´,5,6-OcCB	195	0.2	0.2	0.21	0.2	0.2	0.20	0.20	0.00						
2,2',3,3',4,4',5,5',6-NoCB	206	0.18	0.18	0.18	0.17	0.18	0.18	0.18	0.00						
DeCB	209	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.00						

APPENDIX O - ATTACHMENT 1

Table O3: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = MDL

Congener	Congener Number	Lab Control 1	Lab Control 3	Lab Control 4	Lab Control 5	median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
							x	s	s/x	s/x		0.7071		
Total PCBs	**ppb**	5.26	5.53	5.36	5.27	5.32	5.36	0.13	0.0233	2.33	1.33	0.33	0.23	1.16
% Lipids	**ppb**	**0.036**	**0.032**	**0.035**	**0.038**									
Normalized PCBs	**ppb**	**146.11**	**172.81**	**153.14**	**138.68**	149.63	152.69	14.66	0.0960	9.60	1.08	34.13	24.13	0.90
Ln of Normalized PCBs	**ppb**	4.98	5.15	5.03	4.93	5.01	5.03	0.09	0.0187	1.87	0.96	0.22	0.16	0.91
2,4´-DiCB	**8**	0.44	0.47	0.45	0.44	0.45	0.45	0.01						
2,2´,5-TrCB	**18**	0.33	0.34	0.33	0.33	0.33	0.33	0.01						
2,4,4´-TrCB	**28**	0.14	0.15	0.14	0.14	0.14	0.14	0.00						
2,2´,3,5´-TeCB	**44**	0.28	0.29	0.28	0.28	0.28	0.28	0.00						
2,2´,4,5´-TeCB	**49**	0.3	0.32	0.31	0.3	0.31	0.31	0.01						
2,2´,5,5´-TeCB	**52**	0.37	0.38	0.37	0.37	0.37	0.37	0.01						
2,3´,4,4´-TeCB	**66**	0.22	0.23	0.23	0.22	0.23	0.23	0.01						
2,2´,3,4,5´-PeCB	**87**	0.16	0.17	0.17	0.16	0.17	0.17	0.01						
2,2´,4,5,5´-PeCB	**101**	0.31	0.33	0.32	0.31	0.32	0.32	0.01						
2,3,3´,4,4´-PeCB	**105**	0.18	0.18	0.18	0.18	0.18	0.18	0.00						
2,3´,4,4´,5-PeCB	**118**	0.26	0.28	0.27	0.26	0.27	0.27	0.01						
2,2´,3,3´,4,4´-HxCB	**128**	0.14	0.15	0.15	0.14	0.15	0.15	0.01						
2,2´,3,4,4´,5´-HxCB	**138**	0.18	0.18	0.18	0.18	0.18	0.18	0.00						
2,2´,4,4´,5,5´-HxCB	**153**	0.28	0.29	0.28	0.28	0.28	0.28	0.00						
2,2´,3,3´,4,4´,5-HpCB	**170**	0.16	0.16	0.16	0.16	0.16	0.16	0.00						
2,2´,3,4,4´,5,5´-HpCB	**180**	0.18	0.19	0.18	0.18	0.18	0.18	0.01						
2,2´,3,4,4´,5´,6-HpCB	**183**	0.27	0.29	0.28	0.27	0.28	0.28	0.01						
2,2´,3,4,4´,6,6´-HpCB	**184**	0.23	0.25	0.24	0.24	0.24	0.24	0.01						
2,2´,3,4´,5,5´,6-HpCB	**187**	0.27	0.29	0.28	0.27	0.28	0.28	0.01						
2,2´,3,3´,4,4´,5,6-OcCB	**195**	0.19	0.2	0.19	0.19	0.19	0.19	0.01						
2,2',3,3',4,4',5,5',6-NoCB	**206**	0.17	0.18	0.17	0.17	0.17	0.17	0.00						
DeCB	**209**	0.2	0.21	0.2	0.2	0.20	0.20	0.00						

APPENDIX O - ATTACHMENT 1

Table O3: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = MDL														
Congener	**Congener Number**	**Lab Control 1**	**Lab Control 2**	**Lab Control 3**	**Lab Control 4**	**median**	**Average**	**Std. Dev.**	**CV**	**% CV**	**Skew**	**X(n-i+1) - x(i)**	**b**	**SW**
							x	s	s/x	s/x		0.71		
Total PCBs	**ppb**	5.44	5.61	5.45	5.52	5.49	5.51	0.08	0.0143	1.43	0.99	0.21	0.15	1.19
% Lipids	**ppb**	**0.039**	**0.031**	**0.034**	**0.037**									
Normalized PCBs	**ppb**	**139.49**	**180.97**	**160.29**	**149.19**	154.74	157.48	17.81	0.1131	11.31	0.77	41.48	29.33	0.90
Ln of Normalized PCBs	**ppb**	4.94	5.20	5.08	5.01	5.04	5.05	0.11	0.0220	2.20	0.61	0.26	0.18	0.91
2,4´-DiCB	**8**	0.46	0.47	0.46	0.46	0.46	0.46	0.00						
2,2´,5-TrCB	**18**	0.34	0.35	0.34	0.34	0.34	0.34	0.00						
2,4,4´-TrCB	**28**	0.14	0.15	0.14	0.15	0.15	0.15	0.01						
2,2´,3,5´-TeCB	**44**	0.29	0.3	0.29	0.29	0.29	0.29	0.01						
2,2´,4,5´-TeCB	**49**	0.31	0.32	0.31	0.32	0.32	0.32	0.01						
2,2´,5,5´-TeCB	**52**	0.38	0.39	0.38	0.38	0.38	0.38	0.01						
2,3´,4,4´-TeCB	**66**	0.23	0.24	0.23	0.23	0.23	0.23	0.00						
2,2´,3,4,5´-PeCB	**87**	0.17	0.17	0.17	0.17	0.17	0.17	0.00						
2,2´,4,5,5´-PeCB	**101**	0.32	0.33	0.32	0.33	0.33	0.33	0.01						
2,3,3´,4,4´-PeCB	**105**	0.18	0.19	0.18	0.18	0.18	0.18	0.01						
2,3´,4,4´,5-PeCB	**118**	0.27	0.28	0.27	0.28	0.28	0.28	0.01						
2,2´,3,3´,4,4´-HxCB	**128**	0.15	0.15	0.15	0.15	0.15	0.15	0.00						
2,2´,3,4,4´,5´-HxCB	**138**	0.18	0.19	0.18	0.18	0.18	0.18	0.01						
2,2´,4,4´,5,5´-HxCB	**153**	0.29	0.3	0.29	0.29	0.29	0.29	0.01						
2,2´,3,3´,4,4´,5-HpCB	**170**	0.16	0.17	0.16	0.16	0.16	0.16	0.01						
2,2´,3,4,4´,5,5´-HpCB	**180**	0.19	0.19	0.19	0.19	0.19	0.19	0.00						
2,2´,3,4,4´,5´,6-HpCB	**183**	0.28	0.29	0.28	0.29	0.29	0.29	0.01						
2,2´,3,4,4´,6,6´-HpCB	**184**	0.24	0.25	0.24	0.25	0.25	0.25	0.01						
2,2´,3,4´,5,5´,6-HpCB	**187**	0.28	0.29	0.28	0.29	0.29	0.29	0.01						
2,2´,3,3´,4,4´,5,6-OcCB	**195**	0.2	0.2	0.2	0.2	0.20	0.20	0.00						
2,2',3,3',4,4',5,5',6-NoCB	**206**	0.17	0.18	0.18	0.18	0.18	0.18	0.00						
DeCB	**209**	0.21	0.21	0.21	0.21	0.21	0.21	0.00						

APPENDIX O - ATTACHMENT 1

Table O4: Management Units Lumbriculus Statistical Analysis

Management Unit ND = 0															
Congener	Congener Number	DS-11-MU1-1	DS-11-MU1-2	DS-11-MU1-3	DS-11-MU1-4	DS-11-MU1-5	Median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
								x	s	s/x	s/x		0.7071		
Total PCBs	ppb	4.41	5.07	4.87	6.02	5.01	5.01	5.08	0.59	0.1158	11.58	1.10	1.61	1.14	0.94
Lipids fraction	ppb	0.036	0.037	0.037	0.046	0.039									
Normalized PCBs	ppb	122.50	137.03	131.62	130.87	128.46	130.87	130.10	5.28	0.0406	4.06	-0.30	14.53	10.27	0.95
Ln of Normalized PCBs	ppb	4.81	4.92	4.88	4.87	4.86	4.87	4.87	0.04	0.0084	0.84	-0.40	0.11	0.08	0.95
2,4´-DiCB	8														
2,2´,5-TrCB	18														
2,4,4´-TrCB	28														
2,2´,3,5´-TeCB	44														
2,2´,4,5´-TeCB	49														
2,2´,5,5´-TeCB	52														
2,3´,4,4´-TeCB	66														
2,2´,3,4,5´-PeCB	87														
2,2´,4,5,5´-PeCB	101	0.67	0.74	0.7	0.88	0.71	0.71	0.74	0.08						
2,3,3´,4,4´-PeCB	105														
2,3´,4,4´,5-PeCB	118	0.29	0.43	0.38	0.44	0.4	0.40	0.39	0.06						
2,2´,3,3´,4,4´-HxCB	128														
2,2´,3,4,4´,5´-HxCB	138	0.83	0.9	0.89	1.2	0.9	0.90	0.94	0.15						
2,2´,4,4´,5,5´-HxCB	153	1.7	2	1.9	2.3	2	2.00	1.98	0.22						
2,2´,3,3´,4,4´,5-HpCB	170														
2,2´,3,4,4´,5,5´-HpCB	180														
2,2´,3,4,4´,5´,6-HpCB	183														
2,2´,3,4,4´,6,6´-HpCB	184														
2,2´,3,4´,5,5´,6-HpCB	187	0.92	1	1	1.2	1	1.00	1.02	0.10						
2,2´,3,3´,4,4´,5,6-OcCB	195														
2,2',3,3',4,4',5,5',6-NoCB	206														
DeCB	209														

APPENDIX O - ATTACHMENT 1

Table O4: Management Units Lumbriculus Statistical Analysis

Management Unit ND = 0															
Congener	Congener Number	DS-11-MU2 - 1	DS-11-MU2 - 2	DS-11-MU2 - 3	DS-11-MU2 - 4	DS-11-MU2 - 5	Median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
								x	s	s/x	s/x		0.7071		
Total PCBs	ppb	22.36	18.92	16.68	28.92	19.27	19.27	21.23	4.75	0.2238	22.38	1.33	12.24	8.65	0.83
% Lipids	ppb	0.037	0.033	0.035	0.04	0.037									
Normalized PCBs	ppb	604.32	573.33	476.57	723.00	520.81	573.33	579.61	93.92	0.1620	16.20	0.84	246.43	174.25	0.86
Ln of Normalized PCBs	ppb	6.40	6.35	6.17	6.58	6.26	6.35	6.35	0.16	0.0249	2.49	0.55	0.42	0.29	0.87
2,4´-DiCB	8				6.6		6.60	6.60	#DIV/0!						
2,2´,5-TrCB	18														
2,4,4´-TrCB	28														
2,2´,3,5´-TeCB	44	0.47	0.42	0.4	0.53	0.41	0.42	0.45	0.05						
2,2´,4,5´-TeCB	49	0.69	0.6	0.49	0.69	0.56	0.60	0.61	0.09						
2,2´,5,5´-TeCB	52	1.4	1.2	1	1.4	1.2	1.20	1.24	0.17						
2,3´,4,4´-TeCB	66														
2,2´,3,4,5´-PeCB	87	2.2	1.9	1.7	2.2	1.9	1.90	1.98	0.22						
2,2´,4,5,5´-PeCB	101	3.7	3.3	2.9	3.7	3.3	3.30	3.38	0.33						
2,3,3´,4,4´-PeCB	105	1.2	1.1	0.99	1.2	1.1	1.10	1.12	0.09						
2,3´,4,4´,5-PeCB	118	2	1.8	1.6	2	1.8	1.80	1.84	0.17						
2,2´,3,3´,4,4´-HxCB	128														
2,2´,3,4,4´,5´-HxCB	138	4.4	3.9	3.4	4.4	4.1	4.10	4.04	0.42						
2,2´,4,4´,5,5´-HxCB	153	3.7	3.3	2.9	3.7	3.5	3.50	3.42	0.33						
2,2´,3,3´,4,4´,5-HpCB	170	1.1			1		1.05	1.05	0.07						
2,2´,3,4,4´,5,5´-HpCB	180														
2,2´,3,4,4´,5´,6-HpCB	183														
2,2´,3,4,4´,6,6´-HpCB	184														
2,2´,3,4´,5,5´,6-HpCB	187	1.5	1.4	1.3	1.5	1.4	1.40	1.42	0.08						
2,2´,3,3´,4,4´,5,6-OcCB	195														
2,2',3,3',4,4',5,5',6-NoCB	206														
DeCB	209														

APPENDIX O - ATTACHMENT 1

Table O4: Management Units Lumbriculus Statistical Analysis

Management Unit ND = 0															
Congener	Congener Number	DS-11-MU3 - 1	DS-11-MU3 - 2	DS-11-MU3 - 3	DS-11-MU3 - 4	DS-11-MU3 - 5	Median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
								x	s	s/x	s/x		0.7071		
Total PCBs	ppb	18.62	20.69	17.67	15.49	15.4	17.67	17.57	2.23	0.1269	12.69	0.45	5.20	3.68	0.68
% Lipids	ppb	0.028	0.038	0.041	0.038	0.027									
Normalized PCBs	ppb	665.00	544.47	430.98	407.63	570.37	544.47	523.69	105.65	0.2017	20.17	0.20	257.37	181.99	0.74
Ln of Normalized PCBs	ppb	6.50	6.30	6.07	6.01	6.35	6.30	6.24	0.20	0.0326	3.26	-0.03	0.49	0.35	0.72
2,4´-DiCB	8				1.4		1.40	1.40	#DIV/0!						
2,2´,5-TrCB	18														
2,4,4´-TrCB	28														
2,2´,3,5´-TeCB	44	0.55	0.59	0.48			0.55	0.54	0.06						
2,2´,4,5´-TeCB	49	0.77	0.9	0.69			0.77	0.79	0.11						
2,2´,5,5´-TeCB	52	1.3	1.4	1.1	0.99	1.2	1.20	1.20	0.16						
2,3´,4,4´-TeCB	66														
2,2´,3,4,5´-PeCB	87														
2,2´,4,5,5´-PeCB	101	3.7	4	3.6	3.2	3.3	3.60	3.56	0.32						
2,3,3´,4,4´-PeCB	105	1.4	1.6	1.1	1.3	1	1.30	1.28	0.24						
2,3´,4,4´,5-PeCB	118	2.1	2.3	2	1.8	1.9	2.00	2.02	0.19						
2,2´,3,3´,4,4´-HxCB	128														
2,2´,3,4,4´,5´-HxCB	138	4	4.5	4	2.6	3.7	4.00	3.76	0.71						
2,2´,4,4´,5,5´-HxCB	153	3.6	4.1	3.5	3.2	3.2	3.50	3.52	0.37						
2,2´,3,3´,4,4´,5-HpCB	170														
2,2´,3,4,4´,5,5´-HpCB	180														
2,2´,3,4,4´,5´,6-HpCB	183														
2,2´,3,4,4´,6,6´-HpCB	184														
2,2´,3,4´,5,5´,6-HpCB	187	1.2	1.3	1.2	1	1.1	1.20	1.16	0.11						
2,2´,3,3´,4,4´,5,6-OcCB	195														
2,2',3,3',4,4',5,5',6-NoCB	206														
DeCB	209														

APPENDIX O - ATTACHMENT 1

Table O4: Management Units Lumbriculus Statistical Analysis

Management Unit ND = 0															
Congener	Congener Number	DS-11-MU4 - 1	DS-11-MU4 - 2	DS-11-MU4 - 3	DS-11-MU4 - 4	DS-11-MU4 - 5	Median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
								x	s	s/x	s/x		0.7071		
Total PCBs	ppb	7.5	9.55	19.5	19.04	20.79	19.04	15.28	6.24	0.4084	40.84	-0.62	13.29	9.40	0.57
% Lipids	ppb	0.04	0.028	0.039	0.036	0.045									
Normalized PCBs	ppb	187.50	341.07	500.00	528.89	462.00	462.00	403.89	140.54	0.3480	34.80	-1.10	341.39	241.40	0.74
Ln of Normalized PCBs	ppb	5.23	5.83	6.21	6.27	6.14	6.14	5.94	0.43	0.0721	7.21	-1.50	1.04	0.73	0.73
2,4´-DiCB	8														
2,2´,5-TrCB	18					1.6	1.60	1.60	#DIV/0!						
2,4,4´-TrCB	28														
2,2´,3,5´-TeCB	44			0.75	0.74	0.84	0.75	0.78	0.06						
2,2´,4,5´-TeCB	49		0.4	0.85	0.8	0.97	0.83	0.76	0.25						
2,2´,5,5´-TeCB	52	0.49	0.63	1.4	1.4	1.6	1.40	1.10	0.51						
2,3´,4,4´-TeCB	66														
2,2´,3,4,5´-PeCB	87					0.28	0.28	0.28	#DIV/0!						
2,2´,4,5,5´-PeCB	101	1.5	1.8	3.6	3.5	4	3.50	2.88	1.14						
2,3,3´,4,4´-PeCB	105	0.59	0.65	1.5	1.4	1.8	1.40	1.19	0.54						
2,3´,4,4´,5-PeCB	118	0.85	0.98	2.1	2	2.3	2.00	1.65	0.68						
2,2´,3,3´,4,4´-HxCB	128														
2,2´,3,4,4´,5´-HxCB	138	1.6	2.3	4.2	4.2	1.7	2.30	2.80	1.31						
2,2´,4,4´,5,5´-HxCB	153	1.8	2.1	3.8	3.7	4.2	3.70	3.12	1.09						
2,2´,3,3´,4,4´,5-HpCB	170														
2,2´,3,4,4´,5,5´-HpCB	180														
2,2´,3,4,4´,5´,6-HpCB	183														
2,2´,3,4,4´,6,6´-HpCB	184														
2,2´,3,4´,5,5´,6-HpCB	187	0.67	0.69	1.3	1.3	1.5	1.30	1.09	0.38						
2,2´,3,3´,4,4´,5,6-OcCB	195														
2,2',3,3',4,4',5,5',6-NoCB	206														
DeCB	209														

APPENDIX O - ATTACHMENT 1

Table O4: Management Units Lumbriculus Statistical Analysis

Management Unit ND = 0														
Congener	Congener Number	DS-11-MU5-1	DS-11-MU5-2	DS-11-MU5-4	DS-11-MU5-5	Median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
							x	s	s/x	s/x		0.7071		
Total PCBs	**ppb**	**13.8**	**13.1**	**12**	**11.87**	12.55	12.69	0.92	0.0726	7.26	0.46	1.93	1.36	0.73
% Lipids	**ppb**	**0.053**	**0.032**	**0.034**	**0.035**									
Normalized PCBs	**ppb**	**260.38**	**409.38**	**352.94**	**339.14**	346.04	340.46	61.43	0.1804	18.04	-0.53	149.00	105.36	0.98
Ln of Normalized PCBs	**ppb**	**5.56**	**6.01**	**5.87**	**5.83**	5.85	5.82	0.19	0.0324	3.24	-0.88	0.45	0.32	0.96
2,4´-DiCB	**8**													
2,2´,5-TrCB	**18**													
2,4,4´-TrCB	**28**													
2,2´,3,5´-TeCB	**44**													
2,2´,4,5´-TeCB	**49**													
2,2´,5,5´-TeCB	**52**													
2,3´,4,4´-TeCB	**66**													
2,2´,3,4,5´-PeCB	**87**													
2,2´,4,5,5´-PeCB	**101**	**2.9**	**2.8**	**2.5**	**2.4**	2.65	**2.65**	**0.24**						
2,3,3´,4,4´-PeCB	**105**													
2,3´,4,4´,5-PeCB	**118**	**1.6**	**1.5**	**1.4**	**1.4**	1.45	**1.48**	**0.10**						
2,2´,3,3´,4,4´-HxCB	**128**													
2,2´,3,4,4´,5´-HxCB	**138**	**2.9**	**2.7**	**2.5**	**2.4**	2.60	**2.63**	**0.22**						
2,2´,4,4´,5,5´-HxCB	**153**	**3.7**	**3.5**	**3.2**	**3.3**	3.40	**3.43**	**0.22**						
2,2´,3,3´,4,4´,5-HpCB	**170**	**1.1**	**1.1**	**1**	**0.97**	1.05	**1.04**	**0.07**						
2,2´,3,4,4´,5,5´-HpCB	**180**													
2,2´,3,4,4´,5´,6-HpCB	**183**													
2,2´,3,4,4´,6,6´-HpCB	**184**													
2,2´,3,4´,5,5´,6-HpCB	**187**	**1.6**	**1.5**	**1.4**	**1.4**	1.45	**1.48**	**0.10**						
2,2´,3,3´,4,4´,5,6-OcCB	**195**													
2,2',3,3',4,4',5,5',6-NoCB	**206**													
DeCB	**209**													

APPENDIX O - ATTACHMENT 1

Table O4: Management Units Lumbriculus Statistical Analysis

Management Unit ND = 0															
Congener	**Congener Number**	**DS-11-MU6-1**	**DS-11-MU6-2**	**DS-11-MU6-3**	**DS-11-MU6-4**	**DS-11-MU6-5**	**Median**	**Average**	**Std. Dev.**	**CV**	**% CV**	**Skew**	**X(n-i+1) - x(i)**	**b**	**SW**
								x	s	s/x	s/x		0.7071		
Total PCBs	**ppb**	0	0	0	0	0	0.00	**0.00**	**0.00**	#DIV/0!	#DIV/0!	#DIV/0!		0.00	#DIV/0!
% Lipids	**ppb**	**0.033**	**0.027**	**0.03**	**0.035**	**0.036**									
Normalized PCBs	**ppb**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00	**0.00**	**0.00**	#DIV/0!	#DIV/0!	#DIV/0!		0.00	#DIV/0!
Ln of Normalized PCBs	**ppb**	**#NUM!**	**#NUM!**	**#NUM!**	**#NUM!**	**#NUM!**	#NUM!	**#NUM!**	**#NUM!**	#NUM!	#NUM!	#NUM!		0.00	#NUM!
2,4´-DiCB	**8**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,5-TrCB	**18**						#NUM!	#DIV/0!	#DIV/0!						
2,4,4´-TrCB	**28**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,3,5´-TeCB	**44**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,4,5´-TeCB	**49**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,5,5´-TeCB	**52**						#NUM!	#DIV/0!	#DIV/0!						
2,3´,4,4´-TeCB	**66**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,3,4,5´-PeCB	**87**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,4,5,5´-PeCB	**101**						#NUM!	#DIV/0!	#DIV/0!						
2,3,3´,4,4´-PeCB	**105**						#NUM!	#DIV/0!	#DIV/0!						
2,3´,4,4´,5-PeCB	**118**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,3,3´,4,4´-HxCB	**128**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,3,4,4´,5´-HxCB	**138**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,4,4´,5,5´-HxCB	**153**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,3,3´,4,4´,5-HpCB	**170**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,3,4,4´,5,5´-HpCB	**180**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,3,4,4´,5´,6-HpCB	**183**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,3,4,4´,6,6´-HpCB	**184**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,3,4´,5,5´,6-HpCB	**187**						#NUM!	#DIV/0!	#DIV/0!						
2,2´,3,3´,4,4´,5,6-OcCB	**195**						#NUM!	#DIV/0!	#DIV/0!						
2,2',3,3',4,4',5,5',6-NoCB	**206**						#NUM!	#DIV/0!	#DIV/0!						
DeCB	**209**						#NUM!	#DIV/0!	#DIV/0!						

APPENDIX O - ATTACHMENT 1

Table O5: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = 0														
Congener	Congener Number	DS-11-MOPU - 2	DS-11-MOPU - 3	DS-11-MOPU - 4	DS-11-MOPU - 5	median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
							x	s	s/x	s/x		0.7071		
Total PCBs	ppb	9.14	6.66	7.06	6.47	6.86	7.33	1.23	0.1677	16.77	1.77	2.67	1.89	0.79
% Lipids	ppb	0.032	0.031	0.036	0.039									
Normalized PCBs	ppb	285.63	214.84	196.11	165.90	205.47	215.62	50.84	0.2358	23.58	1.08	119.73	84.66	0.92
Ln of Normalized PCBs	ppb	5.65	5.37	5.28	5.11	5.32	5.35	0.23	0.0425	4.25	0.72	0.54	0.38	0.95
2,4´-DiCB	8													
2,2´,5-TrCB	18													
2,4,4´-TrCB	28													
2,2´,3,5´-TeCB	44													
2,2´,4,5´-TeCB	49													
2,2´,5,5´-TeCB	52													
2,3´,4,4´-TeCB	66													
2,2´,3,4,5´-PeCB	87													
2,2´,4,5,5´-PeCB	101	2.1	1.7	1.7	1.7	1.70	1.80	0.20						
2,3,3´,4,4´-PeCB	105	0.77				0.77	0.77	#DIV/0!						
2,3´,4,4´,5-PeCB	118	1.2	1	1	0.97	1.00	1.04	0.11						
2,2´,3,3´,4,4´-HxCB	128													
2,2´,3,4,4´,5´-HxCB	138	1.8	1.4	1.5	2	1.65	1.68	0.28						
2,2´,4,4´,5,5´-HxCB	153	2.4	1.9	2.2	1.8	2.05	2.08	0.28						
2,2´,3,3´,4,4´,5-HpCB	170													
2,2´,3,4,4´,5,5´-HpCB	180													
2,2´,3,4,4´,5´,6-HpCB	183													
2,2´,3,4,4´,6,6´-HpCB	184													
2,2´,3,4´,5,5´,6-HpCB	187	0.87	0.66	0.66		0.66	0.73	0.12						
2,2´,3,3´,4,4´,5,6-OcCB	195													
2,2',3,3',4,4',5,5',6-NoCB	206													
DeCB	209													

APPENDIX O - ATTACHMENT 1

Table O5: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = 0															
Congener	**Congener Number**	**DS-11-WOPU-1**	**DS-11-WOPU-2**	**DS-11-WOPU-3**	**DS-11-WOPU-4**	**DS-11-WOPU-5**	**median**	**Average**	**Std. Dev.**	**CV**	**% CV**	**Skew**	**X(n-i+1) - x(i)**	**b**	**SW**
								x	s	s/x	s/x		0.7071		
Total PCBs	**ppb**	0	0	0	0	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!		0.00	#DIV/0!
% Lipids	**ppb**	**0.036**	**0.041**	**0.033**	**0.035**	**0.04**									
Normalized PCBs	**ppb**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!		0.00	#DIV/0!
Ln of Normalized PCBs	**ppb**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!		0.00	#NUM!
2,4´-DiCB	**8**														
2,2´,5-TrCB	**18**														
2,4,4´-TrCB	**28**														
2,2´,3,5´-TeCB	**44**														
2,2´,4,5´-TeCB	**49**														
2,2´,5,5´-TeCB	**52**														
2,3´,4,4´-TeCB	**66**														
2,2´,3,4,5´-PeCB	**87**														
2,2´,4,5,5´-PeCB	**101**														
2,3,3´,4,4´-PeCB	**105**														
2,3´,4,4´,5-PeCB	**118**														
2,2´,3,3´,4,4´-HxCB	**128**														
2,2´,3,4,4´,5´-HxCB	**138**														
2,2´,4,4´,5,5´-HxCB	**153**														
2,2´,3,3´,4,4´,5-HpCB	**170**														
2,2´,3,4,4´,5,5´-HpCB	**180**														
2,2´,3,4,4´,5´,6-HpCB	**183**														
2,2´,3,4,4´,6,6´-HpCB	**184**														
2,2´,3,4´,5,5´,6-HpCB	**187**														
2,2´,3,3´,4,4´,5,6-OcCB	**195**														
2,2',3,3',4,4',5,5',6-NoCB	**206**														
DeCB	**209**														

APPENDIX O - ATTACHMENT 1

Table O5: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = 0															
Congener	Congener Number	DS-11-HIPU - 1	DS-11-HIPU - 2	DS-11-HIPU - 3	DS-11-HIPU - 4	DS-11-HIPU - 5	Median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
								x	s	s/x	s/x		0.7071		
Total PCBs	ppb	14.52	16.93	14.23	13.46	13.59	14.23	14.55	1.40	0.0965	9.65	1.71	3.34	2.36	0.71
% Lipids	ppb	0.03	0.029	0.026	0.028	0.028									
Normalized PCBs	ppb	484.00	583.79	547.31	480.71	485.36	485.36	516.23	46.86	0.0908	9.08	0.93	98.44	69.60	0.55
Ln of Normalized PCBs	ppb	6.18	6.37	6.31	6.18	6.18	6.18	6.24	0.09	0.0142	1.42	0.89	0.18	0.13	0.54
2,4´-DiCB	8														
2,2´,5-TrCB	18														
2,4,4´-TrCB	28														
2,2´,3,5´-TeCB	44														
2,2´,4,5´-TeCB	49	0.49	0.59	0.45	0.55	0.45	0.49	0.51	0.06						
2,2´,5,5´-TeCB	52	0.73	0.84	0.58	0.81	0.64	0.73	0.72	0.11						
2,3´,4,4´-TeCB	66														
2,2´,3,4,5´-PeCB	87														
2,2´,4,5,5´-PeCB	101	2.8	3.2	2.7	2.8	2.6	2.80	2.82	0.23						
2,3,3´,4,4´-PeCB	105	1.4	1.8	1.5		1.4	1.45	1.53	0.19						
2,3´,4,4´,5-PeCB	118	1.4	1.7	1.4	1.5	1.3	1.40	1.46	0.15						
2,2´,3,3´,4,4´-HxCB	128														
2,2´,3,4,4´,5´-HxCB	138	2.7	3	2.6	2.7	2.4	2.70	2.68	0.22						
2,2´,4,4´,5,5´-HxCB	153	3.6	4.2	3.5	3.6	3.4	3.60	3.66	0.31						
2,2´,3,3´,4,4´,5-HpCB	170														
2,2´,3,4,4´,5,5´-HpCB	180														
2,2´,3,4,4´,5´,6-HpCB	183														
2,2´,3,4,4´,6,6´-HpCB	184														
2,2´,3,4´,5,5´,6-HpCB	187	1.4	1.6	1.5	1.5	1.4	1.50	1.48	0.08						
2,2´,3,3´,4,4´,5,6-OcCB	195														
2,2',3,3',4,4',5,5',6-NoCB	206														
DeCB	209														

APPENDIX O - ATTACHMENT 1

Table O5: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = 0															
Congener	Congener Number	DS-11-IIPU-1	DS-11-IIPU-2	DS-11-IIPU-3	DS-11-IIPU-4	DS-11-IIPU-5	median	Average	Std. Dev.	CV	% CV	Skew	X(n-i+1) - x(i)	b	SW
								x	s	s/x	s/x		0.7071		
Total PCBs	ppb	5.63	6.05	6.46	7.76	6.9	6.46	6.56	0.82	0.1250	12.50	0.63	2.13	1.51	0.84
% Lipids	ppb	0.043	0.032	0.039	0.036	0.047									
Normalized PCBs	ppb	130.93	189.06	165.64	215.56	146.81	165.64	169.60	33.62	0.1982	19.82	0.38	84.63	59.84	0.79
Ln of Normalized PCBs	ppb	4.87	5.24	5.11	5.37	4.99	5.11	5.12	0.20	0.0386	3.86	0.11	0.50	0.35	0.79
2,4´-DiCB	8														
2,2´,5-TrCB	18														
2,4,4´-TrCB	28														
2,2´,3,5´-TeCB	44														
2,2´,4,5´-TeCB	49														
2,2´,5,5´-TeCB	52														
2,3´,4,4´-TeCB	66														
2,2´,3,4,5´-PeCB	87														
2,2´,4,5,5´-PeCB	101	1.1	1.2	1.3	1.5	1.3	1.30	1.28	0.15						
2,3,3´,4,4´-PeCB	105														
2,3´,4,4´,5-PeCB	118	0.58	0.65	0.66	0.86	0.8	0.66	0.71	0.12						
2,2´,3,3´,4,4´-HxCB	128														
2,2´,3,4,4´,5´-HxCB	138	1.3	1.4	1.5	1.6	1.4	1.40	1.44	0.11						
2,2´,4,4´,5,5´-HxCB	153	1.7	1.8	2	2.6	2.3	2.00	2.08	0.37						
2,2´,3,3´,4,4´,5-HpCB	170														
2,2´,3,4,4´,5,5´-HpCB	180														
2,2´,3,4,4´,5´,6-HpCB	183														
2,2´,3,4,4´,6,6´-HpCB	184														
2,2´,3,4´,5,5´,6-HpCB	187	0.95	1	1	1.2	1.1	1.00	1.05	0.10						
2,2´,3,3´,4,4´,5,6-OcCB	195														
2,2',3,3',4,4',5,5',6-NoCB	206														
DeCB	209														

APPENDIX O - ATTACHMENT 1

Table O5: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = 0														
Congener	**Congener Number**	**Lab Control 1**	**Lab Control 3**	**Lab Control 4**	**Lab Control 5**	**median**	**Average**	**Std. Dev.**	**CV**	**% CV**	**Skew**	**X(n-i+1) - x(i)**	**b**	**SW**
							x	s	s/x	s/x		0.7071		
Total PCBs	**ppb**	0	0	0	0	0.00	0.00	0.00						
% Lipids	**ppb**	**0.036**	**0.032**	**0.035**	**0.038**									
Normalized PCBs	**ppb**	**0.00**	**0.00**	**0.00**	**0.00**	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!		0.00	#DIV/0!
Ln of Normalized PCBs	**ppb**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!		0.00	#NUM!
2,4´-DiCB	**8**													
2,2´,5-TrCB	**18**													
2,4,4´-TrCB	**28**													
2,2´,3,5´-TeCB	**44**													
2,2´,4,5´-TeCB	**49**													
2,2´,5,5´-TeCB	**52**													
2,3´,4,4´-TeCB	**66**													
2,2´,3,4,5´-PeCB	**87**													
2,2´,4,5,5´-PeCB	**101**													
2,3,3´,4,4´-PeCB	**105**													
2,3´,4,4´,5-PeCB	**118**													
2,2´,3,3´,4,4´-HxCB	**128**													
2,2´,3,4,4´,5´-HxCB	**138**													
2,2´,4,4´,5,5´-HxCB	**153**													
2,2´,3,3´,4,4´,5-HpCB	**170**													
2,2´,3,4,4´,5,5´-HpCB	**180**													
2,2´,3,4,4´,5´,6-HpCB	**183**													
2,2´,3,4,4´,6,6´-HpCB	**184**													
2,2´,3,4´,5,5´,6-HpCB	**187**													
2,2´,3,3´,4,4´,5,6-OcCB	**195**													
2,2',3,3',4,4',5,5',6-NoCB	**206**													
DeCB	**209**													

APPENDIX O - ATTACHMENT 1

Table O5: Placement Units Lumbriculus Statistical Analysis

Placement Unit ND = 0														
Congener	**Congener Number**	**Lab Control 1**	**Lab Control 2**	**Lab Control 3**	**Lab Control 4**	**median**	**Average**	**Std. Dev.**	**CV**	**% CV**	**Skew**	**X(n-i+1) - x(i)**	**b**	**SW**
							X	s	s/x	s/x		0.71		
Total PCBs	**ppb**	0	0	0	0	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!		0.00	#DIV/0!
% Lipids	**ppb**	**0.039**	**0.031**	**0.034**	**0.037**									
Normalized PCBs	**ppb**	**0.00**	**0.00**	**0.00**	**0.00**	0.00	0.00	0.00	#DIV/0!	#DIV/0!	#DIV/0!		0.00	#DIV/0!
Ln of Normalized PCBs	**ppb**	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!	#NUM!		0.00	#NUM!
2,4´-DiCB	**8**													
2,2´,5-TrCB	**18**													
2,4,4´-TrCB	**28**													
2,2´,3,5´-TeCB	**44**													
2,2´,4,5´-TeCB	**49**													
2,2´,5,5´-TeCB	**52**													
2,3´,4,4´-TeCB	**66**													
2,2´,3,4,5´-PeCB	**87**													
2,2´,4,5,5´-PeCB	**101**													
2,3,3´,4,4´-PeCB	**105**													
2,3´,4,4´,5-PeCB	**118**													
2,2´,3,3´,4,4´-HxCB	**128**													
2,2´,3,4,4´,5´-HxCB	**138**													
2,2´,4,4´,5,5´-HxCB	**153**													
2,2´,3,3´,4,4´,5-HpCB	**170**													
2,2´,3,4,4´,5,5´-HpCB	**180**													
2,2´,3,4,4´,5´,6-HpCB	**183**													
2,2´,3,4,4´,6,6´-HpCB	**184**													
2,2´,3,4´,5,5´,6-HpCB	**187**													
2,2´,3,3´,4,4´,5,6-OcCB	**195**													
2,2',3,3',4,4',5,5',6-NoCB	**206**													
DeCB	**209**													

ATTACHMENT 2 – BOX PLOTS AND MULTIPLE RANGE TESTS

August 20, 2012

Mariah Hope
FutureNet Group Inc.
12801 Auburn Street
Detroit, Michigan 48223

mariahh@futurenetgroup.com

Dear Ms. Mariah Hope,

This letter provides the analysis for the Duluth PCB data provided by FutureNet Group for Total PCBs and Normalized PCB for the non-detectable (ND) levels equaling the method detection limit (MDL) as shown below. I recoded the data so that the names of all samples containing the letters PU begin with A_.

The analysis of each congener consists of two parts: 1) **box & whisker plot**; and 2) **multiple range tests**. Both represent means comparisons; the former is a commonly-used graphical representation, while the latter is an analytical summary that employs all possible pairwise t-tests with results reported at the 95% confidence level.

very truly yours,

Bob

Robert E. Chapman, Ph.D.
9423 Hidden Lake CT.
Dexter, MI 48130
e-mail: chaphook@aol.com

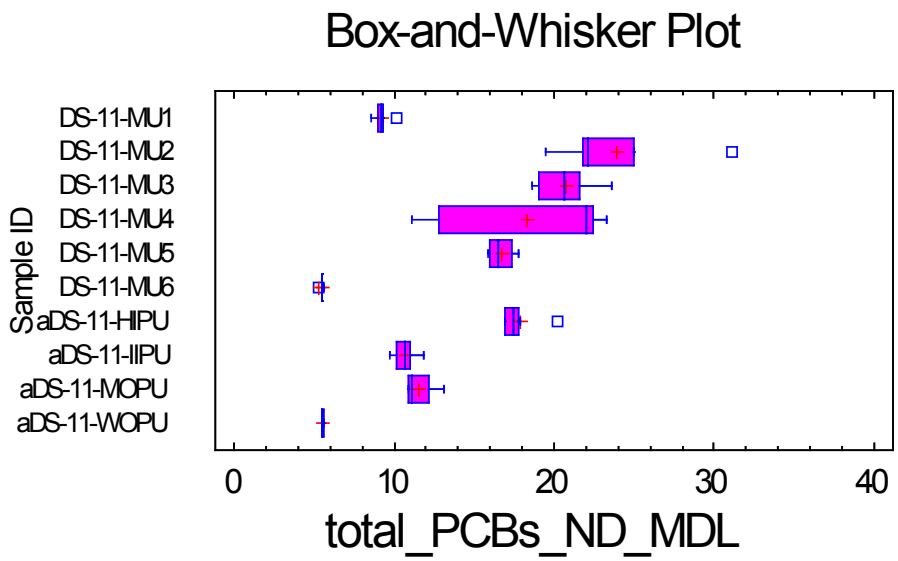
Analyzed PCB Data (22 Congeners)

Management Unit	Parameter	Total PCBs ND = MDL	Normalized PCBs ND = MDL	Total PCBs ND = 0	Normalized PCBs ND = 0
	Sample Name	**µg/Kg**	**µg/Kg**	**µg/Kg**	**µg/Kg**
Management Unit 1	**DS-11-MU1-1**	8.6	238.1	4.4	122.5
	DS-11-MU1-2	9.3	251.9	5.1	137.0
	DS-11-MU1-3	8.9	241.6	4.9	131.6
	DS-11-MU1-4	10.1	220.2	6.0	130.9
	DS-11-MU1-5	9.2	234.6	5.0	128.5
Management Unit 2	**DS-11-MU2 - 1**	25.0	675.7	22.4	604.3
	DS-11-MU2 - 2	21.8	659.1	18.9	573.3
	DS-11-MU2 - 3	19.5	557.4	16.7	476.6
	DS-11-MU2 - 4	31.1	778.5	28.9	723.0
	DS-11-MU2 - 5	22.1	597.3	19.3	520.8
Management Unit 3	**DS-11-MU3 - 1**	21.6	772.1	18.6	665.0
	DS-11-MU3 - 2	23.6	622.1	20.7	544.5
	DS-11-MU3 - 3	20.7	504.1	17.7	431.0
	DS-11-MU3 - 4	18.6	488.9	15.5	407.6
	DS-11-MU3 - 5	19.0	704.1	15.4	570.4
Management Unit 4	**DS-11-MU4 - 1**	11.1	276.8	7.5	187.5
	DS-11-MU4 - 2	12.8	457.1	9.6	341.1
	DS-11-MU4 - 3	22.4	575.1	19.5	500.0
	DS-11-MU4 - 4	22.0	612.2	19.0	528.9
	DS-11-MU4 - 5	23.3	517.3	20.8	462.0
Management Unit 5	**DS-11-MU5-1**	17.8	335.5	13.8	260.4
	DS-11-MU5-2	17.0	532.2	13.1	409.4
	DS-11-MU5-4	16.0	470.6	12.0	352.9
	DS-11-MU5-5	15.9	454.3	11.9	339.1
Management Unit 6	**DS-11-MU6-1**	5.5	166.4	**0.0**	**0.0**
	DS-11-MU6-2	5.6	206.3	**0.0**	**0.0**
	DS-11-MU6-3	5.5	183.3	**0.0**	**0.0**
	DS-11-MU6-4	5.5	158.0	**0.0**	**0.0**
	DS-11-MU6-5	5.3	147.8	**0.0**	**0.0**

Analyzed PCB Data

Placement Unit	Parameter	Total PCBs ND = MDL	Normalized PCBs ND = MDL	Total PCBs ND = 0	Normalized PCBs ND = 0
	Sample Name	µg/Kg	µg/Kg	µg/Kg	µg/Kg
Wisconsin Open Water Placement Unit	DS-11-WOPU-1	5.5	152.5	**0.0**	**0.0**
	DS-11-WOPU-2	5.5	133.2	**0.0**	**0.0**
	DS-11-WOPU-3	5.5	167.3	**0.0**	**0.0**
	DS-11-WOPU-4	5.7	161.4	**0.0**	**0.0**
	DS-11-WOPU-5	5.6	139.8	**0.0**	**0.0**
Hearding Island Placement Unit	DS-11-HIPU - 1	17.8	593.3	14.5	484.0
	DS-11-HIPU - 2	20.2	695.9	16.9	583.8
	DS-11-HIPU - 3	17.4	670.0	14.2	547.3
	DS-11-HIPU - 4	16.9	602.9	13.5	480.7
	DS-11-HIPU - 5	16.9	604.6	13.6	485.4
Interstate Island Placement Unit	DS-11-IIPU-1	9.7	226.5	5.6	130.9
	DS-11-IIPU-2	10.2	318.4	6.1	189.1
	DS-11-IIPU-3	10.7	274.4	6.5	165.6
	DS-11-IIPU-4	11.8	328.1	7.8	215.6
	DS-11-IIPU-5	11.0	234.7	6.9	146.8
Minnesota Open Water Placement Unit	DS-11-MOPU - 2	13.1	410.0	9.1	285.6
	DS-11-MOPU - 3	10.9	350.0	6.7	214.8
	DS-11-MOPU - 4	11.2	311.7	7.1	196.1
	DS-11-MOPU - 5	11.0	282.3	6.5	165.9

Total 22 PCBs ND = MDL



Multiple Range Tests for Total 22 PCBs by Sample ID

Method: 95.0 percent LSD

Sample ID	Count	Mean	Homogeneous Groups
DS-11-MU6	5	5.482	X
aDS-11-WOPU	5	5.542	X
DS-11-MU1	5	9.222	X
aDS-11-IIPU	5	10.694	X
aDS-11-MOPU	4	11.55	X
DS-11-MU5	4	16.6775	X
aDS-11-HIPU	5	17.842	XX
DS-11-MU4	5	18.324	XX
DS-11-MU3	5	20.704	XX
DS-11-MU2	5	23.9	X

Contrast	Difference	+/- Limits
DS-11-MU1 - aDS-11-HIPU	***-8.62**	3.30403
DS-11-MU1 - aDS-11-IIPU	-1.472	3.30403
DS-11-MU1 - aDS-11-MOPU	-2.328	3.50445
DS-11-MU1 - aDS-11-WOPU	***3.68**	3.30403
DS-11-MU2 - aDS-11-HIPU	***6.058**	3.30403
DS-11-MU2 - aDS-11-IIPU	***13.206**	3.30403
DS-11-MU2 - aDS-11-MOPU	***12.35**	3.50445
DS-11-MU2 - aDS-11-WOPU	***18.358**	3.30403
DS-11-MU3 - aDS-11-HIPU	2.862	3.30403
DS-11-MU3 - aDS-11-IIPU	***10.01**	3.30403
DS-11-MU3 - aDS-11-MOPU	***9.154**	3.50445
DS-11-MU3 - aDS-11-WOPU	***15.162**	3.30403
DS-11-MU4 - aDS-11-HIPU	0.482	3.30403
DS-11-MU4 - aDS-11-IIPU	***7.63**	3.30403
DS-11-MU4 - aDS-11-MOPU	***6.774**	3.50445

DS-11-MU4 - aDS-11-WOPU	***12.782**	3.30403
DS-11-MU5 - aDS-11-HIPU	-1.1645	3.50445
DS-11-MU5 - aDS-11-IIPU	***5.9835**	3.50445
DS-11-MU5 - aDS-11-MOPU	***5.1275**	3.69401
DS-11-MU5 - aDS-11-WOPU	***11.1355**	3.50445
DS-11-MU6 - aDS-11-HIPU	***-12.36**	3.30403
DS-11-MU6 - aDS-11-IIPU	***-5.212**	3.30403
DS-11-MU6 - aDS-11-MOPU	***-6.068**	3.50445
DS-11-MU6 - aDS-11-WOPU	-0.06	3.30403

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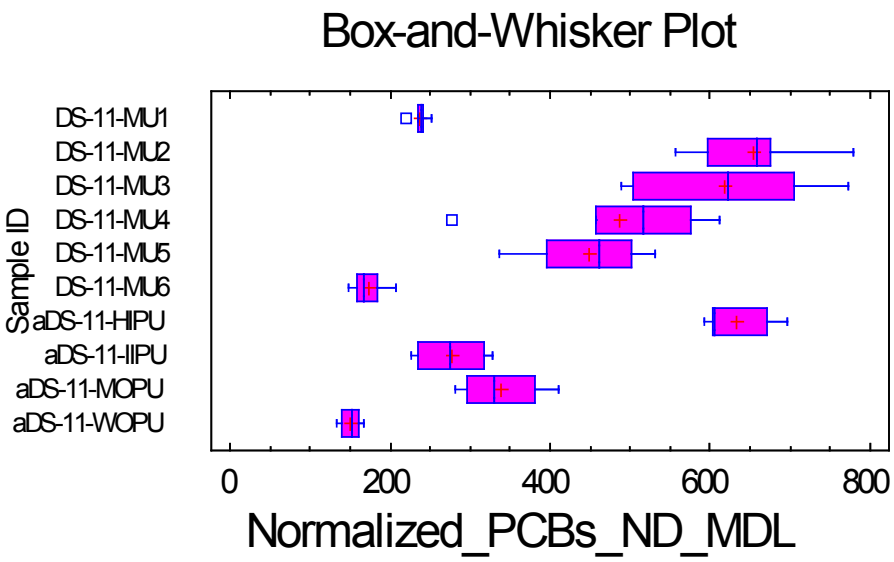
* denotes a statistically significant difference.

Normalized Total 22 PCBs ND = MDL



Multiple Range Tests for Normalized_22_PCBs_ND_MDL by Sample ID

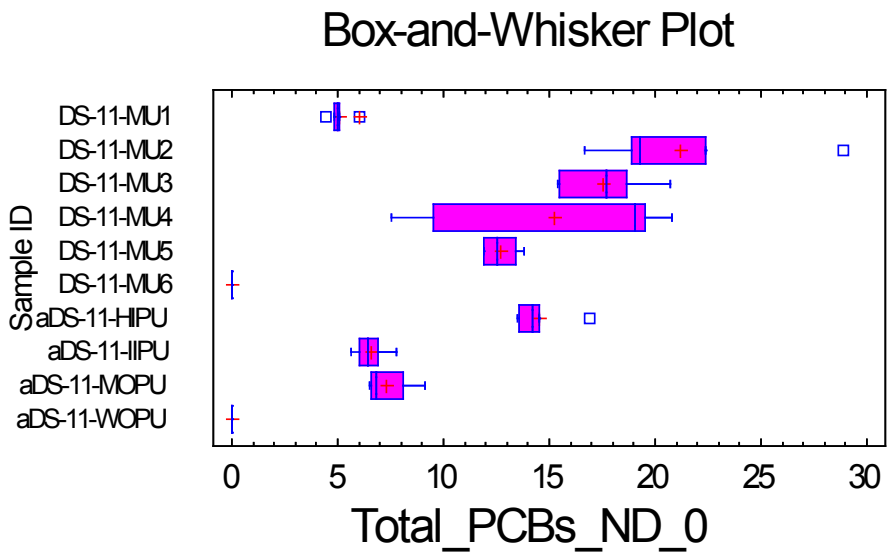
Method: 95.0 percent LSD

Sample ID	Count	Mean	Homogeneous Groups
aDS-11-WOPU	5	150.824	X
DS-11-MU6	5	172.354	X
DS-11-MU1	5	237.282	XX
aDS-11-IIPU	5	276.41	XX
aDS-11-MOPU	4	338.495	X
DS-11-MU5	4	448.135	X
DS-11-MU4	5	487.714	X
DS-11-MU3	5	618.284	X
aDS-11-HIPU	5	633.338	X
DS-11-MU2	5	653.6	X

Contrast	Difference	+/- Limits
DS-11-MU1 - aDS-11-HIPU	***-396.056**	94.9447
DS-11-MU1 - aDS-11-IIPU	-39.128	94.9447
DS-11-MU1 - aDS-11-MOPU	***-101.213**	100.704
DS-11-MU1 - aDS-11-WOPU	86.458	94.9447
DS-11-MU2 - aDS-11-HIPU	20.262	94.9447
DS-11-MU2 - aDS-11-IIPU	***377.19**	94.9447
DS-11-MU2 - aDS-11-MOPU	***315.105**	100.704
DS-11-MU2 - aDS-11-WOPU	***502.776**	94.9447
DS-11-MU3 - aDS-11-HIPU	-15.054	94.9447
DS-11-MU3 - aDS-11-IIPU	***341.874**	94.9447
DS-11-MU3 - aDS-11-MOPU	***279.789**	100.704
DS-11-MU3 - aDS-11-WOPU	***467.46**	94.9447
DS-11-MU4 - aDS-11-HIPU	***-145.624**	94.9447
DS-11-MU4 - aDS-11-IIPU	***211.304**	94.9447
DS-11-MU4 - aDS-11-MOPU	***149.219**	100.704
DS-11-MU4 - aDS-11-WOPU	***336.89**	94.9447
DS-11-MU5 - aDS-11-HIPU	***-185.203**	100.704
DS-11-MU5 - aDS-11-IIPU	***171.725**	100.704
DS-11-MU5 - aDS-11-MOPU	***109.64**	106.151
DS-11-MU5 - aDS-11-WOPU	***297.311**	100.704
DS-11-MU6 - aDS-11-HIPU	***-460.984**	94.9447
DS-11-MU6 - aDS-11-IIPU	***-104.056**	94.9447
DS-11-MU6 - aDS-11-MOPU	***-166.141**	100.704
DS-11-MU6 - aDS-11-WOPU	21.53	94.9447

* denotes a statistically significant difference.

Total 22 PCBs ND = 0



Multiple Range Tests for Total_PCBs_ND_0 by Sample ID

Method: 95.0 percent LSD

Sample ID	Count	Mean	Homogeneous Groups
aDS-11-WOPU	5	0.0	X
DS-11-MU6	5	0.0	X
DS-11-MU1	5	5.076	X
aDS-11-IIPU	5	6.56	X
aDS-11-MOPU	4	7.3325	X
DS-11-MU5	4	12.6925	X
aDS-11-HIPU	5	14.546	XX
DS-11-MU4	5	15.276	XX
DS-11-MU3	5	17.574	X
DS-11-MU2	5	21.23	X

Contrast	Difference	+/- Limits
DS-11-MU1 - aDS-11-HIPU	***-9.47**	3.50561
DS-11-MU1 - aDS-11-IIPU	-1.484	3.50561
DS-11-MU1 - aDS-11-MOPU	-2.2565	3.71826
DS-11-MU1 - aDS-11-WOPU	***5.076**	3.50561
DS-11-MU2 - aDS-11-HIPU	***6.684**	3.50561
DS-11-MU2 - aDS-11-IIPU	***14.67**	3.50561
DS-11-MU2 - aDS-11-MOPU	***13.8975**	3.71826
DS-11-MU2 - aDS-11-WOPU	***21.23**	3.50561
DS-11-MU3 - aDS-11-HIPU	3.028	3.50561
DS-11-MU3 - aDS-11-IIPU	***11.014**	3.50561
DS-11-MU3 - aDS-11-MOPU	***10.2415**	3.71826
DS-11-MU3 - aDS-11-WOPU	***17.574**	3.50561
DS-11-MU4 - aDS-11-HIPU	0.73	3.50561
DS-11-MU4 - aDS-11-IIPU	***8.716**	3.50561
DS-11-MU4 - aDS-11-MOPU	***7.9435**	3.71826

DS-11-MU4 - aDS-11-WOPU	***15.276**	3.50561
DS-11-MU5 - aDS-11-HIPU	-1.8535	3.71826
DS-11-MU5 - aDS-11-IIPU	***6.1325**	3.71826
DS-11-MU5 - aDS-11-MOPU	***5.36**	3.91939
DS-11-MU5 - aDS-11-WOPU	***12.6925**	3.71826
DS-11-MU6 - aDS-11-HIPU	***-14.546**	3.50561
DS-11-MU6 - aDS-11-IIPU	***-6.56**	3.50561
DS-11-MU6 - aDS-11-MOPU	***-7.3325**	3.71826
DS-11-MU6 - aDS-11-WOPU	0.0	3.50561

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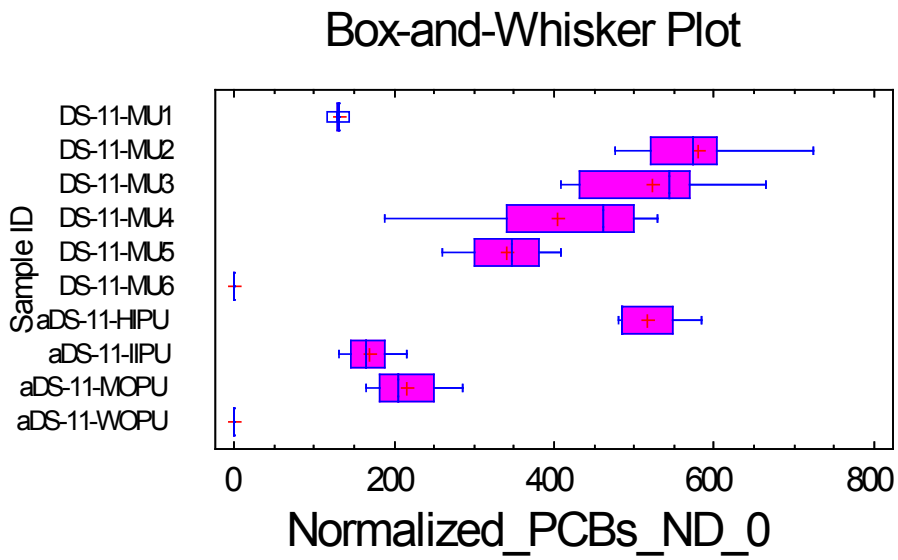
* denotes a statistically significant difference.

Normalized Total 22 PCBs ND = 0



Multiple Range Tests for Normalized_PCBs_ND_0 by Sample ID

Method: 95.0 percent LSD

Sample ID	Count	Mean	Homogeneous Groups
DS-11-MU6	5	0.0	X
aDS-11-WOPU	5	0.0	X
DS-11-MU1	5	130.096	X
aDS-11-IIPU	5	169.6	X
aDS-11-MOPU	4	215.62	X
DS-11-MU5	4	340.46	X
DS-11-MU4	5	403.892	X
aDS-11-HIPU	5	516.234	X
DS-11-MU3	5	523.69	X
DS-11-MU2	5	579.606	X

Contrast	Difference	+/- Limits

DS-11-MU1 - aDS-11-HIPU	***-386.138**	90.8742
DS-11-MU1 - aDS-11-IIPU	-39.504	90.8742
DS-11-MU1 - aDS-11-MOPU	-85.524	96.3866
DS-11-MU1 - aDS-11-WOPU	***130.096**	90.8742
DS-11-MU2 - aDS-11-HIPU	63.372	90.8742
DS-11-MU2 - aDS-11-IIPU	***410.006**	90.8742
DS-11-MU2 - aDS-11-MOPU	***363.986**	96.3866
DS-11-MU2 - aDS-11-WOPU	***579.606**	90.8742
DS-11-MU3 - aDS-11-HIPU	7.456	90.8742
DS-11-MU3 - aDS-11-IIPU	***354.09**	90.8742
DS-11-MU3 - aDS-11-MOPU	***308.07**	96.3866
DS-11-MU3 - aDS-11-WOPU	***523.69**	90.8742
DS-11-MU4 - aDS-11-HIPU	***-112.342**	90.8742
DS-11-MU4 - aDS-11-IIPU	***234.292**	90.8742
DS-11-MU4 - aDS-11-MOPU	***188.272**	96.3866
DS-11-MU4 - aDS-11-WOPU	***403.892**	90.8742
DS-11-MU5 - aDS-11-HIPU	***-175.774**	96.3866
DS-11-MU5 - aDS-11-IIPU	***170.86**	96.3866
DS-11-MU5 - aDS-11-MOPU	***124.84**	101.6
DS-11-MU5 - aDS-11-WOPU	***340.46**	96.3866
DS-11-MU6 - aDS-11-HIPU	***-516.234**	90.8742
DS-11-MU6 - aDS-11-IIPU	***-169.6**	90.8742
DS-11-MU6 - aDS-11-MOPU	***-215.62**	96.3866
DS-11-MU6 - aDS-11-WOPU	0.0	90.8742

* denotes a statistically significant difference.

APPENDIX P

QC/QA Certificate / ITR Certificate

APPENDIX P

QUALITY ASSURANCE / QUALITY CONTROL CERTIFICATION

Every practical effort was made to meet the quality control requirements of the analytical method, and the detection level specifications of the project. Any problems encountered during the handling and / or analyses of the samples are addressed in the Statement of Data Qualifications (Section 4).

A case narrative is presented as part of the entire laboratory report. The detailed laboratory Quality Control Results are documented on:

- Trace Soil Bulk Laboratory Reports **(Appendix H)**.
- RTI Soil Bulk Laboratory Reports **(Appendix I)**.
- GLEC Laboratory Report – Sediment Elutriate Acute Toxicity Test Results **(Appendix J)**.
- GLEC Laboratory Report – 10-day Whole Sediment Toxicity Test Results **(Appendix K)**.
- GLEC Laboratory Report – 28-day Lumbriculus variegatus Bioaccumulation Tests **(Appendix J)**.
- RTI 26 Congeners PCB Lumbriculus Laboratory Report **(Appendix M)**.
- Test America 209 Congeners PCB Lumbriculus Laboratory Report **(Appendix O).**

June 30 2012

Mariah Hope, P.E.
Project Manager

Date

6/30/2012

James Finetti, P.G.
Sr. Project Manager

Date

APPENDIX P

COMPLETION OF INDEPENDENT TECHNICAL REVIEW

Dr. Ali Al-Saffar and Mr. James Finetti completed an independent technical review of the Sediment and Water Sampling and Analysis Report for Duluth-Superior, Minnesota-Wisconsin Open Water Evaluation.

Notice is hereby given that an independent technical review has been conducted that is appropriate to the level of risk and complexity inherent in the project, as defined in the Quality Control Plan. During the independent technical review, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of assumptions; methods, procedures, and material used in analyses; alternatives evaluated; the appropriateness of data used and level of data obtained; and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing USACE policy.

June 30, 2012

Ali Al-Saffar, Ph.D., P.G.
Project Manager

Date

6/30/2012

James Finetti, P.G.
Senior Project Manager

Date

APPENDIX P

CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows:

- No major technical concerns were found.
- As noted above, all concerns resulting from an independent technical review of the project have been considered.

James Finetti

James Finetti, P.G.
Senior Project Manager

6/30/2012

Date