Appendix A
Seaworks Bathymetric Investigation

Final Report for:

KALAMAZOO RIVER – LOTTIE AVENUE TO MORROW DAM

BATHYMETRIC INVESTIGATION

Project:

Eagle Creek Renewable Energy
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Prepared for:

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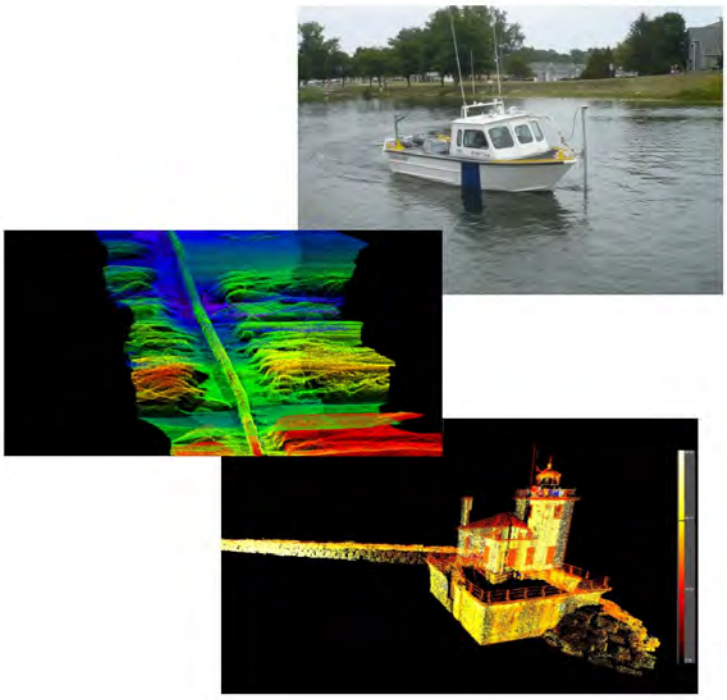

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HYDROGRAPHIC • GEOPHYSICAL • ENVIRONMENTAL

HUBZone
Historically Underutilized Business Zone
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1.0 Project Details

1.1 Project Description

Seaworks was tasked by Eagle Creek Renewable Energy (ECRE) with performing a hydrographic investigation at the Morrow Dam/ Kalamazoo River Site in Comstock, MI. The area of interest was a section of the Kalamazoo River from the Morrow Dam downstream to the railroad bridge at Lottie Ave. Surveys were conducted using multibeam sonar with RTK/PPK GNSS positioning technologies. Above-water features such as banks and the sandbars were surveyed using aerial LiDAR, performed by subcontractor Droneview Technologies.

The survey area measured approximately 7 miles long by an average of 150' wide with water depths varying from about 0-10'. The river is shallow in many areas and some rapids/riffles are present. The area of interest also included two oxbow lakes adjacent to the river. Seaworks gathered data using a Teledyne Oceanscience Z-boat drone equipped with both multibeam and single beam technologies. Multibeam was used for production surveying in the bulk of the river, and single beam in shallow and inaccessible areas.

Hydrographic surveying in the main river took place during Fall 2020, between October 27th and November 8th. Aerial LiDAR surveying was conducted on November 12th. Oxbow hydrographic surveys took place December 1st-3rd.

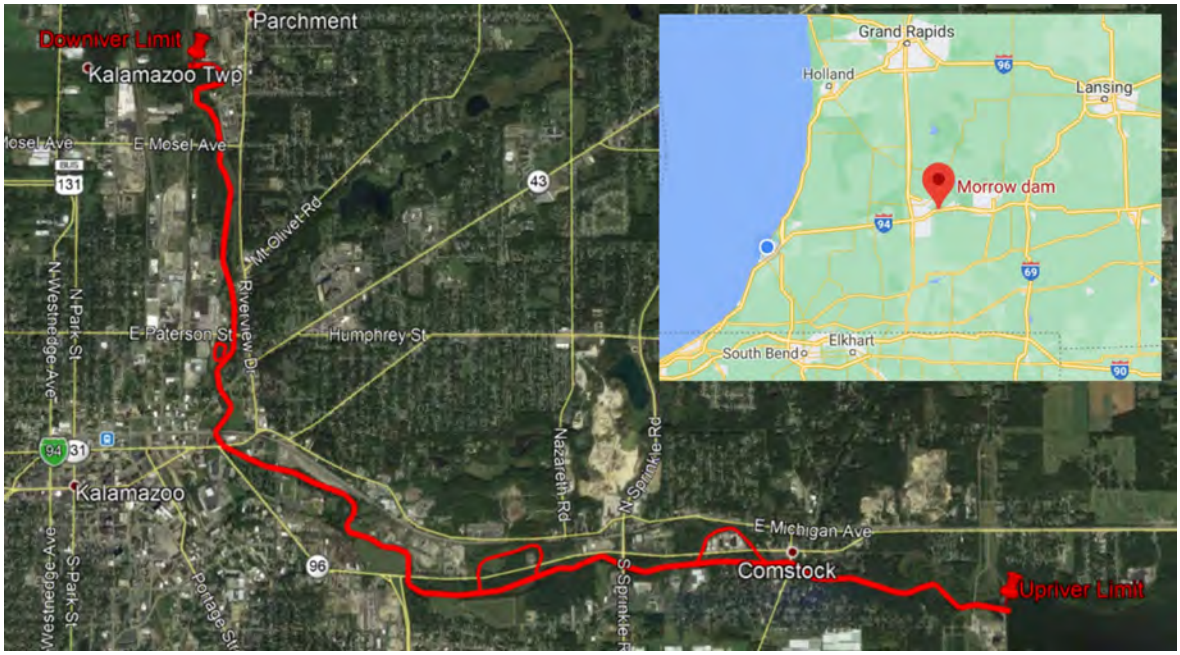


Figure 1.1 – Project Location and Survey Extents

1.2 Project Datums

Horizontal

Datum: North American Datum of 1983 (NAD83)
Grid: Michigan Coordinate System, South Zone
Units: International Foot

Vertical

Datum: North American Vertical Datum of 1988 (NAVD88)
Geoid: Continental US (CONUS) 2018

1.3 Survey Control

A set of three control points were established in locations near the Morrow Dam using GNSS technology with corrections from MDOT VRS system and NGS OPUS methods. Equipment was also verified against a nearby NGS Control Point (X 335). A base station was setup on one control point and the other points were used as daily QC check in/out point. The base station continuously logged RINEX data to be used in survey post processing. Post Processed Kinematic (PPK) methods were utilized to generate a positioning solution, eliminating the need for RTK radio range to be maintained.

A Trimble R8 base station was set on control point 102 or 103 and daily pre- and post-survey QC checks were performed on points 101, 102 and/or 103 using a Trimble R8 rover. All QC points checked in to within 0.10' horizontally and vertically.

Figure 1.2 – Point 101, 102, 103 (left to right)

ID	Easting (ift)	Northing (ift)	Elev (ift)	Description
101	12,818,855.898	287,098.557	770.10	Rebar Cap
102	12,818,935.421	287,019.454	777.41	Rebar Cap
103	12,818,963.136	286,865.039	780.10	Magnail
X335	12,813,772.35	289,505.060	789.41	Covered Metal Rod

2.0 Equipment

2.1 Survey Vessel

Z-Boat 1800-RP

The Z-Boat 1800-RP is a small, remote-controlled, "drone" survey vessel that can be equipped with most of the same survey technologies as Seaworks' large survey vessels. Its portability and compact size make it ideal for shallow-water surveying, difficult to access areas, and protected waters of any depth. Seaworks' boat has a "ruggedized package" upgrade which features a single lifting eye, a dual-GPS/GNSS antenna mount frame, and an interchangeable sensor mount well.

The Z-Boat was operated from a chase boat, a 14' Alumacraft jon boat with a 6hp outboard motor.

Specifications

- Length: 6'
- Width: 3'
- Height: 3'
- Survey/max speed: 3/8kts
- Boat weight: 85lbs
- Payload capacity: 65lbs

Figure 2.1 – Z-Boat

2.2 Sonar Equipment

R2Sonic 2020

The R2Sonic 2020 multibeam sonar system scans underwater features using a high-resolution swath of 256 beams with beam widths of 2° across-track and 2° along-track (2° x 2° system). The system can be operated in either equidistant or equal-angle operating modes, with a swath coverage angle of up to 130°. The sonar operates at user-selectable frequencies between 200kHz and 450kHz.

A continuous sound velocity profile is normally measured by velocity probe casts and then corrected for within the processing software.

Figure 2.2 – R2Sonic 2020

Sonar Equipment & Accessories

- Multibeam Echosounder: R2Sonic 2020
- SV Profiler: Teledyne Odom Digibar Pro

Odom CV100

The Teledyne Odom CV100 Echosounder is a rugged, waterproof, dual-frequency single-beam echosounder. It is capable of digital chart (Echogram) output via an ethernet interface which is logged in Hypack software as .bin files. It operates at a frequency range of 24-340Khz at up to 20Hz ping rates. Typical resolution is 0.01m and accuracy is 0.01m +/-1% of water depth (at 200Khz).

Figure 2.3 – Odom CV100

Continuous sound velocity profile was measured before, during, and after each day's survey using Odom Digibar Pro, which was be used to correct sonar data during collection and processing.

Sonar Equipment

- Teledyne Odom CV100 Echosounder
- Teledyne Odom Digibar Pro

2.3 Positioning & Orientation System

Applanix POS MV 120

Horizontal and vertical positioning were accomplished using an Applanix POS MV 120 Position & Orientation system. The POS MV 120 package uses RTK (Real Time Kinematic) GPS technology which is capable of receiving both L1 & L2 frequencies as well as the GLONASS satellites. Equipment is capable of achieving positioning accuracies of up to +/-0.10', both horizontally and vertically. The RTK positioning equipment is be capable of rapid update rates >5Hz, allowing it to be used for real-time heave compensation.

Figure 2.4 – POS MV 120

A two-antenna "moving baseline RTK" system is used by the POS to provide high-accuracy heading in addition to vessel position. Heading sensing equipment is capable of maintaining at least +/-0.10° heading accuracy under most conditions.

The final component of the system is a precision motion sensor which is used for vessel pitch and roll corrections. The sensor was calibrated/zeroed with the vessel at rest, and then mounting offsets were determined by a patch test performed prior to mobilization. Motion sensing equipment is capable of angular measurement accuracy of at least +/-0.04°.

2.4 Aerial LiDAR Equipment

Piper Aircraft

Smaller class light aircraft utilized by many industries in the general aviation market. All metal construction with moderate range and speed. Highly maneuverable with dual tail design.

- 4-6 Passenger
- Twin Engine Light Aircraft
- 250 HP Engine
- Max Speed: 215 MPH

Figure 2.5 – Piper PA23-250

Teledyne Optech Galaxy

New generation airborne solution packing more power and accuracy into a more compact design. Equipped with multi sensor on fixed mounts for durability. Wide dynamic range allows for exceptional small target detection.

- PulseTRAK and SwathTrak Technologies
- In-air XYZ point cloud
- External IMU
- FMS Mission Manager Planner
- 2 Million points per second
- 8 returns per pulse (precision vertical accuracy)

Figure 2.6 – Teledyne Optech Galaxy

3.0 Personnel

Chris Ebner, P.E. (MI & IL) was the Project Manager and Lead Hydrographer for the operation. Chris is a Hydrographer certified by the Hydrographic Society of America and the National Society of Professional Surveyors (THSOA/NSPS) with 13 years of experience in hydrographic surveying.

Wade Whitfield, Scott Feldpausch and Ed Lopez were the Project Surveyors for field data collection and processing. Wade, Scott, and Ed have relevant education backgrounds, work experience, and extensive hands-on experience using the hydrographic systems described above.

Jason Heywood was the Aerial Survey Project Manager. As Vice President of Droneview Technologies, Jason has provided professional geospatial services for over 20 years to energy, transportation, land development, mining, civil engineering, environmental, airport, and government clients throughout the United States.

4.0 Procedures

4.1 Calibrations & Checks

At the beginning of each survey day, a sound velocity profile was measured using the Digibar Pro. The Digibar cast recorded velocities throughout the water column at 1' increments, which were applied to sonar data during collection and processing. A new Digibar cast was performed at least every 2 hours or any time the survey vessel moved to a new survey area.

Pre- and post-survey water level checks were performed by comparing post-processed elevation outputs from the POS MV to water level shots from the Trimble VRS GNSS Rover.

Bar checks for the Survey Vessel are performed regularly in order to measure returns off an aluminum plate held at a known depth below the sonar head. This is done to confirm the sonar head draft value as well as provide a documented physical check against Seaworks' electronic soundings.

Multibeam and single beam patch tests for the Survey Vessel are performed regularly in order to measure and confirm sensor mounting offsets. This is done by running survey lines in a predetermined pattern over a recognizable object such as a slope or pipeline. The data is then processed using a software routine to compute the pitch, roll, and heading angular offsets.

4.2 Field Procedures

After initial checks and calibrations, bathymetry lines were run parallel to the river channel at line spacings of 10-30'. Survey line spacing was selected in order to provide complete bottom coverage by the multibeam swath at varying water depths. Generally 25% overlap (125% coverage) was desired between passes in order to provide redundant data for QC purposes, although this was not always possible in shallow water.

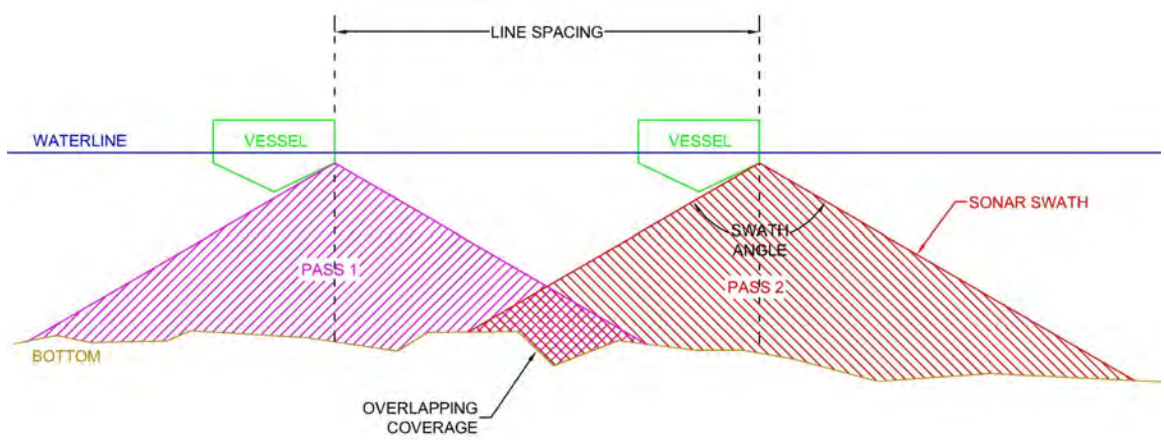


Figure 4.1 – Survey Layout

Sonar operating parameters - Bathymetry

- Sonar Frequency: 400Khz
- Swath Angle: 65° port/65° starboard
- Sonar Mode
    - Equi-Distant Beams
    - Down/Bathy/Normal
- Survey Speed: 2.5-3.0Kts

Following multibeam data collection, the multibeam system was removed from the Z-Boat and single-beam system installed. In areas that were determined to be too shallow or otherwise inaccessible for multibeam data collection, additional coverage was obtained using the single-beam Z-Boat. In oxbow lakes and other areas of interest, data was collected along perpendicular transects spaced 50' apart. In areas previously covered by multibeam, a single pass was performed along the riverbanks, sandbars, and near obstructions. In locations such as coves, etc. a free form weave pattern was utilized at the surveyor's discretion.

In certain locations within the Eastern oxbow lake, a grid of shallow water RTK GNSS pole shots was also gathered in spots that were too shallow for the Z-Boat to access. These were generally collected along a 50' grid and included natural break points in slopes and channels.

Aerial LiDAR work began with setting ground control points for aerial triangulation. This procedure allows for precise positioning adjustments to be performed on collected data. The next step was to complete the fly over for data collection. The MDOT VRS network was used for initial GNSS positioning corrections. The flyover captured both LiDAR point cloud data along with high-definition color digital orthophotography. During data processing, a vegetation filter was used to ensure accurate readings of the riverbanks and ground surfaces.

4.3 Processing & Deliverables

Following data collection, survey data was processed using the Hypack/Hysweep 2020 software package. Raw data were pre-filtered, then manually cleaned of unsuitable data and sonar noise. Positioning and motion sensing corrections were applied, then data were saved in Hypack Edited Data format for additional post-processing.

Data was exported in Hypack Edited data format, as well as 1'x1' XYZ grid files reduced using Median sounding selection. The XYZ grid was used in Hypack's TIN utility to generate contour files for mapping and contour plots.

The Aerial Lidar data were cleaned and processed using vegetation filtering. Positioning adjustments were applied through the use of established ground control points. The high-density point cloud was thinned in order to produce a digital terrain model. Color digital orthophotography images were also

organized and produced with a .25' ground pixel resolution. Finally, LiDAR returns off the water surface were trimmed from the dataset using boundaries derived from the ortho-images.

Merging the various datasets to produce the final product consisted of several steps. Hydrographic multibeam and single-beam/pole shot data were merged using the Hypack XYZ Manager utility. This allowed the two to be combined, favoring the multibeam data where the two datasets overlapped. Next, the aerial and hydrographic data were combined into a single XYZ file. The combined data file was then loaded into the Hypack TIN Utility where a combined TIN was generated, to interpolate between the two datasets where needed, as well as any other gaps that were present. In a couple of specific locations, breaklines were used where data density was not adequate for modelling oxbow channels or river banks. Some smoothing techniques were also utilized along the banks. The TIN was clipped to remove vertical features like bridge piers, bridge abutments, etc.. A handful of locations were also clipped out where Seaworks did not feel enough data was captured to adequately model the surface. A final product was then exported from the TIN program in the form of a 1x1 XYZ grid as well as a DXF format CAD surface.

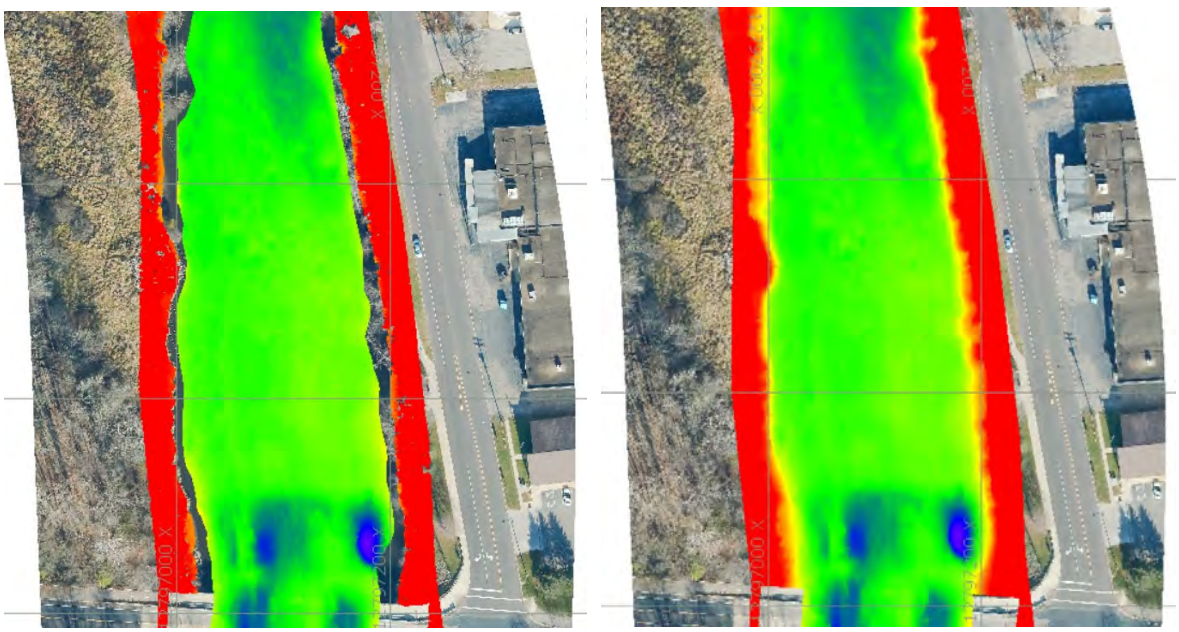


Figure 4.2 – (Left) Data before merging. (Right) Data after merging

5.0 Site Conditions

Conditions along the Kalamazoo River varied from the start to the completion of the survey. Water levels gradually dropped by nearly a foot during the course of the main-river survey effort, conducted the weeks of Oct. 26th and Nov. 2nd. Lower water levels presented challenges in the shallower areas by limiting access in some spots. After completing the river survey, it was decided water levels were too low to perform the oxbow lake surveys. The survey was paused until a moderate rainfall event raised river levels by a few inches, which allowed the oxbow surveys to be completed in early December.

Currents along the river were variable from slow to fast but almost always accessible. Regions of stronger rapids were encountered where the Z-boat did not have enough thrust to make it upstream, or conditions were too shallow and rocky were not able to be surveyed. Strong currents along the river caused reduced survey and transit speeds while working upriver.

Obstructions along the river included bridges, deadfall, leaning trees, surfaced sandbars, culverts and bridges. Road bridges and train bridges often had piles of deadfall tangled in them making access around them difficult. Leaning and fallen trees near the riverbanks made some areas along the banks inaccessible. When the water levels were low, sandbars made some areas of the river unreachable by boat, although exposed sandbars were well-covered by aerial LiDAR.

Figure 5.1 (Top Left) Deadfall log jam near train bridge. (Top Right) Strong currents and shallow conditions with obstacles. (Bottom Left) Exposed river bottom during low water levels. (Bottom Right) Extremely shallow conditions and stronger currents.

Limited access into the oxbow lakes meant carrying the Z-boat and jon boat from the road or park into the river. From there, surveying continued normally. The oxbows were very shallow and, in several

cases, the riverbanks needed to be walked to follow the Z-boat where the jon boat (chase boat) bottomed out.

To access the river, two boat launches, one road access, and one park were used to launch the boats. The boat launch at Merrill Park was used to survey from the rapids at Merrill Park east to the Morrow dam. The boat launch at Verburg Park was used to survey from the railroad bridge at Lottie Ave to the rapids at Merrill Park. The rapids at Merrill Park were too strong for the Z-boat so different access points on each side of the rapids were necessary to survey the entire site.

South Wenke Park was used to launch the Z-Boat and jon boat to access the eastern oxbow near King Hwy and River St. To access the western oxbow along King Hwy, the Z-boat was carried from the roadside to the oxbow lake.

6.0 Results & Discussion

Data has been provided in both .XYZ and DXF (TIN) formats. A handful of small gaps have been left intentionally in the datasets. These locations were inaccessible and it is believed not enough data is available to accurately model the surface. Additionally, there are some gaps where vertical features such as bridge piers and abutments have been clipped out. Finally, there are three sections, between Merrill Park and the Morrow Dam, which have been omitted due to rapids and swift water preventing safe, accurate data collection.

Data is generally good quality with multibeam coverage in the main river channel, except in the extreme upper and lower limits of the survey area. Data within about 1,000’ of the Morrow Dam was mainly collected using single-beam due to swift currents and shallow water. The coves adjacent to the dam tailwaters could not be accessed because of silt curtain from construction activities. Also, the parts of the dam tailwaters that were surveyed were at lower data density than normal. Similar conditions were encountered at the downriver end of the survey area, where the lower ~250’ needed to be surveyed with single-beam due to swift, shallow water.

Ortho imagery over the survey area has also been included in the submittal, in GEOTIFF format.

Appendix B
Photographic and Geophysical Logs

AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam	Date:12/01/2020

Photo No. 1

Description:
Sediment sampling and processing facility (GEI owned)

Photo No. 2

Description:
Freezer outside GEI facility for storing cores and treatability test material.

AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam	Date: 12/02/2020

Photo No. 3

Description: Containment pad for dewatering dredge material excavated during gate replacement activities.

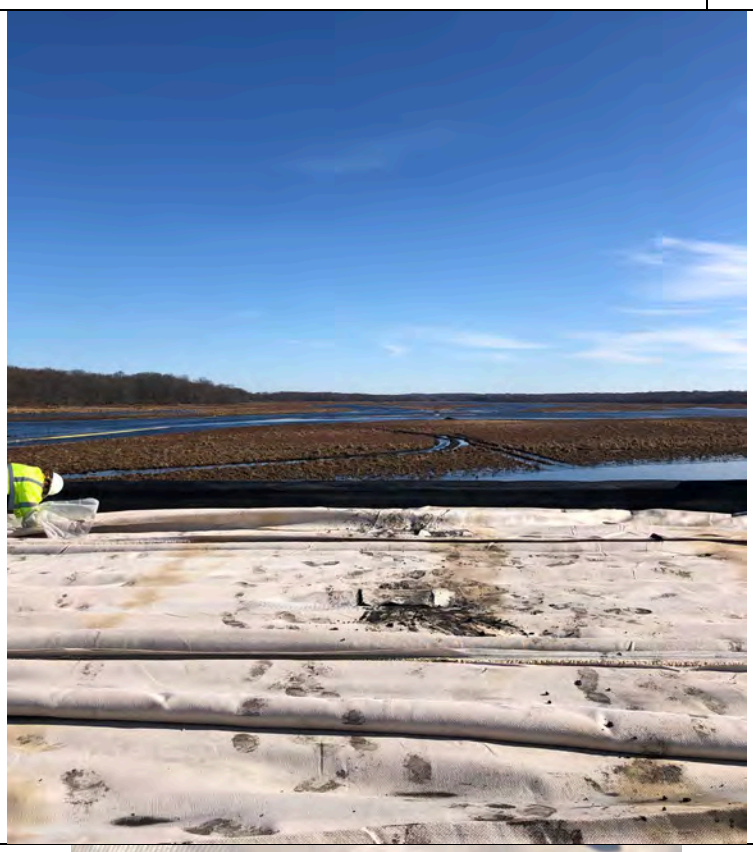


Photo No. 4

Description: Waste characterization sample collected from containment pad.

AECOM

PHOTOGRAPHIC LOG

Site Number/Name:	Date:12/03/2020

Photo No. 5

Description:
Tile rod probing of exposed sediment deposition area.

Photo No. 6

Description:
Tile rod probing of exposed sediment deposition area.

AECOM

PHOTOGRAPHIC LOG

Site Number/Name:	Date:12/06/2020

Photo No. 7

Description:
Probing Location DSRBPR003

Photo No. 8

Description:
Probing Location DSRBPROB007

AECOM

PHOTOGRAPHIC LOG

Site Number/Name:	Date:12/06/2020

Photo No. 9

Description:
Probing Location DSRBPROB015

Photo No. 10

Description:
Probing Location DSLBPROB030

AECOM

PHOTOGRAPHIC LOG

Site Number/Name:	Date: 12/05/2020

Photo No. 11

Description:
Coring work boat

Photo No. 12

Description:
Coring work boat

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam | **Date:12/05/2020**

Photo No. 13

Description:
Collection and securing a core tube containing a sediment sample.

Photo No. 14

Description:
Cores stored on boat after completion.

AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam	Date:12/02/2020

Photo No. 15

Description: DSLBC002 – Attempt 1

Photo No. 16

Description: DSLBC002 – Attempt 2

AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam | **Date:12/02/2020**

Photo No. 17

Description: DSLBC002 – Attempt 3

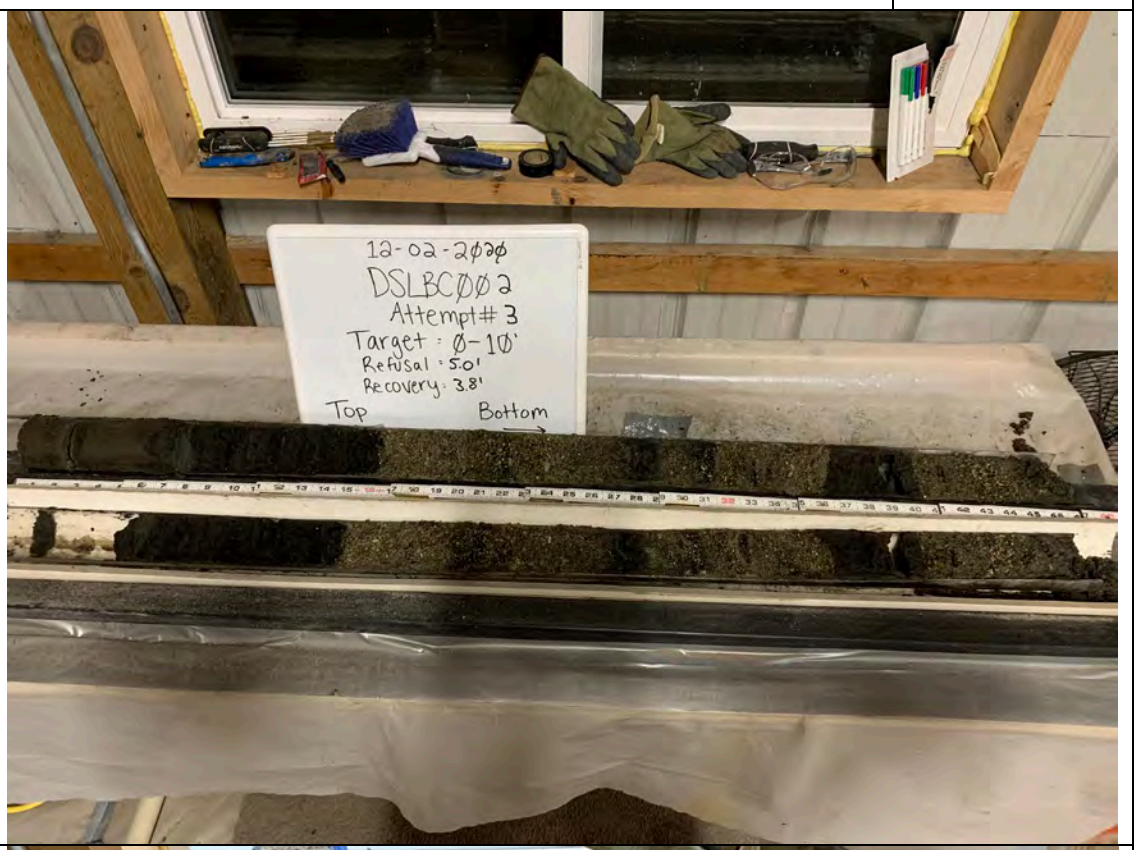


Photo No. 18

Description: DSLBC002 – Attempt 4

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam	**Date:12/04/2020**

Photo No. 19

Description: DSLBC004 – Attempt 1

Photo No. 20

Description: DSLBC004 – Attempt 2

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam	**Date:12/04/2020**

Photo No. 21

Description: DSLBC004 – Attempt 1 on top and Attempt 2 on bottom. Sampling intervals shown.

Photo No. 22

Description: DSRBC008 – Attempt 1

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam | **Date: 12/04/2020**

Photo No. 23

Description: DSRBC008 – Attempt 2

Photo No. 24

Description: DSRBC008 – Attempt 3

AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam | **Date: 12/04/2020**

Photo No. 25

Description: DSRBC008 – Attempt 4

Photo No. 26

Description: DSRBC008 – all attempts shown before sampling.

AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam	Date: 12/04/2020

Photo No. 27

Description: DSRBC008 – sampling horizons shown. Horizon one sample collected

Photo No. 28

Description: DSRBC008 – Horizon 2 samples collected. Remains of cores shown.

AECOM

PHOTOGRAPHIC LOG

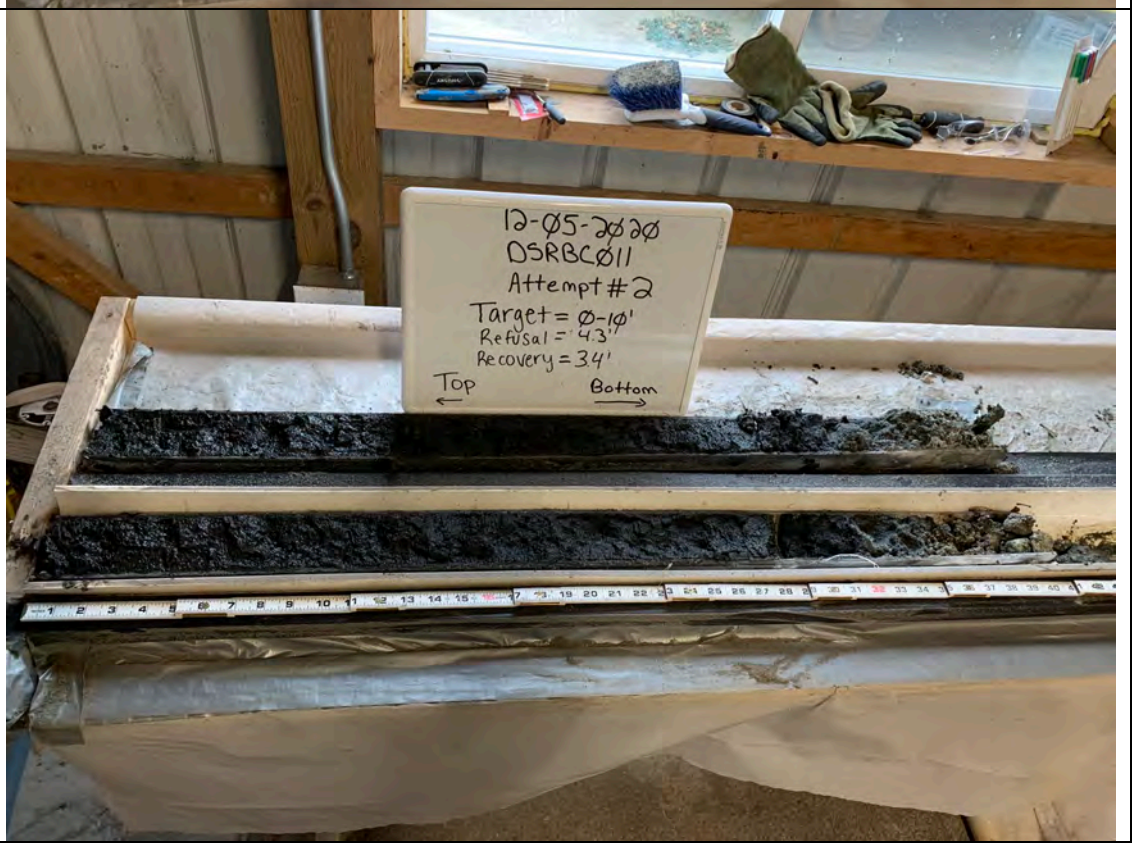
Site Number/Name: 60644031 – Morrow Dam	Date: 12/05/2020

Photo No. 29

Description: DSRBC011 – Attempt 1

Photo No. 30

Description: DSRBC011 – Attempt 2



AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam	Date: 12/05/2020

Photo No. 31

Description: DSRBC011 – attempt 3

Photo No. 32

Description: DSRBC011 – attempt 4.

AECOM

PHOTOGRAPHIC LOG

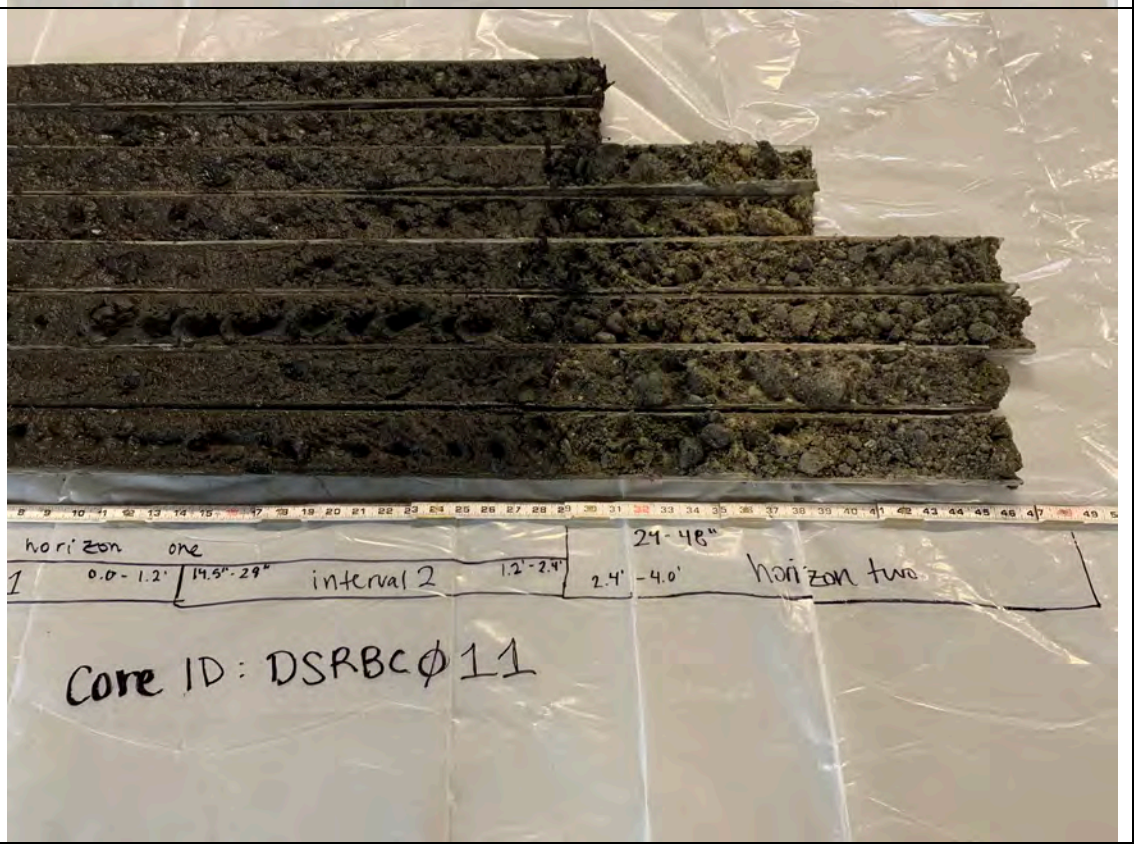
Site Number/Name: 60644031 – Morrow Dam	Date: 12/05/2020

Photo No. 33

Description: DSRBC011 – all attempts. Top sampling horizons and intervals shown.

Photo No. 34

Description: DSRBC011 – all attempts. Bottom sampling horizons and intervals shown.



AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam | **Date: 12/03/2020**

Photo No. 35

Description: USCCC004 – Attempt 1

Photo No. 36

Description: USCCC004 – Attempt 2

AECOM

PHOTOGRAPHIC LOG

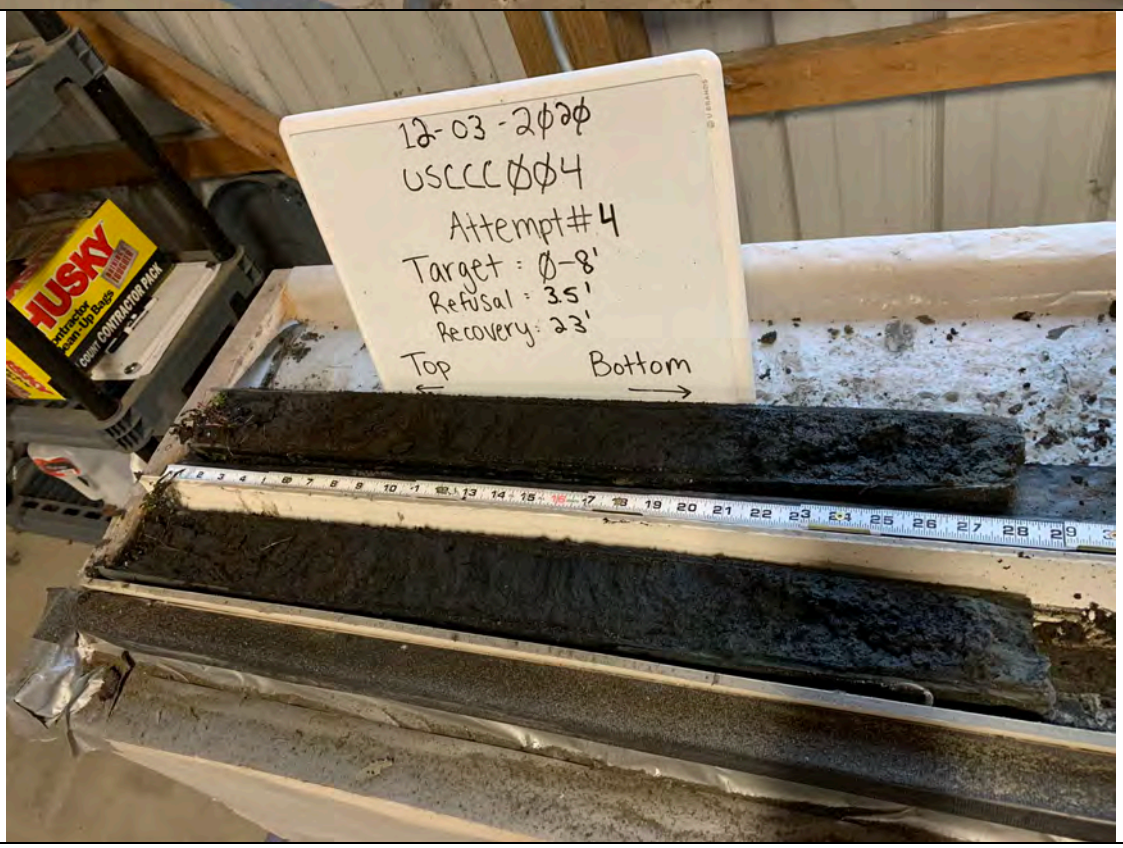
Site Number/Name: 60644031 – Morrow Dam	Date: 12/03/2020

Photo No. 37

Description: USCCC004 – Attempt 3

Photo No. 38

Description: USCCC004 – Attempt 4



AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam	Date: 12/03/2020

Photo No. 39

Description: USCCC004 – All attempts, starting with Attempt 2 at the top, followed by Attempt 1, Attempt 3, and Attempt 4.

Photo No. 40

Description: USCCC004 – All attempts shown. Sampling interval 2.0 – 3.0 feet sampled first due to hydrocarbon odor in Attempt 3 and Attempt 4.

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam	Date: 12/03/2020

Photo No. 41

Description:
USCCC004 – All attempts shown. Sampling intervals 1.0 – 2.0’ and 2.0 – 3.0’ taken.

Photo No. 42

Description:
AECOM personnel opening a core tube.

AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam | **Date: 12/03/2020**

Photo No. 43

Description:
AECOM personnel processing sediment grabs and splits for analysis.

Photo No. 44

Description:
USRBG001 – grab sample homogenized (left) and before being homogenized (right).

AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam	Date: 12/03/2020

Photo No. 45

Description:
USCCG002 – Grab sample before being decanted.

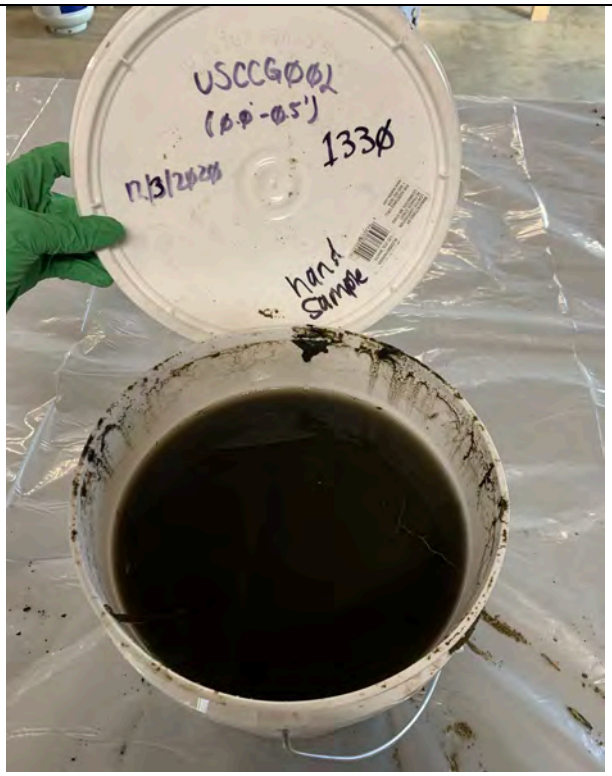
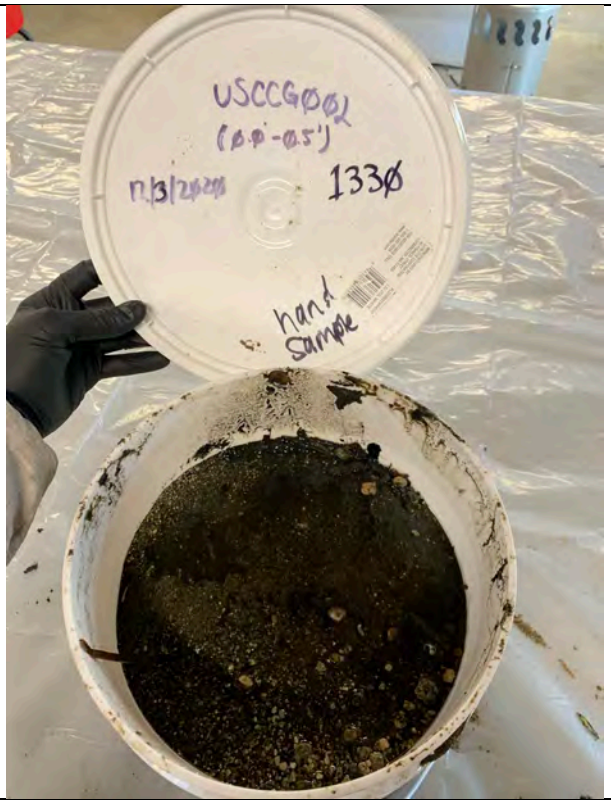


Photo No. 46

Description:
USCCG002 – grab sample after being decanted.



PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam | **Date: 12/04/2020**

Photo No. 47

Description: DSLBG004 – grab sample. Collected via ponar.

Photo No. 48

Description: USCCG004 – grab sample collected by hand.

AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam

Date: 12/06/2020

Photo No. 49

Description: Treatability test sample collected from the remaining material of each grab sample.

Photo No. 50

Description: Treatability test material buckets stored in freezer outside of GEI facility.

AECOM

PHOTOGRAPHIC LOG

Site Number/Name: 60644031 – Morrow Dam

Date: 12/06/2020

Photo No. 51

Description:
Samples stored in GEI Facility cooler. Samples collected stored in coolers, geotechnical stored in 2gal buckets. Cores shown on back wall not associated with AECOM.

Photo No. 52

Description:
Cores stored in freezer outside of GEI facility.

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Grab DSCCG005

Sheet 1 of 1

Date(s) Drilled	12/04/2020	Date Logging Started	12/04/2020	Logged By	J. Bush
Drilling Method	Hand Sample	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	Downstream, center channel	Surface Water Level	0.1'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, trace plant root material, no odor, no sheen		*DSCCG005(0.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

AECOM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSLBC002 Attempt 1

Sheet 1 of 1

Date(s) Drilled	12/02/2020	Date Logging Started	12/02/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	3.6'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	3.0'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 287171 E 12818694 (ft)	Surface Water Level	0.7'		

Depth, feet	SAMPLES Number	Recovery, %	Graphic Log	MATERIAL DESCRIPTION	SEDIMENT SAMPLE ID
0				0.0 Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fine, trace plant root material, no odor, no sheen, sharp contact	*DSLBC002(0-1.3), DUP-1(0-1.3)*
1				1.3	
	1	83		Gray, gray well graded sand (SW), wet, trace gravel, trace shells, sharp contact	*DSLBC002(1.3-2.9)*
2				← Black, silt (ML) seam, wet, non-plastic, non-cohesive, sharp contact 2.6	
				2.9	
3				3.0 Black, organic soil (OL), wet, cohesive, non-plastic, little silt	
				End of Coring at 3.6´ bgs	

AECOM

Report: GEO_CR_DATUM_LABEL; File C:\USERS\COLLEEN.MCLEAN\DESKTOP\EAGLE CREEK\GINT LOGS\EAGLECREEK LOGS.GPJ; 1/28/2021 10:12:38 AM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSLBC002 Attempt 2

Sheet 1 of 1

Date(s) Drilled	12/02/2020	Date Logging Started	12/02/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	4.1'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	3.2'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 287171 E 12818694 (ft)	Surface Water Level	0.7'		

Depth, feet	SAMPLES Number	Recovery, %	Graphic Log	MATERIAL DESCRIPTION	SEDIMENT SAMPLE ID
0				Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, no odor, no sheen, sharp contact (0.0 – 1.2)	*DSLBC002(0-1.3), DUP-1 (0-1.3)*
1	1	78		Gray, well graded sand (SW), wet, trace gravel, trace shells, sharp contact (1.2 – 3.1)	*DSLBC002(1.3-2.9)*
2				← Black, silt (ML) seam, wet, non-plastic, non cohesive, sharp contact (2.8 – 3.2)	
3				Black, organic soil (OL), wet, cohesive, non-plastic, little silt (3.1 – 3.2)	
4				End of Coring at 4.1´ bgs	

AECOM

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Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSLBC002 Attempt 3

Sheet 1 of 1

Date(s) Drilled	12/02/2020	Date Logging Started	12/03/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	5.0'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	3.8'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 287171 E 12818694 (ft)	Surface Water Level	0.7'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0 Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, no odor, no sheen, sharp contact		*Used for treatability*
1						1.4 Gray, well graded sand (SW), wet, trace gravel, trace shells, sharp contact		
2	1		76			← Black, silt (ML) seam, wet, non-plastic, non-cohesive, sharp contact 2.9		
3						3.2 Black, organic soil (OL), wet, cohesive, non-plastic, little silt, sharp contact 3.5 Gray, well graded sand (SW), wet, trace gravel, trace shells 3.8		
4								
5						End of Coring at 5.0´ bgs		

AECOM

Report: GEO_CR_DATUM_LABEL; File C:\USERS\COLLEEN.MCLEAN\DESKTOP\EAGLE CREEK\GINT LOGS\EAGLECREEK LOGS.GPJ; 1/28/2021 10:12:44 AM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSLBC002 Attempt 4

Sheet 1 of 1

Date(s) Drilled	12/02/2020	Date Logging Started	12/03/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	4.1'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	3.1'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 287171 E 12818694 (ft)	Surface Water Level	0.7'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION	SEDIMENT SAMPLE ID
0						0.0 Black, organic soil, (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, no odor, no sheen, sharp contact	*Used for Geotechnical Sampling*
1						1.3	
	1		75			Gray, well graded sand (SW), wet, trace gravel, trace shells, sharp contact	
2						← Black, silt (ML) seam, wet, non-plastic, non-cohesive, sharp contact 2.6 2.7	
						Black, organic soil (OL), wet, cohesive, non-plastic, little silt	
3						3.1	
4						End of Coring at 4.1´ bgs	

AECOM

Report: GEO_CR_DATUM_LABEL; File C:\USERS\COLLEEN.MCLEAN\DESKTOP\EAGLE CREEK\GINT LOGS\EAGLECREEK LOGS.GPJ; 1/28/2021 10:12:48 AM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSLBC004 Attempt 1

Sheet 1 of 1

Date(s) Drilled	12/04/2020	Date Logging Started	12/05/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	4.9'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	4.1'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 287581 E 12815942 (ft)	Surface Water Level	1.7'		

Depth, feet	SAMPLES Number	Recovery, %	Graphic Log	MATERIAL DESCRIPTION	SEDIMENT SAMPLE ID
0				Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, no odor, no sheen, sharp contact (0.0 – 2.6)	*DSLBC004(0.0-1.3), DSLBC004(0.0-1.3)MS, DSLBC004(0.0-1.3)MSD*
1					*DSLBC004(1.3-2.6)*
2	1	84			
3				Gray, well graded sand with gravel (SP), wet, trace shells (2.6 – 4.1)	*DSLBC004(2.6-3.75)*
4				End of Coring at 4.9´ bgs	

AECOM

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Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSLBC004 Attempt 2

Sheet 1 of 1

Date(s) Drilled	12/04/2020	Date Logging Started	12/05/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	6.2'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	5.1'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 287581 E 12815952 (ft)	Surface Water Level	1.7'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION	SEDIMENT SAMPLE ID
0						0.0 Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant roots, no odor, no sheen, sharp contact	
1							*DSLBC004(0.0-1.3), DSLBC004(0.0-1.3)MS, DSLBC004(0.0-1.3)MSD*
2	1		82			2.7 Gray, well graded sand (SW), wet, trace gravel, trace shells	*DSLBC004(1.3-2.6)*
3							
4							*DSLBC004(2.6-3.75)*
5						5.1	*DSLBC004(3.75-4.9)*
6						End of Coring at 6.2´ bgs	

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Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab DSLBG002

Date(s) Drilled	12/02/2020	Date Logging Started	12/03/2020	Logged By	C. McLean
Drilling Method	Ponar	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	Downstream, left bank	Surface Water Level	0.7'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, no odor, no sheen		*DSLBG002(0.0-0.5), DUP-2*
						0.5		
						End of Coring at 0.5´ bgs		

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab DSLBG003

Sheet 1 of 1

Date(s) Drilled	12/02/2020	Date Logging Started	12/03/2020	Logged By	C. McLean
Drilling Method	Ponar	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	N 287887 E 12816817 (ft)	Surface Water Level	0.5'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, no odor, no sheen		*DSLBG003(0.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

AECOM

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab DSLBG004

Sheet 1 of 1

Date(s) Drilled	12/04/2020	Date Logging Started	12/04/2020	Logged By	C. McLean
Drilling Method	Ponar	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	Downstream, left bank	Surface Water Level	1.7'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic sol (OL), wet, non-plastic, non cohesive, trace plant root material, no odor, no sheen		*DSLBG004(0.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

AECOM

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab DSLBG007

Sheet 1 of 1

Date(s) Drilled	12/04/2020	Date Logging Started	12/05/2020	Logged By	J. Bush
Drilling Method	Ponar	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	N 288415 E 12812698 (ft)	Surface Water Level	0.8'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, trace leaves, no odor, no sheen		*DSLBG007(0.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

AECOM

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab DSLBG009

Sheet 1 of 1

Date(s) Drilled	12/05/2020	Date Logging Started	12/06/2020	Logged By	J. Bush
Drilling Method	Hand Sample	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	Downstream, left bank	Surface Water Level	NA		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, trace plant root material, no odor, no sheen		*DSLBG009(0.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

AECOM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSRBC008 Attempt 1

Sheet 1 of 1

Date(s) Drilled	12/04/2020	Date Logging Started	12/05/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	2.1'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	1.7'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 288777 E 12812125 (ft)	Surface Water Level	0.1'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION	SEDIMENT SAMPLE ID
0						0.0 Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, no odor, no sheen, sharp contact	DSRBC008(0.0-1.25)
	1		81			0.8 Gray, well graded sand (SW), wet, trace gravel 1.0	
1						Black, well graded sand (SW), wet, trace gravel, trace shells, trace slag, no odor, no sheen 1.7	DSRBC008(1.25-2.33)
2						End of Coring at 2.1´ bgs	

AECOM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSRBC008 Attempt 2

Sheet 1 of 1

Date(s) Drilled	12/04/2020	Date Logging Started	12/05/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	2.4'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	1.9'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 288777 E 12812125 (ft)	Surface Water Level	0.1'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, no odor, no sheen, sharp contact (0.0)		DSRCB008(0.0-1.25)
1	1		79					
						Gray, well graded sand (SW), wet, trace gravel (1.4)		DSRCB008(1.25-2.33)
						Black, well graded sand (SW), wet, trace gravel, trace slag, no odor, no sheen (1.5)		
2						(1.9)		
						End of Coring at 2.4´ bgs		

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Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSRBC008 Attempt 3

Sheet 1 of 1

Date(s) Drilled	12/04/2020	Date Logging Started	12/05/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	2.8'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	2.6'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 288777 E 12812125 (ft)	Surface Water Level	0.1'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						Black, orangic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace root material, no odor, no sheen, sharp contact	0.0	DSRBC008(0-1.25)
1	1		93			Gray, well graded sand (SW), wet, trace gravel	1.2	DSRBC008(1.25-2.33)
						Black, well graded sand (SW), wet, trace gravel, trace shells, no odor, no sheen	1.3	
2						Dark gray, well graded sand (SW), wet, trace gravel	2.0	
						Gray, well graded gravel (GW), wet, trace sand	2.3	
							2.6	
						End of Coring at 2.8´ bgs		

AECOM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSRBC008 Attempt 4

Sheet 1 of 1

Date(s) Drilled	12/04/2020	Date Logging Started	12/05/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	3.9'
Drill Rig Type	Flat-bottom sampling boat/air boar	Drilling Contractor	SWAT	Depth Recovered	2.4'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 288777 E 12812125 (ft)	Surface Water Level	0.1'		

Depth, feet	SAMPLES Number	Recovery, %	Graphic Log	MATERIAL DESCRIPTION	SEDIMENT SAMPLE ID
0				Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace root material, no odor, no sheen (0.0–0.8)	DSRBC008(0.0-1.25)
				Gray, well graded sand (SW), wet, trace gravel (0.8–1.0)	
1	1	62		Black, well graded sand (SW), wet, trace gravel, trace shells, no odor, no sheen (1.0–1.6)	DSRBC000(1.25-2.33)
				Dark gray, well graded sand (SW), wet, trace gravel (1.6–1.9)	
2				Gray, well graded gravel (GW), wet, trace sand (1.9–2.4)	
3				End of Coring at 3.9´ bgs	

AECOM

Report: GEO_CR_DATUM_LABEL; File C:\USERS\COLLEEN.MCLEAN\DESKTOP\EAGLE CREEK\GINT LOGS\EAGLECREEK LOGS.GPJ; 1/28/2021 10:13:24 AM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSRBC011 Attempt 1

Sheet 1 of 1

Date(s) Drilled	12/05/2020	Date Logging Started	12/06/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	2.9'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	2.5'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 288452 E 12806135 (ft)	Surface Water Level	0.0'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
						Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, no odor, no sheen, sharp contact		DSRBC011(0.0-1.2)
1	1		86					DSRBC011(1.2-2.4)
2						2.4		
						Black, well graded sand (SW), wet, trace gravel, no odor, no sheen 2.5		
						End of Coring at 2.9´ bgs		

AECOM

Report: GEO_CR_DATUM_LABEL; File C:\USERS\COLLEEN.MCLEAN\DESKTOP\EAGLE CREEK\GINT LOGS\EAGLECREEK LOGS.GPJ; 1/28/2021 10:13:27 AM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSRBC011 Attempt 2

Sheet 1 of 1

Date(s) Drilled	12/05/2020	Date Logging Started	12/06/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	4.3'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	3.4'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 288452 E 12806135 (ft)	Surface Water Level	0.0'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
						Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, no odor, no sheen, sharp contact.		DSRBC011(0.0-1.2)
1								DSRBC011(1.2-2.4)
	1		79					
2						2.3		
						Black, well graded sand (SW), wet, trace gravel, trace woody material, no odor, no sheen 2.6		DSRBC011(2.4-4.0)
						Gray, well graded sand (SW), wet, trace gravel, trace woody material 3.0		
3						Brown, well graded sand (SW), wet, some gravel, trace woody material, trace shells 3.4		
4						End of Coring at 4.3´ bgs		

AECOM

Report: GEO_CR_DATUM_LABEL; File C:\USERS\COLLEEN.MCLEAN\DESKTOP\EAGLE CREEK\GINT LOGS\EAGLECREEK LOGS.GPJ; 1/28/2021 10:13:31 AM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSRBC011 Attempt 3

Sheet 1 of 1

Date(s) Drilled	12/05/2020	Date Logging Started	12/06/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	4.6'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	4.0'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 288452 E 12806135 (ft)	Surface Water Level	0.0'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION	SEDIMENT SAMPLE ID
0						0.0 Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant material, no odor, no sheen, sharp contact	DSRBC011(0.0-1.2)
1							DSRBC011(1.2-2.4)
2	1		87			2.4 Black, well graded sand (SW), wet, trace gravel	DSRBC011(2.4-4.0)
						2.8 Gray, well graded gravel with sand (GW), wet, trace shells	
3							
4						4.0 End of Coring at 4.6´ bgs	

AECOM

Report: GEO_CR_DATUM_LABEL; File C:\USERS\COLLEEN.MCLEAN\DESKTOP\EAGLE CREEK\GINT LOGS\EAGLECREEK LOGS.GPJ; 1/28/2021 10:13:34 AM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core DSRBC011 Attempt 4

Sheet 1 of 1

Date(s) Drilled	12/05/2020	Date Logging Started	12/06/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	4.7'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	3.8'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 288452 E 12806135 (ft)	Surface Water Level	0.0'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION	SEDIMENT SAMPLE ID
0						0.0 Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root, no odor, no sheen, sharp contact	DSRBC011(0.0-1.2)
1							DSRBC011(1.2-2.4)
2	1		81			2.4 Gray, well graded sand (SW), wet, trace gravel	DSRBC011(2.4-4.0)
						2.6 Gray, well graded gravel with sand (GW), wet	
3						3.8	
4						End of Coring at 4.7´ bgs	

AECOM

Report: GEO_CR_DATUM_LABEL; File C:\USERS\COLLEEN.MCLEAN\DESKTOP\EAGLE CREEK\GINT LOGS\EAGLECREEK LOGS.GPJ; 1/28/2021 10:13:37 AM

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab DSRBG001

Sheet 1 of 1

Date(s) Drilled	12/02/2020	Date Logging Started	12/03/2020	Logged By	C. McLean
Drilling Method	Ponar	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	N 287469 E 12818700 (ft)	Surface Water Level	0.8'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, no odor, no sheen		*DSRBG001(0.0-05), DSRBG001(0.0-05)MS, DSRBG001(0.0-05)MSD*
						0.5		
						End of Coring at 0.5´ bgs		

AECOM

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab DSRBG006

Sheet 1 of 1

Date(s) Drilled	12/04/2020	Date Logging Started	12/05/2020	Logged By	J. Bush
Drilling Method	Ponar	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	N 288362 E 12813409 (ft)	Surface Water Level	0.5'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, trace plant root material, no odor, no sheen		*DSRBG006(0.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab DSRBG008

Date(s) Drilled	12/04/2020	Date Logging Started	12/05/2020	Logged By	J. Bush
Drilling Method	Hand Sample	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	Downstream, right bank	Surface Water Level	0.1'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, trace shells, trace gravel, trace plant root material, no odor, no sheen		*DSRBG008(0.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab DSRBG010

Date(s) Drilled	12/05/2020	Date Logging Started	12/06/2020	Logged By	J. Bush
Drilling Method	Ponar	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	N 288641 E 12810438 (ft)	Surface Water Level	0.6'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, trace plant root material, trace leaves, no odor, no sheen		*DSRBG010(0.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab DSRBG011

Date(s) Drilled	12/05/2020	Date Logging Started	12/06/2020	Logged By	J. Bush
Drilling Method	Hand Sample	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	N 288452 E 12806135 (ft)	Surface Water Level	0.0'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-cohesive, non-plastic, no odor, no sheen		*DSRBG011(0.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core USCCC004 Attempt 1

Sheet 1 of 1

Date(s) Drilled	12/03/2020	Date Logging Started	12/04/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	3.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	2.7'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 286695 E 12820136 (ft)	Surface Water Level	NA		

Elevation, feet	Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
	0						a 0.0		
							Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, no odor or sheen		*USCCC004(0-1.0)*
	1	1		100					*USCCC004(1.0-2.0), USCCC004(1.0-2.0)MS, USCCC004(1.0-2.0)MSD*
	2						2.7		*USSCCC004(2.0-3.0), DUP-4(2.0-3.0)*
	3						End of Coring at 3.5´ bgs		

AECOM

Report: GEO_CR_DATUM_LABEL; File C:\USERS\COLLEEN.MCLEAN\DESKTOP\EAGLE CREEK\GINT LOGS\EAGLECREEK LOGS.GPJ; 1/28/2021 10:13:57 AM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core USCCC004 Attempt 2

Sheet 1 of 1

Date(s) Drilled	12/03/2020	Date Logging Started	12/04/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	3.8'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	3.5'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 286695 E 12820136 (ft)	Surface Water Level	NA		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION	SEDIMENT SAMPLE ID
0						0.0 Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, no odor, no sheen	USCCC004(0.0-1.0)
1							USCCC004(1.0-2.0), USCCC004(1.0-2.0)MS, USCCC004(1.0-2.0)MSD
	1		100				
2							USCCC0004(2.0-3.0), DUP-4(2.0-3.0)
						2.7 Black, organic soil (OL), wet, cohesive, non-plastic, little silt	
3						3.2 Gray, poorly graded sand (SP), wet 3.3	
						End of Coring at 3.8´ bgs	

AECOM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core USCCC004 Attempt 3

Sheet 1 of 1

Date(s) Drilled	12/03/2020	Date Logging Started	12/04/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	3.8'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	2.9'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 286695 E 12820136 (ft)	Surface Water Level	NA		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
						Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plact root material @2.4' Slight hydrocarbon odor		*USCCC004(0.0-1.0)*
1	1		100					*USCCC004(1.0-2.0), USCCC004(1.0-2.0)MS, USCCC004(1.0-2.0)MSD*
2								*USCCC004(2.0-3.0), DUP-4(2.0-3.0)*
						2.9		
3						End of Coring at 3.8´ bgs		

AECOM

Report: GEO_CR_DATUM_LABEL; File C:\USERS\COLLEEN.MCLEAN\DESKTOP\EAGLE CREEK\GINT LOGS\EAGLECREEK LOGS.GPJ; 1/28/2021 10:14:03 AM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Core USCCC004 Attempt 4

Sheet 1 of 1

Date(s) Drilled	12/03/2020	Date Logging Started	12/04/2020	Logged By	C. McLean
Drilling Method	Vibracore	Drill Bit Size/Type	NA	Depth of Refusal	3.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	2.3'
Corehole Backfill	NA	Sampling Method(s)		Target Depth	10'
Coring Location	N 286695 E 12820136 (ft)	Surface Water Level	NA		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION	SEDIMENT SAMPLE ID
0						0.0 Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, no odor, no sheen	USCCC004(0.0-1.0)
1	1		100				USCCC004(1.0-2.0), USCCC004(1.0-2.0)MS, USCCC004(1.0-2.0)MSD
2						1.9 Black, organic soil (OL), wet, non-plastic, cohesive, little silt, slight hydrocarbon odor 2.2	USCCC004(2.0-3.0), DUP-4(2.0-3.0)
						2.3 Gray, poorly graded sand (SP), wet	
3						End of Coring at 3.5´ bgs	

AECOM

Project: STS Hydropower/Eagle Creek Renewable Energy
Project Location: Comstock, MI
Project Number: 60644031

Log of Grab USCCG002

Sheet 1 of 1

Date(s) Drilled	12/03/2020	Date Logging Started	12/04/2020	Logged By	J. Bush
Drilling Method	Hand Sample	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom samling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	N 284836 E 12831935 (ft)	Surface Water Level	0.2'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, well graded sand (SW), wet, trace gravel, trace shells		*USCCG0002(0.0-0.5), DUP-3 (0.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab USCCG003

Sheet 1 of 1

Date(s) Drilled	12-03/2020	Date Logging Started	12/04/2020	Logged By	J. Bush
Drilling Method	Ponar	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	N 285868 E 12824062 (ft)	Surface Water Level	0.9'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, no odor, no sheen		*USCCG003(0.0-0.5), USCCG003(0.0-0.5)MS, USCCG003(0.0-0.5)MSD*
						0.5		
						End of Coring at 0.5´ bgs		

AECOM

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab USCCG004

Date(s) Drilled	12/03/2020	Date Logging Started	12/04/2020	Logged By	J. Bush
Drilling Method	Hand Sample	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	Upstream, center channel	Surface Water Level	NA		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, no odor, no sheen		*USCCG004(0.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

Project: STS Hydropower/Eagle Creek Renewable Energy

Project Location: Comstock, MI

Project Number: 60644031

Log of Grab USRBG001

Sheet 1 of 1

Date(s) Drilled	12/03/2020	Date Logging Started	12/04/2020	Logged By	J. Bush
Drilling Method	Ponar	Drill Bit Size/Type	NA	Depth of Refusal	0.5'
Drill Rig Type	Flat-bottom sampling boat/air boat	Drilling Contractor	SWAT	Depth Recovered	0.5'
Corehole Backfill	NA	Sampling Method(s)	Grab	Target Depth	0.5'
Coring Location	N 287703 E 12840276 (ft)	Surface Water Level	0.2'		

Depth, feet	SAMPLES Number		Recovery, %		Graphic Log	MATERIAL DESCRIPTION		SEDIMENT SAMPLE ID
0						0.0		
	1		100			Black, organic soil (OL), wet, non-plastic, non-cohesive, trace fines, trace plant root material, some well graded sand, no odor, no sheen		*USRBG001(1.0-0.5)*
						0.5		
						End of Coring at 0.5´ bgs		

Appendix C
Laboratory Reports

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

January 20, 2021

Alison Bitel
AECOM
27777 Franklin Road
Suite 2150
Southfield, MI 48034

RE: Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Dear Alison Bitel:

Enclosed are the analytical results for sample(s) received by the laboratory on December 08, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Tod Noltemeyer

Tod Noltemeyer
tod.noltemeyer@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Brian Mastin, AECOM
Andrea Peak, AECOM

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40219480001	**USRBG001(0.0-0.5)**	Solid	12/03/20 16:00	12/08/20 10:20
40219480002	**USCCG002(0.0-0.5)**	Solid	12/03/20 13:30	12/08/20 10:20
40219480003	**DUP-3**	Solid	12/03/20 00:00	12/08/20 10:20
40219480004	**USCCG003(0.0-0.5)**	Solid	12/03/20 11:00	12/08/20 10:20
40219480005	**USCCG004(0.0-0.5)**	Solid	12/03/20 09:30	12/08/20 10:20
40219480006	**DSLBG004(0.0-0.5)**	Solid	12/04/20 10:40	12/08/20 10:20
40219480007	**DSCCG005(0.0-0.5)**	Solid	12/04/20 11:40	12/08/20 10:20
40219480008	**DUP-4**	Solid	12/04/20 00:00	12/08/20 10:20
40219480009	**USCCC004(0.0-1.0)**	Solid	12/03/20 09:30	12/08/20 10:20
40219480010	**USCCC004(2.0-3.0)**	Solid	12/03/20 09:30	12/08/20 10:20
40219480011	**USCCC004(1.0-2.0)**	Solid	12/03/20 09:30	12/08/20 10:20
40219480012	**DSRBG006(0.0-0.5)**	Solid	12/04/20 12:30	12/08/20 10:20
40219480013	**DSLBG007(0.0-0.5)**	Solid	12/04/20 15:00	12/08/20 10:20
40219480014	**DSRBG008(0.0-0.5)**	Solid	12/04/20 16:20	12/08/20 10:20
40219480015	**DSRBC008(0.0-1.25)**	Solid	12/04/20 15:50	12/08/20 10:20
40219480016	**DSRBC008(1.25-2.33)**	Solid	12/04/20 15:50	12/08/20 10:20
40219480017	**DSLBC004(0.0-1.3)**	Solid	12/04/20 10:00	12/08/20 10:20
40219480018	**DSLBC004(1.3-2.6)**	Solid	12/04/20 10:00	12/08/20 10:20
40219480019	**DSLBC004(2.6-3.75)**	Solid	12/04/20 10:00	12/08/20 10:20
40219480020	**DSLBC004(3.75-4.9)**	Solid	12/04/20 10:00	12/08/20 10:20
40219480021	**DSLBG009(0.0-0.5)**	Solid	12/05/20 14:50	12/08/20 10:20
40219480022	**DSRBG010(0.0-0.5)**	Solid	12/05/20 12:50	12/08/20 10:20
40219480023	**DSRBG011(0.0-0.5)**	Solid	12/05/20 10:50	12/08/20 10:20
40219480024	**DSRBC011(0-1.2)**	Solid	12/05/20 11:10	12/08/20 10:20
40219480025	**DSRBC011(1.2-2.4)**	Solid	12/05/20 11:10	12/08/20 10:20
40219480026	**DSRBC011(2.4-4.0)**	Solid	12/05/20 11:10	12/08/20 10:20

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40219480001	**USRBG001(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 6010	TXW	9	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219480002	**USCCG002(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 6010	TXW	9	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219480003	**DUP-3**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 6010	TXW	9	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219480004	**USCCG003(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 6010	TXW	9	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219480005	**USCCG004(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 6010	TXW	9	PASI-G
		EPA 7471	AJT	1	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219480006	**DSLBG004(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219480007	**DSCCG005(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		ASTM D2974-87	ASD	1	PASI-G
40219480008	**DUP-4**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 6010	TXW	9	PASI-G
		EPA 7471	AJT	1	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219480009	**USCCC004(0.0-1.0)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 6010	TXW	9	PASI-G
		EPA 7471	AJT	1	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219480010	**USCCC004(2.0-3.0)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 6010	TXW	9	PASI-G
		EPA 7471	AJT	1	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480011	**USCCC004(1.0-2.0)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 6010	TXW	9	PASI-G
		EPA 7471	AJT	1	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480012	**DSRBG006(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480013	**DSLBG007(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480014	**DSRBG008(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480015	**DSRBC008(0.0-1.25)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480016	**DSRBC008(1.25-2.33)**	EPA 8015D Modified	MRN	2	PASI-G

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SAMPLE ANALYTE COUNT

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480017	**DSLBC004(0.0-1.3)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480018	**DSLBC004(1.3-2.6)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480019	**DSLBC004(2.6-3.75)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480020	**DSLBC004(3.75-4.9)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480021	**DSLBG009(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480022	**DSRBG010(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480023	**DSRBG011(0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480024	**DSRBC011(0-1.2)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480025	**DSRBC011(1.2-2.4)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	PXL	1	PASI-G
40219480026	**DSRBC011(2.4-4.0)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	PXL	1	PASI-G

PASI-G = Pace Analytical Services - Green Bay

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PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Method: **EPA 8015D Modified**
Description: 8015 GCS THC-Diesel
Client: AECOM, Inc. - MI
Date: January 20, 2021

General Information:
26 samples were analyzed for EPA 8015D Modified by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

QC Batch: 373317

B: Analyte was detected in the associated method blank.

- BLANK for HBN 373317 [OEXT/477 (Lab ID: 2157488)
  - TPH - Diesel (C10-C28)

QC Batch: 373892

B: Analyte was detected in the associated method blank.

- BLANK for HBN 373892 [OEXT/478 (Lab ID: 2160823)
  - TPH - Diesel (C10-C28)

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 373892

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40219480004,40219480011,40219480017

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MSD (Lab ID: 2160826)
  - TPH - Diesel (C10-C28)

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PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Method: **EPA 8015D Modified**
Description: 8015 GCS THC-Diesel
Client: AECOM, Inc. - MI
Date: January 20, 2021

Additional Comments:

Batch Comments:

The default spike range of the standard used for QC evaluation is C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.

- QC Batch: 373362
- QC Batch: 373969

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PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Method: **EPA 8082A**
Description: 8082A KZOO PCB
Client: AECOM, Inc. - MI
Date: January 20, 2021

General Information:
26 samples were analyzed for EPA 8082A by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3541 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 373474

S0: Surrogate recovery outside laboratory control limits.

- MS (Lab ID: 2158382)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Method: **EPA 6010**
Description: 6010 MET ICP
Client: AECOM, Inc. - MI
Date: January 20, 2021

General Information:
9 samples were analyzed for EPA 6010 by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Method: **EPA 7471**
Description: 7471 Mercury
Client: AECOM, Inc. - MI
Date: January 20, 2021

General Information:
9 samples were analyzed for EPA 7471 by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: AECOM, Inc. - MI
Date: January 20, 2021

General Information:
13 samples were analyzed for EPA 8270 by SIM by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 373429

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40219480004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2158124)
  - 1-Methylnaphthalene
  - 2-Methylnaphthalene
  - Acenaphthene
  - Acenaphthylene
  - Anthracene
  - Benzo(a)pyrene
  - Fluoranthene
  - Fluorene

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PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: AECOM, Inc. - MI
Date: January 20, 2021

QC Batch: 373429

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40219480004

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Naphthalene
- Phenanthrene
- Pyrene

- MSD (Lab ID: 2158125)
  - 1-Methylnaphthalene
  - 2-Methylnaphthalene
  - Acenaphthene
  - Acenaphthylene
  - Anthracene
  - Fluoranthene
  - Fluorene
  - Naphthalene
  - Phenanthrene
  - Pyrene

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: USRBG001(0.0-0.5) **Lab ID: 40219480001** Collected: 12/03/20 16:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**13.4**	mg/kg	3.5	0.92	1	12/09/20 09:20	12/10/20 08:20		B
Surrogates									
o-Terphenyl (S)	61	%	25-101		1	12/09/20 09:20	12/10/20 08:20	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<31.0**	ug/kg	105	31.0	1	12/09/20 15:45	12/10/20 20:54	12674-11-2	
PCB-1221 (Aroclor 1221)	**<31.0**	ug/kg	105	31.0	1	12/09/20 15:45	12/10/20 20:54	11104-28-2	
PCB-1232 (Aroclor 1232)	**<31.0**	ug/kg	105	31.0	1	12/09/20 15:45	12/10/20 20:54	11141-16-5	
PCB-1242 (Aroclor 1242)	**<31.0**	ug/kg	105	31.0	1	12/09/20 15:45	12/10/20 20:54	53469-21-9	
PCB-1248 (Aroclor 1248)	**<31.0**	ug/kg	105	31.0	1	12/09/20 15:45	12/10/20 20:54	12672-29-6	
PCB-1254 (Aroclor 1254)	**39.1J**	ug/kg	105	31.0	1	12/09/20 15:45	12/10/20 20:54	11097-69-1	
PCB-1260 (Aroclor 1260)	**<31.0**	ug/kg	105	31.0	1	12/09/20 15:45	12/10/20 20:54	11096-82-5	
PCB, Total	**39.1J**	ug/kg	105	31.0	1	12/09/20 15:45	12/10/20 20:54	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	90	%	50-150		1	12/09/20 15:45	12/10/20 20:54	877-09-8	
Decachlorobiphenyl (S)	84	%	50-150		1	12/09/20 15:45	12/10/20 20:54	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
	Pace Analytical Services - Green Bay								
Arsenic	**4.4J**	mg/kg	5.1	3.0	1	12/09/20 06:13	12/09/20 21:26	7440-38-2	
Barium	**46.0**	mg/kg	1.0	0.31	1	12/09/20 06:13	12/09/20 21:26	7440-39-3	
Cadmium	**0.58J**	mg/kg	1.0	0.27	1	12/09/20 06:13	12/09/20 21:26	7440-43-9	
Chromium	**17.3**	mg/kg	2.1	0.57	1	12/09/20 06:13	12/09/20 21:26	7440-47-3	
Copper	**10.5**	mg/kg	2.1	0.57	1	12/09/20 06:13	12/09/20 21:26	7440-50-8	
Lead	**27.8**	mg/kg	4.1	1.2	1	12/09/20 06:13	12/09/20 21:26	7439-92-1	
Selenium	**<2.7**	mg/kg	8.2	2.7	1	12/09/20 06:13	12/09/20 21:26	7782-49-2	
Silver	**<0.63**	mg/kg	2.1	0.63	1	12/09/20 06:13	12/09/20 21:26	7440-22-4	
Zinc	**68.8**	mg/kg	8.2	2.5	1	12/09/20 06:13	12/09/20 21:26	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
	Pace Analytical Services - Green Bay								
Mercury	**0.099**	mg/kg	0.068	0.019	1	12/15/20 12:14	12/16/20 09:05	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<5.1**	ug/kg	35.1	5.1	1	12/10/20 09:04	12/11/20 19:17	90-12-0	
2-Methylnaphthalene	**<5.1**	ug/kg	35.1	5.1	1	12/10/20 09:04	12/11/20 19:17	91-57-6	
Acenaphthene	**<4.5**	ug/kg	35.1	4.5	1	12/10/20 09:04	12/11/20 19:17	83-32-9	
Acenaphthylene	**18.1J**	ug/kg	35.1	4.4	1	12/10/20 09:04	12/11/20 19:17	208-96-8	
Anthracene	**26.8J**	ug/kg	35.1	4.4	1	12/10/20 09:04	12/11/20 19:17	120-12-7	
Benzo(a)anthracene	**101**	ug/kg	35.1	4.5	1	12/10/20 09:04	12/11/20 19:17	56-55-3	
Benzo(a)pyrene	**114**	ug/kg	35.1	4.0	1	12/10/20 09:04	12/11/20 19:17	50-32-8	
Benzo(b)fluoranthene	**119**	ug/kg	35.1	4.9	1	12/10/20 09:04	12/11/20 19:17	205-99-2	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: USRBG001(0.0-0.5) **Lab ID: 40219480001** Collected: 12/03/20 16:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
Benzo(g,h,i)perylene	**74.3**	ug/kg	35.1	6.2	1	12/10/20 09:04	12/11/20 19:17	191-24-2	
Benzo(k)fluoranthene	**51.2**	ug/kg	35.1	4.5	1	12/10/20 09:04	12/11/20 19:17	207-08-9	
Chrysene	**113**	ug/kg	35.1	6.6	1	12/10/20 09:04	12/11/20 19:17	218-01-9	
Dibenz(a,h)anthracene	**19.0J**	ug/kg	35.1	4.9	1	12/10/20 09:04	12/11/20 19:17	53-70-3	
Fluoranthene	**178**	ug/kg	35.1	4.1	1	12/10/20 09:04	12/11/20 19:17	206-44-0	
Fluorene	**4.6J**	ug/kg	35.1	4.2	1	12/10/20 09:04	12/11/20 19:17	86-73-7	
Indeno(1,2,3-cd)pyrene	**59.2**	ug/kg	35.1	7.3	1	12/10/20 09:04	12/11/20 19:17	193-39-5	
Naphthalene	**3.7J**	ug/kg	35.1	3.4	1	12/10/20 09:04	12/11/20 19:17	91-20-3	
Phenanthrene	**45.8**	ug/kg	35.1	4.0	1	12/10/20 09:04	12/11/20 19:17	85-01-8	
Pyrene	**165**	ug/kg	35.1	5.2	1	12/10/20 09:04	12/11/20 19:17	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	55	%	17-100		1	12/10/20 09:04	12/11/20 19:17	321-60-8	
Terphenyl-d14 (S)	61	%	17-98		1	12/10/20 09:04	12/11/20 19:17	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**52.3**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: USCCG002(0.0-0.5) **Lab ID: 40219480002** Collected: 12/03/20 13:30 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**4.1**	mg/kg	2.0	0.53	1	12/09/20 09:20	12/10/20 08:28		B
Surrogates									
o-Terphenyl (S)	62	%	25-101		1	12/09/20 09:20	12/10/20 08:28	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<18.1**	ug/kg	61.2	18.1	1	12/09/20 15:45	12/10/20 21:38	12674-11-2	
PCB-1221 (Aroclor 1221)	**<18.1**	ug/kg	61.2	18.1	1	12/09/20 15:45	12/10/20 21:38	11104-28-2	
PCB-1232 (Aroclor 1232)	**<18.1**	ug/kg	61.2	18.1	1	12/09/20 15:45	12/10/20 21:38	11141-16-5	
PCB-1242 (Aroclor 1242)	**<18.1**	ug/kg	61.2	18.1	1	12/09/20 15:45	12/10/20 21:38	53469-21-9	
PCB-1248 (Aroclor 1248)	**<18.1**	ug/kg	61.2	18.1	1	12/09/20 15:45	12/10/20 21:38	12672-29-6	
PCB-1254 (Aroclor 1254)	**<18.1**	ug/kg	61.2	18.1	1	12/09/20 15:45	12/10/20 21:38	11097-69-1	
PCB-1260 (Aroclor 1260)	**<18.1**	ug/kg	61.2	18.1	1	12/09/20 15:45	12/10/20 21:38	11096-82-5	
PCB, Total	**<18.1**	ug/kg	61.2	18.1	1	12/09/20 15:45	12/10/20 21:38	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	89	%	50-150		1	12/09/20 15:45	12/10/20 21:38	877-09-8	
Decachlorobiphenyl (S)	88	%	50-150		1	12/09/20 15:45	12/10/20 21:38	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
	Pace Analytical Services - Green Bay								
Arsenic	**5.0**	mg/kg	3.1	1.8	1	12/09/20 06:13	12/09/20 21:31	7440-38-2	
Barium	**18.8**	mg/kg	0.61	0.18	1	12/09/20 06:13	12/09/20 21:31	7440-39-3	
Cadmium	**<0.16**	mg/kg	0.61	0.16	1	12/09/20 06:13	12/09/20 21:31	7440-43-9	
Chromium	**8.5**	mg/kg	1.2	0.34	1	12/09/20 06:13	12/09/20 21:31	7440-47-3	
Copper	**1.6**	mg/kg	1.2	0.34	1	12/09/20 06:13	12/09/20 21:31	7440-50-8	
Lead	**3.4**	mg/kg	2.4	0.73	1	12/09/20 06:13	12/09/20 21:31	7439-92-1	
Selenium	**<1.6**	mg/kg	4.9	1.6	1	12/09/20 06:13	12/09/20 21:31	7782-49-2	
Silver	**<0.38**	mg/kg	1.2	0.38	1	12/09/20 06:13	12/09/20 21:31	7440-22-4	
Zinc	**22.1**	mg/kg	4.9	1.5	1	12/09/20 06:13	12/09/20 21:31	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
	Pace Analytical Services - Green Bay								
Mercury	**0.012J**	mg/kg	0.039	0.011	1	12/15/20 12:14	12/16/20 09:07	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<3.0**	ug/kg	20.5	3.0	1	12/10/20 09:04	12/11/20 20:26	90-12-0	
2-Methylnaphthalene	**<3.0**	ug/kg	20.5	3.0	1	12/10/20 09:04	12/11/20 20:26	91-57-6	
Acenaphthene	**<2.7**	ug/kg	20.5	2.7	1	12/10/20 09:04	12/11/20 20:26	83-32-9	
Acenaphthylene	**4.0J**	ug/kg	20.5	2.6	1	12/10/20 09:04	12/11/20 20:26	208-96-8	
Anthracene	**3.9J**	ug/kg	20.5	2.5	1	12/10/20 09:04	12/11/20 20:26	120-12-7	
Benzo(a)anthracene	**21.1**	ug/kg	20.5	2.6	1	12/10/20 09:04	12/11/20 20:26	56-55-3	
Benzo(a)pyrene	**26.0**	ug/kg	20.5	2.3	1	12/10/20 09:04	12/11/20 20:26	50-32-8	
Benzo(b)fluoranthene	**27.8**	ug/kg	20.5	2.8	1	12/10/20 09:04	12/11/20 20:26	205-99-2	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: USCCG002(0.0-0.5) **Lab ID: 40219480002** Collected: 12/03/20 13:30 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
Benzo(g,h,i)perylene	**16.6J**	ug/kg	20.5	3.6	1	12/10/20 09:04	12/11/20 20:26	191-24-2	
Benzo(k)fluoranthene	**13.9J**	ug/kg	20.5	2.6	1	12/10/20 09:04	12/11/20 20:26	207-08-9	
Chrysene	**25.2**	ug/kg	20.5	3.9	1	12/10/20 09:04	12/11/20 20:26	218-01-9	
Dibenz(a,h)anthracene	**3.8J**	ug/kg	20.5	2.8	1	12/10/20 09:04	12/11/20 20:26	53-70-3	
Fluoranthene	**38.3**	ug/kg	20.5	2.4	1	12/10/20 09:04	12/11/20 20:26	206-44-0	
Fluorene	**<2.5**	ug/kg	20.5	2.5	1	12/10/20 09:04	12/11/20 20:26	86-73-7	
Indeno(1,2,3-cd)pyrene	**13.1J**	ug/kg	20.5	4.3	1	12/10/20 09:04	12/11/20 20:26	193-39-5	
Naphthalene	**4.0J**	ug/kg	20.5	2.0	1	12/10/20 09:04	12/11/20 20:26	91-20-3	
Phenanthrene	**11.7J**	ug/kg	20.5	2.3	1	12/10/20 09:04	12/11/20 20:26	85-01-8	
Pyrene	**34.8**	ug/kg	20.5	3.0	1	12/10/20 09:04	12/11/20 20:26	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	65	%	17-100		1	12/10/20 09:04	12/11/20 20:26	321-60-8	
Terphenyl-d14 (S)	62	%	17-98		1	12/10/20 09:04	12/11/20 20:26	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**18.4**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DUP-3 **Lab ID: 40219480003** Collected: 12/03/20 00:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**3.3**	mg/kg	2.0	0.53	1	12/09/20 09:20	12/10/20 08:36		B
Surrogates									
o-Terphenyl (S)	56	%	25-101		1	12/09/20 09:20	12/10/20 08:36	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<18.0**	ug/kg	60.9	18.0	1	12/09/20 15:45	12/10/20 22:22	12674-11-2	
PCB-1221 (Aroclor 1221)	**<18.0**	ug/kg	60.9	18.0	1	12/09/20 15:45	12/10/20 22:22	11104-28-2	
PCB-1232 (Aroclor 1232)	**<18.0**	ug/kg	60.9	18.0	1	12/09/20 15:45	12/10/20 22:22	11141-16-5	
PCB-1242 (Aroclor 1242)	**<18.0**	ug/kg	60.9	18.0	1	12/09/20 15:45	12/10/20 22:22	53469-21-9	
PCB-1248 (Aroclor 1248)	**<18.0**	ug/kg	60.9	18.0	1	12/09/20 15:45	12/10/20 22:22	12672-29-6	
PCB-1254 (Aroclor 1254)	**<18.0**	ug/kg	60.9	18.0	1	12/09/20 15:45	12/10/20 22:22	11097-69-1	
PCB-1260 (Aroclor 1260)	**<18.0**	ug/kg	60.9	18.0	1	12/09/20 15:45	12/10/20 22:22	11096-82-5	
PCB, Total	**<18.0**	ug/kg	60.9	18.0	1	12/09/20 15:45	12/10/20 22:22	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	88	%	50-150		1	12/09/20 15:45	12/10/20 22:22	877-09-8	
Decachlorobiphenyl (S)	88	%	50-150		1	12/09/20 15:45	12/10/20 22:22	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
	Pace Analytical Services - Green Bay								
Arsenic	**4.0**	mg/kg	3.0	1.7	1	12/09/20 06:13	12/09/20 21:34	7440-38-2	
Barium	**19.6**	mg/kg	0.59	0.18	1	12/09/20 06:13	12/09/20 21:34	7440-39-3	
Cadmium	**<0.16**	mg/kg	0.59	0.16	1	12/09/20 06:13	12/09/20 21:34	7440-43-9	
Chromium	**10.1**	mg/kg	1.2	0.33	1	12/09/20 06:13	12/09/20 21:34	7440-47-3	
Copper	**1.8**	mg/kg	1.2	0.33	1	12/09/20 06:13	12/09/20 21:34	7440-50-8	
Lead	**3.4**	mg/kg	2.4	0.71	1	12/09/20 06:13	12/09/20 21:34	7439-92-1	
Selenium	**<1.6**	mg/kg	4.8	1.6	1	12/09/20 06:13	12/09/20 21:34	7782-49-2	
Silver	**<0.37**	mg/kg	1.2	0.37	1	12/09/20 06:13	12/09/20 21:34	7440-22-4	
Zinc	**27.1**	mg/kg	4.8	1.4	1	12/09/20 06:13	12/09/20 21:34	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
	Pace Analytical Services - Green Bay								
Mercury	**<0.011**	mg/kg	0.039	0.011	1	12/15/20 12:14	12/16/20 09:14	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<3.0**	ug/kg	20.3	3.0	1	12/10/20 09:04	12/11/20 19:34	90-12-0	
2-Methylnaphthalene	**<3.0**	ug/kg	20.3	3.0	1	12/10/20 09:04	12/11/20 19:34	91-57-6	
Acenaphthene	**<2.6**	ug/kg	20.3	2.6	1	12/10/20 09:04	12/11/20 19:34	83-32-9	
Acenaphthylene	**<2.6**	ug/kg	20.3	2.6	1	12/10/20 09:04	12/11/20 19:34	208-96-8	
Anthracene	**5.2J**	ug/kg	20.3	2.5	1	12/10/20 09:04	12/11/20 19:34	120-12-7	
Benzo(a)anthracene	**17.5J**	ug/kg	20.3	2.6	1	12/10/20 09:04	12/11/20 19:34	56-55-3	
Benzo(a)pyrene	**18.7J**	ug/kg	20.3	2.3	1	12/10/20 09:04	12/11/20 19:34	50-32-8	
Benzo(b)fluoranthene	**22.2**	ug/kg	20.3	2.8	1	12/10/20 09:04	12/11/20 19:34	205-99-2	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DUP-3 **Lab ID: 40219480003** Collected: 12/03/20 00:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
Benzo(g,h,i)perylene	**13.3J**	ug/kg	20.3	3.6	1	12/10/20 09:04	12/11/20 19:34	191-24-2	
Benzo(k)fluoranthene	**9.8J**	ug/kg	20.3	2.6	1	12/10/20 09:04	12/11/20 19:34	207-08-9	
Chrysene	**20.3J**	ug/kg	20.3	3.8	1	12/10/20 09:04	12/11/20 19:34	218-01-9	
Dibenz(a,h)anthracene	**<2.8**	ug/kg	20.3	2.8	1	12/10/20 09:04	12/11/20 19:34	53-70-3	
Fluoranthene	**37.6**	ug/kg	20.3	2.4	1	12/10/20 09:04	12/11/20 19:34	206-44-0	
Fluorene	**<2.4**	ug/kg	20.3	2.4	1	12/10/20 09:04	12/11/20 19:34	86-73-7	
Indeno(1,2,3-cd)pyrene	**11.1J**	ug/kg	20.3	4.2	1	12/10/20 09:04	12/11/20 19:34	193-39-5	
Naphthalene	**2.1J**	ug/kg	20.3	2.0	1	12/10/20 09:04	12/11/20 19:34	91-20-3	
Phenanthrene	**16.4J**	ug/kg	20.3	2.3	1	12/10/20 09:04	12/11/20 19:34	85-01-8	
Pyrene	**29.6**	ug/kg	20.3	3.0	1	12/10/20 09:04	12/11/20 19:34	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	65	%	17-100		1	12/10/20 09:04	12/11/20 19:34	321-60-8	
Terphenyl-d14 (S)	67	%	17-98		1	12/10/20 09:04	12/11/20 19:34	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**17.7**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: USCCG003(0.0-0.5) **Lab ID: 40219480004** Collected: 12/03/20 11:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**85.0**	mg/kg	6.5	1.7	1	12/16/20 09:09	12/17/20 08:42		M0
Surrogates									
o-Terphenyl (S)	54	%	25-101		1	12/16/20 09:09	12/17/20 08:42	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<57.6**	ug/kg	195	57.6	1	12/09/20 15:45	12/10/20 23:49	12674-11-2	
PCB-1221 (Aroclor 1221)	**<57.6**	ug/kg	195	57.6	1	12/09/20 15:45	12/10/20 23:49	11104-28-2	
PCB-1232 (Aroclor 1232)	**<57.6**	ug/kg	195	57.6	1	12/09/20 15:45	12/10/20 23:49	11141-16-5	
PCB-1242 (Aroclor 1242)	**<57.6**	ug/kg	195	57.6	1	12/09/20 15:45	12/10/20 23:49	53469-21-9	
PCB-1248 (Aroclor 1248)	**104J**	ug/kg	195	57.6	1	12/09/20 15:45	12/10/20 23:49	12672-29-6	
PCB-1254 (Aroclor 1254)	**397**	ug/kg	195	57.6	1	12/09/20 15:45	12/10/20 23:49	11097-69-1	
PCB-1260 (Aroclor 1260)	**95.7J**	ug/kg	195	57.6	1	12/09/20 15:45	12/10/20 23:49	11096-82-5	
PCB, Total	**597**	ug/kg	195	57.6	1	12/09/20 15:45	12/10/20 23:49	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	76	%	50-150		1	12/09/20 15:45	12/10/20 23:49	877-09-8	
Decachlorobiphenyl (S)	74	%	50-150		1	12/09/20 15:45	12/10/20 23:49	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
	Pace Analytical Services - Green Bay								
Arsenic	**19.3**	mg/kg	9.7	5.7	1	12/09/20 06:13	12/09/20 21:16	7440-38-2	
Barium	**278**	mg/kg	1.9	0.58	1	12/09/20 06:13	12/09/20 21:16	7440-39-3	
Cadmium	**3.6**	mg/kg	1.9	0.52	1	12/09/20 06:13	12/09/20 21:16	7440-43-9	
Chromium	**388**	mg/kg	3.9	1.1	1	12/09/20 06:13	12/09/20 21:16	7440-47-3	
Copper	**127**	mg/kg	3.9	1.1	1	12/09/20 06:13	12/09/20 21:16	7440-50-8	
Lead	**179**	mg/kg	7.8	2.3	1	12/09/20 06:13	12/09/20 21:16	7439-92-1	
Selenium	**<5.1**	mg/kg	15.5	5.1	1	12/09/20 06:13	12/09/20 21:16	7782-49-2	
Silver	**3.6J**	mg/kg	3.9	1.2	1	12/09/20 06:13	12/09/20 21:16	7440-22-4	
Zinc	**625**	mg/kg	15.5	4.7	1	12/09/20 06:13	12/09/20 21:16	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
	Pace Analytical Services - Green Bay								
Mercury	**0.56**	mg/kg	0.14	0.039	1	12/15/20 12:14	12/16/20 08:58	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<9.5**	ug/kg	65.1	9.5	1	12/10/20 09:04	12/11/20 18:08	90-12-0	M1
2-Methylnaphthalene	**9.6J**	ug/kg	65.1	9.5	1	12/10/20 09:04	12/11/20 18:08	91-57-6	M1
Acenaphthene	**<8.4**	ug/kg	65.1	8.4	1	12/10/20 09:04	12/11/20 18:08	83-32-9	M1
Acenaphthylene	**17.7J**	ug/kg	65.1	8.2	1	12/10/20 09:04	12/11/20 18:08	208-96-8	M1
Anthracene	**18.7J**	ug/kg	65.1	8.1	1	12/10/20 09:04	12/11/20 18:08	120-12-7	M1
Benzo(a)anthracene	**86.4**	ug/kg	65.1	8.4	1	12/10/20 09:04	12/11/20 18:08	56-55-3	
Benzo(a)pyrene	**118**	ug/kg	65.1	7.4	1	12/10/20 09:04	12/11/20 18:08	50-32-8	M1
Benzo(b)fluoranthene	**135**	ug/kg	65.1	9.0	1	12/10/20 09:04	12/11/20 18:08	205-99-2	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: USCCG003(0.0-0.5) **Lab ID: 40219480004** Collected: 12/03/20 11:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
Benzo(g,h,i)perylene	**78.9**	ug/kg	65.1	11.4	1	12/10/20 09:04	12/11/20 18:08	191-24-2	
Benzo(k)fluoranthene	**61.5J**	ug/kg	65.1	8.3	1	12/10/20 09:04	12/11/20 18:08	207-08-9	
Chrysene	**109**	ug/kg	65.1	12.3	1	12/10/20 09:04	12/11/20 18:08	218-01-9	
Dibenz(a,h)anthracene	**19.1J**	ug/kg	65.1	9.0	1	12/10/20 09:04	12/11/20 18:08	53-70-3	
Fluoranthene	**171**	ug/kg	65.1	7.7	1	12/10/20 09:04	12/11/20 18:08	206-44-0	M1
Fluorene	**8.4J**	ug/kg	65.1	7.8	1	12/10/20 09:04	12/11/20 18:08	86-73-7	M1
Indeno(1,2,3-cd)pyrene	**62.6J**	ug/kg	65.1	13.6	1	12/10/20 09:04	12/11/20 18:08	193-39-5	
Naphthalene	**17.9J**	ug/kg	65.1	6.3	1	12/10/20 09:04	12/11/20 18:08	91-20-3	M1
Phenanthrene	**60.5J**	ug/kg	65.1	7.5	1	12/10/20 09:04	12/11/20 18:08	85-01-8	M1
Pyrene	**149**	ug/kg	65.1	9.6	1	12/10/20 09:04	12/11/20 18:08	129-00-0	M1
Surrogates									
2-Fluorobiphenyl (S)	38	%	17-100		1	12/10/20 09:04	12/11/20 18:08	321-60-8	
Terphenyl-d14 (S)	45	%	17-98		1	12/10/20 09:04	12/11/20 18:08	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**74.3**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: USCCG004(0.0-0.5) **Lab ID: 40219480005** Collected: 12/03/20 09:30 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**27.2**	mg/kg	5.1	1.3	1	12/09/20 09:20	12/10/20 08:44		
Surrogates									
o-Terphenyl (S)	43	%	25-101		1	12/09/20 09:20	12/10/20 08:44	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<45.1**	ug/kg	152	45.1	1	12/09/20 15:45	12/11/20 02:00	12674-11-2	
PCB-1221 (Aroclor 1221)	**<45.1**	ug/kg	152	45.1	1	12/09/20 15:45	12/11/20 02:00	11104-28-2	
PCB-1232 (Aroclor 1232)	**<45.1**	ug/kg	152	45.1	1	12/09/20 15:45	12/11/20 02:00	11141-16-5	
PCB-1242 (Aroclor 1242)	**<45.1**	ug/kg	152	45.1	1	12/09/20 15:45	12/11/20 02:00	53469-21-9	
PCB-1248 (Aroclor 1248)	**45.3J**	ug/kg	152	45.1	1	12/09/20 15:45	12/11/20 02:00	12672-29-6	
PCB-1254 (Aroclor 1254)	**230**	ug/kg	152	45.1	1	12/09/20 15:45	12/11/20 02:00	11097-69-1	
PCB-1260 (Aroclor 1260)	**52.0J**	ug/kg	152	45.1	1	12/09/20 15:45	12/11/20 02:00	11096-82-5	
PCB, Total	**327**	ug/kg	152	45.1	1	12/09/20 15:45	12/11/20 02:00	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	87	%	50-150		1	12/09/20 15:45	12/11/20 02:00	877-09-8	
Decachlorobiphenyl (S)	76	%	50-150		1	12/09/20 15:45	12/11/20 02:00	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
	Pace Analytical Services - Green Bay								
Arsenic	**23.5**	mg/kg	7.5	4.4	1	12/09/20 06:13	12/09/20 21:41	7440-38-2	
Barium	**216**	mg/kg	1.5	0.45	1	12/09/20 06:13	12/09/20 21:41	7440-39-3	
Cadmium	**3.1**	mg/kg	1.5	0.40	1	12/09/20 06:13	12/09/20 21:41	7440-43-9	
Chromium	**147**	mg/kg	3.0	0.83	1	12/09/20 06:13	12/09/20 21:41	7440-47-3	
Copper	**69.1**	mg/kg	3.0	0.83	1	12/09/20 06:13	12/09/20 21:41	7440-50-8	
Lead	**91.3**	mg/kg	6.0	1.8	1	12/09/20 06:13	12/09/20 21:41	7439-92-1	
Selenium	**<3.9**	mg/kg	11.9	3.9	1	12/09/20 06:13	12/09/20 21:41	7782-49-2	
Silver	**<0.91**	mg/kg	3.0	0.91	1	12/09/20 06:13	12/09/20 21:41	7440-22-4	
Zinc	**387**	mg/kg	11.9	3.6	1	12/09/20 06:13	12/09/20 21:41	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
	Pace Analytical Services - Green Bay								
Mercury	**0.45**	mg/kg	0.10	0.029	1	12/15/20 12:14	12/16/20 09:17	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<7.5**	ug/kg	51.0	7.5	1	12/10/20 09:04	12/11/20 20:43	90-12-0	
2-Methylnaphthalene	**<7.5**	ug/kg	51.0	7.5	1	12/10/20 09:04	12/11/20 20:43	91-57-6	
Acenaphthene	**<6.6**	ug/kg	51.0	6.6	1	12/10/20 09:04	12/11/20 20:43	83-32-9	
Acenaphthylene	**23.6J**	ug/kg	51.0	6.4	1	12/10/20 09:04	12/11/20 20:43	208-96-8	
Anthracene	**28.9J**	ug/kg	51.0	6.3	1	12/10/20 09:04	12/11/20 20:43	120-12-7	
Benzo(a)anthracene	**139**	ug/kg	51.0	6.6	1	12/10/20 09:04	12/11/20 20:43	56-55-3	
Benzo(a)pyrene	**161**	ug/kg	51.0	5.8	1	12/10/20 09:04	12/11/20 20:43	50-32-8	
Benzo(b)fluoranthene	**193**	ug/kg	51.0	7.1	1	12/10/20 09:04	12/11/20 20:43	205-99-2	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: USCCG004(0.0-0.5) **Lab ID: 40219480005** Collected: 12/03/20 09:30 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
Benzo(g,h,i)perylene	**115**	ug/kg	51.0	8.9	1	12/10/20 09:04	12/11/20 20:43	191-24-2	
Benzo(k)fluoranthene	**78.3**	ug/kg	51.0	6.5	1	12/10/20 09:04	12/11/20 20:43	207-08-9	
Chrysene	**168**	ug/kg	51.0	9.6	1	12/10/20 09:04	12/11/20 20:43	218-01-9	
Dibenz(a,h)anthracene	**27.7J**	ug/kg	51.0	7.1	1	12/10/20 09:04	12/11/20 20:43	53-70-3	
Fluoranthene	**218**	ug/kg	51.0	6.0	1	12/10/20 09:04	12/11/20 20:43	206-44-0	
Fluorene	**8.0J**	ug/kg	51.0	6.1	1	12/10/20 09:04	12/11/20 20:43	86-73-7	
Indeno(1,2,3-cd)pyrene	**89.8**	ug/kg	51.0	10.6	1	12/10/20 09:04	12/11/20 20:43	193-39-5	
Naphthalene	**12.2J**	ug/kg	51.0	5.0	1	12/10/20 09:04	12/11/20 20:43	91-20-3	
Phenanthrene	**83.5**	ug/kg	51.0	5.8	1	12/10/20 09:04	12/11/20 20:43	85-01-8	
Pyrene	**207**	ug/kg	51.0	7.5	1	12/10/20 09:04	12/11/20 20:43	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	52	%	17-100		1	12/10/20 09:04	12/11/20 20:43	321-60-8	
Terphenyl-d14 (S)	50	%	17-98		1	12/10/20 09:04	12/11/20 20:43	1718-51-0	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**67.3**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSLBG004(0.0-0.5) **Lab ID: 40219480006** Collected: 12/04/20 10:40 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**65.9**	mg/kg	7.2	1.9	1	12/09/20 09:20	12/10/20 08:52		
Surrogates									
o-Terphenyl (S)	47	%	25-101		1	12/09/20 09:20	12/10/20 08:52	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<63.5**	ug/kg	215	63.5	1	12/09/20 15:45	12/11/20 02:43	12674-11-2	
PCB-1221 (Aroclor 1221)	**<63.5**	ug/kg	215	63.5	1	12/09/20 15:45	12/11/20 02:43	11104-28-2	
PCB-1232 (Aroclor 1232)	**<63.5**	ug/kg	215	63.5	1	12/09/20 15:45	12/11/20 02:43	11141-16-5	
PCB-1242 (Aroclor 1242)	**<63.5**	ug/kg	215	63.5	1	12/09/20 15:45	12/11/20 02:43	53469-21-9	
PCB-1248 (Aroclor 1248)	**66.9J**	ug/kg	215	63.5	1	12/09/20 15:45	12/11/20 02:43	12672-29-6	
PCB-1254 (Aroclor 1254)	**295**	ug/kg	215	63.5	1	12/09/20 15:45	12/11/20 02:43	11097-69-1	
PCB-1260 (Aroclor 1260)	**<63.5**	ug/kg	215	63.5	1	12/09/20 15:45	12/11/20 02:43	11096-82-5	
PCB, Total	**362**	ug/kg	215	63.5	1	12/09/20 15:45	12/11/20 02:43	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	93	%	50-150		1	12/09/20 15:45	12/11/20 02:43	877-09-8	
Decachlorobiphenyl (S)	87	%	50-150		1	12/09/20 15:45	12/11/20 02:43	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<10.5**	ug/kg	72.0	10.5	1	12/10/20 09:04	12/11/20 21:18	90-12-0	
2-Methylnaphthalene	**<10.5**	ug/kg	72.0	10.5	1	12/10/20 09:04	12/11/20 21:18	91-57-6	
Acenaphthene	**<9.3**	ug/kg	72.0	9.3	1	12/10/20 09:04	12/11/20 21:18	83-32-9	
Acenaphthylene	**39.9J**	ug/kg	72.0	9.1	1	12/10/20 09:04	12/11/20 21:18	208-96-8	
Anthracene	**31.6J**	ug/kg	72.0	8.9	1	12/10/20 09:04	12/11/20 21:18	120-12-7	
Benzo(a)anthracene	**135**	ug/kg	72.0	9.3	1	12/10/20 09:04	12/11/20 21:18	56-55-3	
Benzo(a)pyrene	**197**	ug/kg	72.0	8.2	1	12/10/20 09:04	12/11/20 21:18	50-32-8	
Benzo(b)fluoranthene	**213**	ug/kg	72.0	10.0	1	12/10/20 09:04	12/11/20 21:18	205-99-2	
Benzo(g,h,i)perylene	**132**	ug/kg	72.0	12.6	1	12/10/20 09:04	12/11/20 21:18	191-24-2	
Benzo(k)fluoranthene	**92.8**	ug/kg	72.0	9.2	1	12/10/20 09:04	12/11/20 21:18	207-08-9	
Chrysene	**169**	ug/kg	72.0	13.6	1	12/10/20 09:04	12/11/20 21:18	218-01-9	
Dibenz(a,h)anthracene	**31.5J**	ug/kg	72.0	10	1	12/10/20 09:04	12/11/20 21:18	53-70-3	
Fluoranthene	**230**	ug/kg	72.0	8.5	1	12/10/20 09:04	12/11/20 21:18	206-44-0	
Fluorene	**9.7J**	ug/kg	72.0	8.6	1	12/10/20 09:04	12/11/20 21:18	86-73-7	
Indeno(1,2,3-cd)pyrene	**103**	ug/kg	72.0	15.0	1	12/10/20 09:04	12/11/20 21:18	193-39-5	
Naphthalene	**18.0J**	ug/kg	72.0	7.0	1	12/10/20 09:04	12/11/20 21:18	91-20-3	
Phenanthrene	**65.2J**	ug/kg	72.0	8.2	1	12/10/20 09:04	12/11/20 21:18	85-01-8	
Pyrene	**210**	ug/kg	72.0	10.6	1	12/10/20 09:04	12/11/20 21:18	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	43	%	17-100		1	12/10/20 09:04	12/11/20 21:18	321-60-8	
Terphenyl-d14 (S)	43	%	17-98		1	12/10/20 09:04	12/11/20 21:18	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSLBG004(0.0-0.5) **Lab ID: 40219480006** Collected: 12/04/20 10:40 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**76.8**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSCCG005(0.0-0.5) **Lab ID: 40219480007** Collected: 12/04/20 11:40 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**45.0**	mg/kg	6.5	1.7	1	12/09/20 09:20	12/10/20 09:00		
Surrogates									
o-Terphenyl (S)	33	%	25-101		1	12/09/20 09:20	12/10/20 09:00	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<57.4**	ug/kg	194	57.4	1	12/09/20 15:45	12/11/20 04:10	12674-11-2	
PCB-1221 (Aroclor 1221)	**<57.4**	ug/kg	194	57.4	1	12/09/20 15:45	12/11/20 04:10	11104-28-2	
PCB-1232 (Aroclor 1232)	**<57.4**	ug/kg	194	57.4	1	12/09/20 15:45	12/11/20 04:10	11141-16-5	
PCB-1242 (Aroclor 1242)	**<57.4**	ug/kg	194	57.4	1	12/09/20 15:45	12/11/20 04:10	53469-21-9	
PCB-1248 (Aroclor 1248)	**<57.4**	ug/kg	194	57.4	1	12/09/20 15:45	12/11/20 04:10	12672-29-6	
PCB-1254 (Aroclor 1254)	**160J**	ug/kg	194	57.4	1	12/09/20 15:45	12/11/20 04:10	11097-69-1	
PCB-1260 (Aroclor 1260)	**<57.4**	ug/kg	194	57.4	1	12/09/20 15:45	12/11/20 04:10	11096-82-5	
PCB, Total	**160J**	ug/kg	194	57.4	1	12/09/20 15:45	12/11/20 04:10	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	105	%	50-150		1	12/09/20 15:45	12/11/20 04:10	877-09-8	
Decachlorobiphenyl (S)	91	%	50-150		1	12/09/20 15:45	12/11/20 04:10	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<9.5**	ug/kg	64.8	9.5	1	12/10/20 09:04	12/14/20 18:20	90-12-0	
2-Methylnaphthalene	**<9.5**	ug/kg	64.8	9.5	1	12/10/20 09:04	12/14/20 18:20	91-57-6	
Acenaphthene	**<8.4**	ug/kg	64.8	8.4	1	12/10/20 09:04	12/14/20 18:20	83-32-9	
Acenaphthylene	**26.6J**	ug/kg	64.8	8.2	1	12/10/20 09:04	12/14/20 18:20	208-96-8	
Anthracene	**33.6J**	ug/kg	64.8	8.0	1	12/10/20 09:04	12/14/20 18:20	120-12-7	
Benzo(a)anthracene	**147**	ug/kg	64.8	8.4	1	12/10/20 09:04	12/14/20 18:20	56-55-3	
Benzo(a)pyrene	**202**	ug/kg	64.8	7.4	1	12/10/20 09:04	12/14/20 18:20	50-32-8	
Benzo(b)fluoranthene	**239**	ug/kg	64.8	9.0	1	12/10/20 09:04	12/14/20 18:20	205-99-2	
Benzo(g,h,i)perylene	**161**	ug/kg	64.8	11.4	1	12/10/20 09:04	12/14/20 18:20	191-24-2	
Benzo(k)fluoranthene	**104**	ug/kg	64.8	8.3	1	12/10/20 09:04	12/14/20 18:20	207-08-9	
Chrysene	**191**	ug/kg	64.8	12.2	1	12/10/20 09:04	12/14/20 18:20	218-01-9	
Dibenz(a,h)anthracene	**37.7J**	ug/kg	64.8	9.0	1	12/10/20 09:04	12/14/20 18:20	53-70-3	
Fluoranthene	**290**	ug/kg	64.8	7.7	1	12/10/20 09:04	12/14/20 18:20	206-44-0	
Fluorene	**<7.8**	ug/kg	64.8	7.8	1	12/10/20 09:04	12/14/20 18:20	86-73-7	
Indeno(1,2,3-cd)pyrene	**127**	ug/kg	64.8	13.5	1	12/10/20 09:04	12/14/20 18:20	193-39-5	
Naphthalene	**8.6J**	ug/kg	64.8	6.3	1	12/10/20 09:04	12/14/20 18:20	91-20-3	
Phenanthrene	**77.5**	ug/kg	64.8	7.4	1	12/10/20 09:04	12/14/20 18:20	85-01-8	
Pyrene	**238**	ug/kg	64.8	9.5	1	12/10/20 09:04	12/14/20 18:20	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	54	%	17-100		1	12/10/20 09:04	12/14/20 18:20	321-60-8	
Terphenyl-d14 (S)	64	%	17-98		1	12/10/20 09:04	12/14/20 18:20	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSCCG005(0.0-0.5) **Lab ID: 40219480007** Collected: 12/04/20 11:40 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**74.2**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DUP-4 **Lab ID: 40219480008** Collected: 12/04/20 00:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**11.2**	mg/kg	3.4	0.90	1	12/09/20 09:20	12/10/20 09:09		B
Surrogates									
o-Terphenyl (S)	42	%	25-101		1	12/09/20 09:20	12/10/20 09:09	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<30.4**	ug/kg	103	30.4	1	12/09/20 15:45	12/11/20 04:54	12674-11-2	
PCB-1221 (Aroclor 1221)	**<30.4**	ug/kg	103	30.4	1	12/09/20 15:45	12/11/20 04:54	11104-28-2	
PCB-1232 (Aroclor 1232)	**<30.4**	ug/kg	103	30.4	1	12/09/20 15:45	12/11/20 04:54	11141-16-5	
PCB-1242 (Aroclor 1242)	**<30.4**	ug/kg	103	30.4	1	12/09/20 15:45	12/11/20 04:54	53469-21-9	
PCB-1248 (Aroclor 1248)	**60.7J**	ug/kg	103	30.4	1	12/09/20 15:45	12/11/20 04:54	12672-29-6	
PCB-1254 (Aroclor 1254)	**240**	ug/kg	103	30.4	1	12/09/20 15:45	12/11/20 04:54	11097-69-1	
PCB-1260 (Aroclor 1260)	**47.9J**	ug/kg	103	30.4	1	12/09/20 15:45	12/11/20 04:54	11096-82-5	
PCB, Total	**349**	ug/kg	103	30.4	1	12/09/20 15:45	12/11/20 04:54	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	89	%	50-150		1	12/09/20 15:45	12/11/20 04:54	877-09-8	
Decachlorobiphenyl (S)	82	%	50-150		1	12/09/20 15:45	12/11/20 04:54	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
	Pace Analytical Services - Green Bay								
Arsenic	**20.6**	mg/kg	5.1	3.0	1	12/09/20 06:13	12/09/20 21:43	7440-38-2	
Barium	**201**	mg/kg	1.0	0.31	1	12/09/20 06:13	12/09/20 21:43	7440-39-3	
Cadmium	**1.1**	mg/kg	1.0	0.27	1	12/09/20 06:13	12/09/20 21:43	7440-43-9	
Chromium	**91.3**	mg/kg	2.1	0.57	1	12/09/20 06:13	12/09/20 21:43	7440-47-3	
Copper	**36.9**	mg/kg	2.1	0.57	1	12/09/20 06:13	12/09/20 21:43	7440-50-8	
Lead	**42.3**	mg/kg	4.1	1.2	1	12/09/20 06:13	12/09/20 21:43	7439-92-1	
Selenium	**<2.7**	mg/kg	8.2	2.7	1	12/09/20 06:13	12/09/20 21:43	7782-49-2	
Silver	**<0.63**	mg/kg	2.1	0.63	1	12/09/20 06:13	12/09/20 21:43	7440-22-4	
Zinc	**194**	mg/kg	8.2	2.5	1	12/09/20 06:13	12/09/20 21:43	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
	Pace Analytical Services - Green Bay								
Mercury	**0.16**	mg/kg	0.071	0.020	1	12/15/20 12:14	12/16/20 09:19	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**51.4**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: USCCC004(0.0-1.0) **Lab ID: 40219480009** Collected: 12/03/20 09:30 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**37.0**	mg/kg	5.3	1.4	1	12/09/20 09:20	12/10/20 09:17		
Surrogates									
o-Terphenyl (S)	47	%	25-101		1	12/09/20 09:20	12/10/20 09:17	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<46.5**	ug/kg	157	46.5	1	12/09/20 15:45	12/11/20 05:38	12674-11-2	
PCB-1221 (Aroclor 1221)	**<46.5**	ug/kg	157	46.5	1	12/09/20 15:45	12/11/20 05:38	11104-28-2	
PCB-1232 (Aroclor 1232)	**<46.5**	ug/kg	157	46.5	1	12/09/20 15:45	12/11/20 05:38	11141-16-5	
PCB-1242 (Aroclor 1242)	**<46.5**	ug/kg	157	46.5	1	12/09/20 15:45	12/11/20 05:38	53469-21-9	
PCB-1248 (Aroclor 1248)	**<46.5**	ug/kg	157	46.5	1	12/09/20 15:45	12/11/20 05:38	12672-29-6	
PCB-1254 (Aroclor 1254)	**182**	ug/kg	157	46.5	1	12/09/20 15:45	12/11/20 05:38	11097-69-1	
PCB-1260 (Aroclor 1260)	**<46.5**	ug/kg	157	46.5	1	12/09/20 15:45	12/11/20 05:38	11096-82-5	
PCB, Total	**182**	ug/kg	157	46.5	1	12/09/20 15:45	12/11/20 05:38	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	100	%	50-150		1	12/09/20 15:45	12/11/20 05:38	877-09-8	
Decachlorobiphenyl (S)	87	%	50-150		1	12/09/20 15:45	12/11/20 05:38	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
	Pace Analytical Services - Green Bay								
Arsenic	**21.8**	mg/kg	7.3	4.3	1	12/09/20 06:13	12/09/20 21:46	7440-38-2	
Barium	**238**	mg/kg	1.5	0.44	1	12/09/20 06:13	12/09/20 21:46	7440-39-3	
Cadmium	**2.8**	mg/kg	1.5	0.39	1	12/09/20 06:13	12/09/20 21:46	7440-43-9	
Chromium	**131**	mg/kg	2.9	0.82	1	12/09/20 06:13	12/09/20 21:46	7440-47-3	
Copper	**63.7**	mg/kg	2.9	0.81	1	12/09/20 06:13	12/09/20 21:46	7440-50-8	
Lead	**80.6**	mg/kg	5.9	1.8	1	12/09/20 06:13	12/09/20 21:46	7439-92-1	
Selenium	**<3.8**	mg/kg	11.7	3.8	1	12/09/20 06:13	12/09/20 21:46	7782-49-2	
Silver	**<0.90**	mg/kg	2.9	0.90	1	12/09/20 06:13	12/09/20 21:46	7440-22-4	
Zinc	**356**	mg/kg	11.7	3.5	1	12/09/20 06:13	12/09/20 21:46	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
	Pace Analytical Services - Green Bay								
Mercury	**0.41**	mg/kg	0.11	0.032	1	12/15/20 12:14	12/16/20 09:21	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**68.3**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: USCCC004(2.0-3.0) **Lab ID: 40219480010** Collected: 12/03/20 09:30 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**13.1**	mg/kg	3.5	0.91	1	12/09/20 09:20	12/10/20 09:25		B
Surrogates									
o-Terphenyl (S)	42	%	25-101		1	12/09/20 09:20	12/10/20 09:25	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<30.8**	ug/kg	104	30.8	1	12/10/20 12:34	12/15/20 18:34	12674-11-2	
PCB-1221 (Aroclor 1221)	**<30.8**	ug/kg	104	30.8	1	12/10/20 12:34	12/15/20 18:34	11104-28-2	
PCB-1232 (Aroclor 1232)	**<30.8**	ug/kg	104	30.8	1	12/10/20 12:34	12/15/20 18:34	11141-16-5	
PCB-1242 (Aroclor 1242)	**<30.8**	ug/kg	104	30.8	1	12/10/20 12:34	12/15/20 18:34	53469-21-9	
PCB-1248 (Aroclor 1248)	**108**	ug/kg	104	30.8	1	12/10/20 12:34	12/15/20 18:34	12672-29-6	
PCB-1254 (Aroclor 1254)	**357**	ug/kg	104	30.8	1	12/10/20 12:34	12/15/20 18:34	11097-69-1	
PCB-1260 (Aroclor 1260)	**78.9J**	ug/kg	104	30.8	1	12/10/20 12:34	12/15/20 18:34	11096-82-5	
PCB, Total	**544**	ug/kg	104	30.8	1	12/10/20 12:34	12/15/20 18:34	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	82	%	50-150		1	12/10/20 12:34	12/15/20 18:34	877-09-8	
Decachlorobiphenyl (S)	86	%	50-150		1	12/10/20 12:34	12/15/20 18:34	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
	Pace Analytical Services - Green Bay								
Arsenic	**19.6**	mg/kg	5.2	3.1	1	12/09/20 06:13	12/09/20 21:48	7440-38-2	
Barium	**198**	mg/kg	1.0	0.31	1	12/09/20 06:13	12/09/20 21:48	7440-39-3	
Cadmium	**1.1**	mg/kg	1.0	0.28	1	12/09/20 06:13	12/09/20 21:48	7440-43-9	
Chromium	**91.0**	mg/kg	2.1	0.58	1	12/09/20 06:13	12/09/20 21:48	7440-47-3	
Copper	**37.1**	mg/kg	2.1	0.58	1	12/09/20 06:13	12/09/20 21:48	7440-50-8	
Lead	**42.1**	mg/kg	4.2	1.2	1	12/09/20 06:13	12/09/20 21:48	7439-92-1	
Selenium	**<2.7**	mg/kg	8.3	2.7	1	12/09/20 06:13	12/09/20 21:48	7782-49-2	
Silver	**<0.64**	mg/kg	2.1	0.64	1	12/09/20 06:13	12/09/20 21:48	7440-22-4	
Zinc	**198**	mg/kg	8.3	2.5	1	12/09/20 06:13	12/09/20 21:48	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
	Pace Analytical Services - Green Bay								
Mercury	**0.20**	mg/kg	0.068	0.019	1	12/15/20 12:14	12/16/20 09:24	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**52.1**	%	0.10	0.10	1		12/10/20 12:30		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: USCCC004(1.0-2.0) **Lab ID: 40219480011** Collected: 12/03/20 09:30 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**12.4**	mg/kg	4.8	1.3	1	12/16/20 09:09	12/17/20 09:06		B
Surrogates									
o-Terphenyl (S)	40	%	25-101		1	12/16/20 09:09	12/17/20 09:06	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<42.2**	ug/kg	143	42.2	1	12/10/20 12:34	12/15/20 18:56	12674-11-2	
PCB-1221 (Aroclor 1221)	**<42.2**	ug/kg	143	42.2	1	12/10/20 12:34	12/15/20 18:56	11104-28-2	
PCB-1232 (Aroclor 1232)	**<42.2**	ug/kg	143	42.2	1	12/10/20 12:34	12/15/20 18:56	11141-16-5	
PCB-1242 (Aroclor 1242)	**<42.2**	ug/kg	143	42.2	1	12/10/20 12:34	12/15/20 18:56	53469-21-9	
PCB-1248 (Aroclor 1248)	**128J**	ug/kg	143	42.2	1	12/10/20 12:34	12/15/20 18:56	12672-29-6	
PCB-1254 (Aroclor 1254)	**448**	ug/kg	143	42.2	1	12/10/20 12:34	12/15/20 18:56	11097-69-1	
PCB-1260 (Aroclor 1260)	**112J**	ug/kg	143	42.2	1	12/10/20 12:34	12/15/20 18:56	11096-82-5	
PCB, Total	**688**	ug/kg	143	42.2	1	12/10/20 12:34	12/15/20 18:56	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	80	%	50-150		1	12/10/20 12:34	12/15/20 18:56	877-09-8	
Decachlorobiphenyl (S)	85	%	50-150		1	12/10/20 12:34	12/15/20 18:56	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
	Pace Analytical Services - Green Bay								
Arsenic	**19.1**	mg/kg	7.1	4.2	1	12/09/20 06:13	12/09/20 21:51	7440-38-2	
Barium	**251**	mg/kg	1.4	0.43	1	12/09/20 06:13	12/09/20 21:51	7440-39-3	
Cadmium	**2.2**	mg/kg	1.4	0.38	1	12/09/20 06:13	12/09/20 21:51	7440-43-9	
Chromium	**140**	mg/kg	2.8	0.79	1	12/09/20 06:13	12/09/20 21:51	7440-47-3	
Copper	**56.4**	mg/kg	2.8	0.79	1	12/09/20 06:13	12/09/20 21:51	7440-50-8	
Lead	**70.0**	mg/kg	5.7	1.7	1	12/09/20 06:13	12/09/20 21:51	7439-92-1	
Selenium	**<3.7**	mg/kg	11.4	3.7	1	12/09/20 06:13	12/09/20 21:51	7782-49-2	
Silver	**<0.87**	mg/kg	2.8	0.87	1	12/09/20 06:13	12/09/20 21:51	7440-22-4	
Zinc	**302**	mg/kg	11.4	3.4	1	12/09/20 06:13	12/09/20 21:51	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
	Pace Analytical Services - Green Bay								
Mercury	**0.35**	mg/kg	0.099	0.028	1	12/15/20 12:14	12/16/20 09:26	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**65.1**	%	0.10	0.10	1		12/10/20 12:30		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBG006(0.0-0.5) **Lab ID: 40219480012** Collected: 12/04/20 12:30 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**44.3**	mg/kg	5.8	1.5	1	12/09/20 09:20	12/10/20 09:33		
Surrogates									
o-Terphenyl (S)	43	%	25-101		1	12/09/20 09:20	12/10/20 09:33	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<50.8**	ug/kg	172	50.8	1	12/10/20 12:34	12/15/20 20:01	12674-11-2	
PCB-1221 (Aroclor 1221)	**<50.8**	ug/kg	172	50.8	1	12/10/20 12:34	12/15/20 20:01	11104-28-2	
PCB-1232 (Aroclor 1232)	**<50.8**	ug/kg	172	50.8	1	12/10/20 12:34	12/15/20 20:01	11141-16-5	
PCB-1242 (Aroclor 1242)	**<50.8**	ug/kg	172	50.8	1	12/10/20 12:34	12/15/20 20:01	53469-21-9	
PCB-1248 (Aroclor 1248)	**<50.8**	ug/kg	172	50.8	1	12/10/20 12:34	12/15/20 20:01	12672-29-6	
PCB-1254 (Aroclor 1254)	**214**	ug/kg	172	50.8	1	12/10/20 12:34	12/15/20 20:01	11097-69-1	
PCB-1260 (Aroclor 1260)	**<50.8**	ug/kg	172	50.8	1	12/10/20 12:34	12/15/20 20:01	11096-82-5	
PCB, Total	**214**	ug/kg	172	50.8	1	12/10/20 12:34	12/15/20 20:01	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	84	%	50-150		1	12/10/20 12:34	12/15/20 20:01	877-09-8	
Decachlorobiphenyl (S)	86	%	50-150		1	12/10/20 12:34	12/15/20 20:01	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<8.4**	ug/kg	57.6	8.4	1	12/10/20 09:04	12/14/20 18:37	90-12-0	
2-Methylnaphthalene	**<8.4**	ug/kg	57.6	8.4	1	12/10/20 09:04	12/14/20 18:37	91-57-6	
Acenaphthene	**<7.5**	ug/kg	57.6	7.5	1	12/10/20 09:04	12/14/20 18:37	83-32-9	
Acenaphthylene	**29.3J**	ug/kg	57.6	7.3	1	12/10/20 09:04	12/14/20 18:37	208-96-8	
Anthracene	**43.1J**	ug/kg	57.6	7.2	1	12/10/20 09:04	12/14/20 18:37	120-12-7	
Benzo(a)anthracene	**195**	ug/kg	57.6	7.4	1	12/10/20 09:04	12/14/20 18:37	56-55-3	
Benzo(a)pyrene	**250**	ug/kg	57.6	6.5	1	12/10/20 09:04	12/14/20 18:37	50-32-8	
Benzo(b)fluoranthene	**305**	ug/kg	57.6	8.0	1	12/10/20 09:04	12/14/20 18:37	205-99-2	
Benzo(g,h,i)perylene	**171**	ug/kg	57.6	10.1	1	12/10/20 09:04	12/14/20 18:37	191-24-2	
Benzo(k)fluoranthene	**123**	ug/kg	57.6	7.4	1	12/10/20 09:04	12/14/20 18:37	207-08-9	
Chrysene	**244**	ug/kg	57.6	10.9	1	12/10/20 09:04	12/14/20 18:37	218-01-9	
Dibenz(a,h)anthracene	**40.7J**	ug/kg	57.6	8.0	1	12/10/20 09:04	12/14/20 18:37	53-70-3	
Fluoranthene	**379**	ug/kg	57.6	6.8	1	12/10/20 09:04	12/14/20 18:37	206-44-0	
Fluorene	**10.4J**	ug/kg	57.6	6.9	1	12/10/20 09:04	12/14/20 18:37	86-73-7	
Indeno(1,2,3-cd)pyrene	**135**	ug/kg	57.6	12.0	1	12/10/20 09:04	12/14/20 18:37	193-39-5	
Naphthalene	**13.2J**	ug/kg	57.6	5.6	1	12/10/20 09:04	12/14/20 18:37	91-20-3	
Phenanthrene	**119**	ug/kg	57.6	6.6	1	12/10/20 09:04	12/14/20 18:37	85-01-8	
Pyrene	**319**	ug/kg	57.6	8.5	1	12/10/20 09:04	12/14/20 18:37	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	39	%	17-100		1	12/10/20 09:04	12/14/20 18:37	321-60-8	
Terphenyl-d14 (S)	48	%	17-98		1	12/10/20 09:04	12/14/20 18:37	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBG006(0.0-0.5) **Lab ID: 40219480012** Collected: 12/04/20 12:30 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**71.0**	%	0.10	0.10	1		12/10/20 12:31		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSLBG007(0.0-0.5) **Lab ID: 40219480013** Collected: 12/04/20 15:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**51.9**	mg/kg	6.7	1.7	1	12/09/20 09:20	12/10/20 09:41		
Surrogates									
o-Terphenyl (S)	37	%	25-101		1	12/09/20 09:20	12/10/20 09:41	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<58.9**	ug/kg	199	58.9	1	12/10/20 12:34	12/15/20 20:23	12674-11-2	
PCB-1221 (Aroclor 1221)	**<58.9**	ug/kg	199	58.9	1	12/10/20 12:34	12/15/20 20:23	11104-28-2	
PCB-1232 (Aroclor 1232)	**<58.9**	ug/kg	199	58.9	1	12/10/20 12:34	12/15/20 20:23	11141-16-5	
PCB-1242 (Aroclor 1242)	**<58.9**	ug/kg	199	58.9	1	12/10/20 12:34	12/15/20 20:23	53469-21-9	
PCB-1248 (Aroclor 1248)	**82.5J**	ug/kg	199	58.9	1	12/10/20 12:34	12/15/20 20:23	12672-29-6	
PCB-1254 (Aroclor 1254)	**367**	ug/kg	199	58.9	1	12/10/20 12:34	12/15/20 20:23	11097-69-1	
PCB-1260 (Aroclor 1260)	**94.8J**	ug/kg	199	58.9	1	12/10/20 12:34	12/15/20 20:23	11096-82-5	
PCB, Total	**545**	ug/kg	199	58.9	1	12/10/20 12:34	12/15/20 20:23	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	85	%	50-150		1	12/10/20 12:34	12/15/20 20:23	877-09-8	
Decachlorobiphenyl (S)	87	%	50-150		1	12/10/20 12:34	12/15/20 20:23	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<9.7**	ug/kg	66.7	9.7	1	12/10/20 09:04	12/14/20 17:46	90-12-0	
2-Methylnaphthalene	**<9.8**	ug/kg	66.7	9.8	1	12/10/20 09:04	12/14/20 17:46	91-57-6	
Acenaphthene	**<8.6**	ug/kg	66.7	8.6	1	12/10/20 09:04	12/14/20 17:46	83-32-9	
Acenaphthylene	**12.7J**	ug/kg	66.7	8.4	1	12/10/20 09:04	12/14/20 17:46	208-96-8	
Anthracene	**16.8J**	ug/kg	66.7	8.3	1	12/10/20 09:04	12/14/20 17:46	120-12-7	
Benzo(a)anthracene	**78.6**	ug/kg	66.7	8.6	1	12/10/20 09:04	12/14/20 17:46	56-55-3	
Benzo(a)pyrene	**109**	ug/kg	66.7	7.6	1	12/10/20 09:04	12/14/20 17:46	50-32-8	
Benzo(b)fluoranthene	**137**	ug/kg	66.7	9.3	1	12/10/20 09:04	12/14/20 17:46	205-99-2	
Benzo(g,h,i)perylene	**77.0**	ug/kg	66.7	11.7	1	12/10/20 09:04	12/14/20 17:46	191-24-2	
Benzo(k)fluoranthene	**59.8J**	ug/kg	66.7	8.5	1	12/10/20 09:04	12/14/20 17:46	207-08-9	
Chrysene	**105**	ug/kg	66.7	12.6	1	12/10/20 09:04	12/14/20 17:46	218-01-9	
Dibenz(a,h)anthracene	**18.9J**	ug/kg	66.7	9.2	1	12/10/20 09:04	12/14/20 17:46	53-70-3	
Fluoranthene	**153**	ug/kg	66.7	7.9	1	12/10/20 09:04	12/14/20 17:46	206-44-0	
Fluorene	**<8.0**	ug/kg	66.7	8.0	1	12/10/20 09:04	12/14/20 17:46	86-73-7	
Indeno(1,2,3-cd)pyrene	**65.7J**	ug/kg	66.7	13.9	1	12/10/20 09:04	12/14/20 17:46	193-39-5	
Naphthalene	**8.6J**	ug/kg	66.7	6.5	1	12/10/20 09:04	12/14/20 17:46	91-20-3	
Phenanthrene	**41.8J**	ug/kg	66.7	7.6	1	12/10/20 09:04	12/14/20 17:46	85-01-8	
Pyrene	**124**	ug/kg	66.7	9.8	1	12/10/20 09:04	12/14/20 17:46	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	59	%	17-100		1	12/10/20 09:04	12/14/20 17:46	321-60-8	
Terphenyl-d14 (S)	62	%	17-98		1	12/10/20 09:04	12/14/20 17:46	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSLBG007(0.0-0.5) **Lab ID: 40219480013** Collected: 12/04/20 15:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**75.0**	%	0.10	0.10	1		12/10/20 12:31		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBG008(0.0-0.5) **Lab ID: 40219480014** Collected: 12/04/20 16:20 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**47.4**	mg/kg	5.2	1.4	1	12/09/20 09:20	12/10/20 09:49		
Surrogates									
o-Terphenyl (S)	34	%	25-101		1	12/09/20 09:20	12/10/20 09:49	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<46.4**	ug/kg	157	46.4	1	12/10/20 12:34	12/15/20 20:45	12674-11-2	
PCB-1221 (Aroclor 1221)	**<46.4**	ug/kg	157	46.4	1	12/10/20 12:34	12/15/20 20:45	11104-28-2	
PCB-1232 (Aroclor 1232)	**<46.4**	ug/kg	157	46.4	1	12/10/20 12:34	12/15/20 20:45	11141-16-5	
PCB-1242 (Aroclor 1242)	**<46.4**	ug/kg	157	46.4	1	12/10/20 12:34	12/15/20 20:45	53469-21-9	
PCB-1248 (Aroclor 1248)	**57.7J**	ug/kg	157	46.4	1	12/10/20 12:34	12/15/20 20:45	12672-29-6	
PCB-1254 (Aroclor 1254)	**160**	ug/kg	157	46.4	1	12/10/20 12:34	12/15/20 20:45	11097-69-1	
PCB-1260 (Aroclor 1260)	**<46.4**	ug/kg	157	46.4	1	12/10/20 12:34	12/15/20 20:45	11096-82-5	
PCB, Total	**218**	ug/kg	157	46.4	1	12/10/20 12:34	12/15/20 20:45	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	82	%	50-150		1	12/10/20 12:34	12/15/20 20:45	877-09-8	
Decachlorobiphenyl (S)	84	%	50-150		1	12/10/20 12:34	12/15/20 20:45	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<7.7**	ug/kg	52.4	7.7	1	12/10/20 09:04	12/14/20 19:28	90-12-0	
2-Methylnaphthalene	**9.3J**	ug/kg	52.4	7.7	1	12/10/20 09:04	12/14/20 19:28	91-57-6	
Acenaphthene	**13.2J**	ug/kg	52.4	6.8	1	12/10/20 09:04	12/14/20 19:28	83-32-9	
Acenaphthylene	**51.6J**	ug/kg	52.4	6.6	1	12/10/20 09:04	12/14/20 19:28	208-96-8	
Anthracene	**65.3**	ug/kg	52.4	6.5	1	12/10/20 09:04	12/14/20 19:28	120-12-7	
Benzo(a)anthracene	**317**	ug/kg	52.4	6.8	1	12/10/20 09:04	12/14/20 19:28	56-55-3	
Benzo(a)pyrene	**379**	ug/kg	52.4	6.0	1	12/10/20 09:04	12/14/20 19:28	50-32-8	
Benzo(b)fluoranthene	**468**	ug/kg	52.4	7.3	1	12/10/20 09:04	12/14/20 19:28	205-99-2	
Benzo(g,h,i)perylene	**272**	ug/kg	52.4	9.2	1	12/10/20 09:04	12/14/20 19:28	191-24-2	
Benzo(k)fluoranthene	**176**	ug/kg	52.4	6.7	1	12/10/20 09:04	12/14/20 19:28	207-08-9	
Chrysene	**358**	ug/kg	52.4	9.9	1	12/10/20 09:04	12/14/20 19:28	218-01-9	
Dibenz(a,h)anthracene	**68.2**	ug/kg	52.4	7.3	1	12/10/20 09:04	12/14/20 19:28	53-70-3	
Fluoranthene	**547**	ug/kg	52.4	6.2	1	12/10/20 09:04	12/14/20 19:28	206-44-0	
Fluorene	**19.1J**	ug/kg	52.4	6.3	1	12/10/20 09:04	12/14/20 19:28	86-73-7	
Indeno(1,2,3-cd)pyrene	**217**	ug/kg	52.4	10.9	1	12/10/20 09:04	12/14/20 19:28	193-39-5	
Naphthalene	**21.1J**	ug/kg	52.4	5.1	1	12/10/20 09:04	12/14/20 19:28	91-20-3	
Phenanthrene	**193**	ug/kg	52.4	6.0	1	12/10/20 09:04	12/14/20 19:28	85-01-8	
Pyrene	**481**	ug/kg	52.4	7.7	1	12/10/20 09:04	12/14/20 19:28	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	51	%	17-100		1	12/10/20 09:04	12/14/20 19:28	321-60-8	
Terphenyl-d14 (S)	53	%	17-98		1	12/10/20 09:04	12/14/20 19:28	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBG008(0.0-0.5) **Lab ID: 40219480014** Collected: 12/04/20 16:20 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**68.1**	%	0.10	0.10	1		12/10/20 12:31		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBC008(0.0-1.25) **Lab ID: 40219480015** Collected: 12/04/20 15:50 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**41.6**	mg/kg	5.6	1.5	1	12/09/20 09:20	12/10/20 09:57		
Surrogates									
o-Terphenyl (S)	64	%	25-101		1	12/09/20 09:20	12/10/20 09:57	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<49.8**	ug/kg	168	49.8	1	12/10/20 12:34	12/15/20 21:07	12674-11-2	
PCB-1221 (Aroclor 1221)	**<49.8**	ug/kg	168	49.8	1	12/10/20 12:34	12/15/20 21:07	11104-28-2	
PCB-1232 (Aroclor 1232)	**<49.8**	ug/kg	168	49.8	1	12/10/20 12:34	12/15/20 21:07	11141-16-5	
PCB-1242 (Aroclor 1242)	**<49.8**	ug/kg	168	49.8	1	12/10/20 12:34	12/15/20 21:07	53469-21-9	
PCB-1248 (Aroclor 1248)	**<49.8**	ug/kg	168	49.8	1	12/10/20 12:34	12/15/20 21:07	12672-29-6	
PCB-1254 (Aroclor 1254)	**205**	ug/kg	168	49.8	1	12/10/20 12:34	12/15/20 21:07	11097-69-1	
PCB-1260 (Aroclor 1260)	**55.8J**	ug/kg	168	49.8	1	12/10/20 12:34	12/15/20 21:07	11096-82-5	
PCB, Total	**261**	ug/kg	168	49.8	1	12/10/20 12:34	12/15/20 21:07	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	80	%	50-150		1	12/10/20 12:34	12/15/20 21:07	877-09-8	
Decachlorobiphenyl (S)	83	%	50-150		1	12/10/20 12:34	12/15/20 21:07	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**70.3**	%	0.10	0.10	1		12/10/20 12:31		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBC008(1.25-2.33) **Lab ID: 40219480016** Collected: 12/04/20 15:50 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**7.1**	mg/kg	2.1	0.56	1	12/16/20 09:09	12/17/20 09:38		
Surrogates									
o-Terphenyl (S)	44	%	25-101		1	12/16/20 09:09	12/17/20 09:38	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<19.0**	ug/kg	64.3	19.0	1	12/10/20 12:34	12/15/20 22:12	12674-11-2	
PCB-1221 (Aroclor 1221)	**<19.0**	ug/kg	64.3	19.0	1	12/10/20 12:34	12/15/20 22:12	11104-28-2	
PCB-1232 (Aroclor 1232)	**<19.0**	ug/kg	64.3	19.0	1	12/10/20 12:34	12/15/20 22:12	11141-16-5	
PCB-1242 (Aroclor 1242)	**<19.0**	ug/kg	64.3	19.0	1	12/10/20 12:34	12/15/20 22:12	53469-21-9	
PCB-1248 (Aroclor 1248)	**<19.0**	ug/kg	64.3	19.0	1	12/10/20 12:34	12/15/20 22:12	12672-29-6	
PCB-1254 (Aroclor 1254)	**23.8J**	ug/kg	64.3	19.0	1	12/10/20 12:34	12/15/20 22:12	11097-69-1	
PCB-1260 (Aroclor 1260)	**<19.0**	ug/kg	64.3	19.0	1	12/10/20 12:34	12/15/20 22:12	11096-82-5	
PCB, Total	**23.8J**	ug/kg	64.3	19.0	1	12/10/20 12:34	12/15/20 22:12	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	86	%	50-150		1	12/10/20 12:34	12/15/20 22:12	877-09-8	
Decachlorobiphenyl (S)	94	%	50-150		1	12/10/20 12:34	12/15/20 22:12	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**22.4**	%	0.10	0.10	1		12/10/20 12:31		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSLBC004(0.0-1.3) **Lab ID: 40219480017** Collected: 12/04/20 10:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**63.2**	mg/kg	6.6	1.7	1	12/16/20 09:09	12/17/20 09:30		
Surrogates									
o-Terphenyl (S)	44	%	25-101		1	12/16/20 09:09	12/17/20 09:30	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<58.2**	ug/kg	197	58.2	1	12/10/20 12:34	12/15/20 22:34	12674-11-2	
PCB-1221 (Aroclor 1221)	**<58.2**	ug/kg	197	58.2	1	12/10/20 12:34	12/15/20 22:34	11104-28-2	
PCB-1232 (Aroclor 1232)	**<58.2**	ug/kg	197	58.2	1	12/10/20 12:34	12/15/20 22:34	11141-16-5	
PCB-1242 (Aroclor 1242)	**<58.2**	ug/kg	197	58.2	1	12/10/20 12:34	12/15/20 22:34	53469-21-9	
PCB-1248 (Aroclor 1248)	**149J**	ug/kg	197	58.2	1	12/10/20 12:34	12/15/20 22:34	12672-29-6	
PCB-1254 (Aroclor 1254)	**622**	ug/kg	197	58.2	1	12/10/20 12:34	12/15/20 22:34	11097-69-1	
PCB-1260 (Aroclor 1260)	**155J**	ug/kg	197	58.2	1	12/10/20 12:34	12/15/20 22:34	11096-82-5	
PCB, Total	**926**	ug/kg	197	58.2	1	12/10/20 12:34	12/15/20 22:34	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	83	%	50-150		1	12/10/20 12:34	12/15/20 22:34	877-09-8	
Decachlorobiphenyl (S)	86	%	50-150		1	12/10/20 12:34	12/15/20 22:34	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**74.6**	%	0.10	0.10	1		12/10/20 12:32		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSLBC004(1.3-2.6) **Lab ID: 40219480018** Collected: 12/04/20 10:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**46.0**	mg/kg	5.7	1.5	1	12/16/20 09:09	12/17/20 09:46		
Surrogates									
o-Terphenyl (S)	38	%	25-101		1	12/16/20 09:09	12/17/20 09:46	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<50.2**	ug/kg	170	50.2	1	12/10/20 12:34	12/15/20 23:39	12674-11-2	
PCB-1221 (Aroclor 1221)	**<50.2**	ug/kg	170	50.2	1	12/10/20 12:34	12/15/20 23:39	11104-28-2	
PCB-1232 (Aroclor 1232)	**<50.2**	ug/kg	170	50.2	1	12/10/20 12:34	12/15/20 23:39	11141-16-5	
PCB-1242 (Aroclor 1242)	**<50.2**	ug/kg	170	50.2	1	12/10/20 12:34	12/15/20 23:39	53469-21-9	
PCB-1248 (Aroclor 1248)	**131J**	ug/kg	170	50.2	1	12/10/20 12:34	12/15/20 23:39	12672-29-6	
PCB-1254 (Aroclor 1254)	**523**	ug/kg	170	50.2	1	12/10/20 12:34	12/15/20 23:39	11097-69-1	
PCB-1260 (Aroclor 1260)	**138J**	ug/kg	170	50.2	1	12/10/20 12:34	12/15/20 23:39	11096-82-5	
PCB, Total	**792**	ug/kg	170	50.2	1	12/10/20 12:34	12/15/20 23:39	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	84	%	50-150		1	12/10/20 12:34	12/15/20 23:39	877-09-8	
Decachlorobiphenyl (S)	86	%	50-150		1	12/10/20 12:34	12/15/20 23:39	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**70.6**	%	0.10	0.10	1		12/10/20 12:32		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSLBC004(2.6-3.75) **Lab ID: 40219480019** Collected: 12/04/20 10:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**3.3**	mg/kg	2.0	0.52	1	12/16/20 09:09	12/17/20 09:54		B
Surrogates									
o-Terphenyl (S)	60	%	25-101		1	12/16/20 09:09	12/17/20 09:54	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<17.5**	ug/kg	59.2	17.5	1	12/10/20 12:34	12/16/20 00:01	12674-11-2	
PCB-1221 (Aroclor 1221)	**<17.5**	ug/kg	59.2	17.5	1	12/10/20 12:34	12/16/20 00:01	11104-28-2	
PCB-1232 (Aroclor 1232)	**<17.5**	ug/kg	59.2	17.5	1	12/10/20 12:34	12/16/20 00:01	11141-16-5	
PCB-1242 (Aroclor 1242)	**<17.5**	ug/kg	59.2	17.5	1	12/10/20 12:34	12/16/20 00:01	53469-21-9	
PCB-1248 (Aroclor 1248)	**<17.5**	ug/kg	59.2	17.5	1	12/10/20 12:34	12/16/20 00:01	12672-29-6	
PCB-1254 (Aroclor 1254)	**<17.5**	ug/kg	59.2	17.5	1	12/10/20 12:34	12/16/20 00:01	11097-69-1	
PCB-1260 (Aroclor 1260)	**<17.5**	ug/kg	59.2	17.5	1	12/10/20 12:34	12/16/20 00:01	11096-82-5	
PCB, Total	**<17.5**	ug/kg	59.2	17.5	1	12/10/20 12:34	12/16/20 00:01	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	88	%	50-150		1	12/10/20 12:34	12/16/20 00:01	877-09-8	
Decachlorobiphenyl (S)	96	%	50-150		1	12/10/20 12:34	12/16/20 00:01	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**15.4**	%	0.10	0.10	1		12/10/20 12:32		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSLBC004(3.75-4.9) **Lab ID: 40219480020** Collected: 12/04/20 10:00 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**5.1**	mg/kg	2.0	0.52	1	12/16/20 09:09	12/17/20 10:02		B
Surrogates									
o-Terphenyl (S)	72	%	25-101		1	12/16/20 09:09	12/17/20 10:02	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<17.5**	ug/kg	59.3	17.5	1	12/10/20 12:34	12/16/20 00:22	12674-11-2	
PCB-1221 (Aroclor 1221)	**<17.5**	ug/kg	59.3	17.5	1	12/10/20 12:34	12/16/20 00:22	11104-28-2	
PCB-1232 (Aroclor 1232)	**<17.5**	ug/kg	59.3	17.5	1	12/10/20 12:34	12/16/20 00:22	11141-16-5	
PCB-1242 (Aroclor 1242)	**<17.5**	ug/kg	59.3	17.5	1	12/10/20 12:34	12/16/20 00:22	53469-21-9	
PCB-1248 (Aroclor 1248)	**<17.5**	ug/kg	59.3	17.5	1	12/10/20 12:34	12/16/20 00:22	12672-29-6	
PCB-1254 (Aroclor 1254)	**<17.5**	ug/kg	59.3	17.5	1	12/10/20 12:34	12/16/20 00:22	11097-69-1	
PCB-1260 (Aroclor 1260)	**<17.5**	ug/kg	59.3	17.5	1	12/10/20 12:34	12/16/20 00:22	11096-82-5	
PCB, Total	**<17.5**	ug/kg	59.3	17.5	1	12/10/20 12:34	12/16/20 00:22	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	87	%	50-150		1	12/10/20 12:34	12/16/20 00:22	877-09-8	
Decachlorobiphenyl (S)	94	%	50-150		1	12/10/20 12:34	12/16/20 00:22	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**15.5**	%	0.10	0.10	1		12/10/20 12:32		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSLBG009(0.0-0.5) **Lab ID: 40219480021** Collected: 12/05/20 14:50 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**40.8**	mg/kg	5.5	1.4	1	12/16/20 09:09	12/17/20 10:10		
Surrogates									
o-Terphenyl (S)	56	%	25-101		1	12/16/20 09:09	12/17/20 10:10	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<48.3**	ug/kg	163	48.3	1	12/10/20 12:34	12/16/20 00:44	12674-11-2	
PCB-1221 (Aroclor 1221)	**<48.3**	ug/kg	163	48.3	1	12/10/20 12:34	12/16/20 00:44	11104-28-2	
PCB-1232 (Aroclor 1232)	**<48.3**	ug/kg	163	48.3	1	12/10/20 12:34	12/16/20 00:44	11141-16-5	
PCB-1242 (Aroclor 1242)	**<48.3**	ug/kg	163	48.3	1	12/10/20 12:34	12/16/20 00:44	53469-21-9	
PCB-1248 (Aroclor 1248)	**78.7J**	ug/kg	163	48.3	1	12/10/20 12:34	12/16/20 00:44	12672-29-6	
PCB-1254 (Aroclor 1254)	**330**	ug/kg	163	48.3	1	12/10/20 12:34	12/16/20 00:44	11097-69-1	
PCB-1260 (Aroclor 1260)	**92.1J**	ug/kg	163	48.3	1	12/10/20 12:34	12/16/20 00:44	11096-82-5	
PCB, Total	**501**	ug/kg	163	48.3	1	12/10/20 12:34	12/16/20 00:44	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	85	%	50-150		1	12/10/20 12:34	12/16/20 00:44	877-09-8	
Decachlorobiphenyl (S)	87	%	50-150		1	12/10/20 12:34	12/16/20 00:44	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<8.0**	ug/kg	54.7	8.0	1	12/10/20 09:04	12/14/20 18:54	90-12-0	
2-Methylnaphthalene	**<8.0**	ug/kg	54.7	8.0	1	12/10/20 09:04	12/14/20 18:54	91-57-6	
Acenaphthene	**<7.1**	ug/kg	54.7	7.1	1	12/10/20 09:04	12/14/20 18:54	83-32-9	
Acenaphthylene	**20.2J**	ug/kg	54.7	6.9	1	12/10/20 09:04	12/14/20 18:54	208-96-8	
Anthracene	**29.7J**	ug/kg	54.7	6.8	1	12/10/20 09:04	12/14/20 18:54	120-12-7	
Benzo(a)anthracene	**124**	ug/kg	54.7	7.1	1	12/10/20 09:04	12/14/20 18:54	56-55-3	
Benzo(a)pyrene	**166**	ug/kg	54.7	6.2	1	12/10/20 09:04	12/14/20 18:54	50-32-8	
Benzo(b)fluoranthene	**213**	ug/kg	54.7	7.6	1	12/10/20 09:04	12/14/20 18:54	205-99-2	
Benzo(g,h,i)perylene	**124**	ug/kg	54.7	9.6	1	12/10/20 09:04	12/14/20 18:54	191-24-2	
Benzo(k)fluoranthene	**81.4**	ug/kg	54.7	7.0	1	12/10/20 09:04	12/14/20 18:54	207-08-9	
Chrysene	**167**	ug/kg	54.7	10.3	1	12/10/20 09:04	12/14/20 18:54	218-01-9	
Dibenz(a,h)anthracene	**29.9J**	ug/kg	54.7	7.6	1	12/10/20 09:04	12/14/20 18:54	53-70-3	
Fluoranthene	**263**	ug/kg	54.7	6.5	1	12/10/20 09:04	12/14/20 18:54	206-44-0	
Fluorene	**6.9J**	ug/kg	54.7	6.6	1	12/10/20 09:04	12/14/20 18:54	86-73-7	
Indeno(1,2,3-cd)pyrene	**99.6**	ug/kg	54.7	11.4	1	12/10/20 09:04	12/14/20 18:54	193-39-5	
Naphthalene	**9.9J**	ug/kg	54.7	5.3	1	12/10/20 09:04	12/14/20 18:54	91-20-3	
Phenanthrene	**69.7**	ug/kg	54.7	6.3	1	12/10/20 09:04	12/14/20 18:54	85-01-8	
Pyrene	**211**	ug/kg	54.7	8.0	1	12/10/20 09:04	12/14/20 18:54	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	41	%	17-100		1	12/10/20 09:04	12/14/20 18:54	321-60-8	
Terphenyl-d14 (S)	42	%	17-98		1	12/10/20 09:04	12/14/20 18:54	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSLBG009(0.0-0.5) **Lab ID: 40219480021** Collected: 12/05/20 14:50 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**69.5**	%	0.10	0.10	1		12/10/20 12:32		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBG010(0.0-0.5) **Lab ID: 40219480022** Collected: 12/05/20 12:50 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**80.0**	mg/kg	7.9	2.1	1	12/16/20 09:09	12/17/20 10:18		
Surrogates									
o-Terphenyl (S)	47	%	25-101		1	12/16/20 09:09	12/17/20 10:18	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<70.1**	ug/kg	237	70.1	1	12/10/20 12:34	12/16/20 01:06	12674-11-2	
PCB-1221 (Aroclor 1221)	**<70.1**	ug/kg	237	70.1	1	12/10/20 12:34	12/16/20 01:06	11104-28-2	
PCB-1232 (Aroclor 1232)	**<70.1**	ug/kg	237	70.1	1	12/10/20 12:34	12/16/20 01:06	11141-16-5	
PCB-1242 (Aroclor 1242)	**<70.1**	ug/kg	237	70.1	1	12/10/20 12:34	12/16/20 01:06	53469-21-9	
PCB-1248 (Aroclor 1248)	**125J**	ug/kg	237	70.1	1	12/10/20 12:34	12/16/20 01:06	12672-29-6	
PCB-1254 (Aroclor 1254)	**546**	ug/kg	237	70.1	1	12/10/20 12:34	12/16/20 01:06	11097-69-1	
PCB-1260 (Aroclor 1260)	**129J**	ug/kg	237	70.1	1	12/10/20 12:34	12/16/20 01:06	11096-82-5	
PCB, Total	**800**	ug/kg	237	70.1	1	12/10/20 12:34	12/16/20 01:06	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	82	%	50-150		1	12/10/20 12:34	12/16/20 01:06	877-09-8	
Decachlorobiphenyl (S)	84	%	50-150		1	12/10/20 12:34	12/16/20 01:06	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<11.5**	ug/kg	79.1	11.5	1	12/10/20 09:04	12/14/20 18:03	90-12-0	
2-Methylnaphthalene	**<11.6**	ug/kg	79.1	11.6	1	12/10/20 09:04	12/14/20 18:03	91-57-6	
Acenaphthene	**<10.3**	ug/kg	79.1	10.3	1	12/10/20 09:04	12/14/20 18:03	83-32-9	
Acenaphthylene	**23.7J**	ug/kg	79.1	10	1	12/10/20 09:04	12/14/20 18:03	208-96-8	
Anthracene	**21.9J**	ug/kg	79.1	9.8	1	12/10/20 09:04	12/14/20 18:03	120-12-7	
Benzo(a)anthracene	**121**	ug/kg	79.1	10.2	1	12/10/20 09:04	12/14/20 18:03	56-55-3	
Benzo(a)pyrene	**164**	ug/kg	79.1	9.0	1	12/10/20 09:04	12/14/20 18:03	50-32-8	
Benzo(b)fluoranthene	**195**	ug/kg	79.1	11.0	1	12/10/20 09:04	12/14/20 18:03	205-99-2	
Benzo(g,h,i)perylene	**119**	ug/kg	79.1	13.9	1	12/10/20 09:04	12/14/20 18:03	191-24-2	
Benzo(k)fluoranthene	**77.1J**	ug/kg	79.1	10.1	1	12/10/20 09:04	12/14/20 18:03	207-08-9	
Chrysene	**154**	ug/kg	79.1	14.9	1	12/10/20 09:04	12/14/20 18:03	218-01-9	
Dibenz(a,h)anthracene	**25.7J**	ug/kg	79.1	10.9	1	12/10/20 09:04	12/14/20 18:03	53-70-3	
Fluoranthene	**231**	ug/kg	79.1	9.4	1	12/10/20 09:04	12/14/20 18:03	206-44-0	
Fluorene	**<9.5**	ug/kg	79.1	9.5	1	12/10/20 09:04	12/14/20 18:03	86-73-7	
Indeno(1,2,3-cd)pyrene	**95.7**	ug/kg	79.1	16.5	1	12/10/20 09:04	12/14/20 18:03	193-39-5	
Naphthalene	**13.6J**	ug/kg	79.1	7.7	1	12/10/20 09:04	12/14/20 18:03	91-20-3	
Phenanthrene	**66.0J**	ug/kg	79.1	9.1	1	12/10/20 09:04	12/14/20 18:03	85-01-8	
Pyrene	**184**	ug/kg	79.1	11.6	1	12/10/20 09:04	12/14/20 18:03	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	60	%	17-100		1	12/10/20 09:04	12/14/20 18:03	321-60-8	
Terphenyl-d14 (S)	56	%	17-98		1	12/10/20 09:04	12/14/20 18:03	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBG010(0.0-0.5) **Lab ID: 40219480022** Collected: 12/05/20 12:50 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**78.9**	%	0.10	0.10	1		12/10/20 12:32		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBG011(0.0-0.5) **Lab ID: 40219480023** Collected: 12/05/20 10:50 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**37.1**	mg/kg	6.0	1.6	1	12/16/20 09:09	12/17/20 10:26		
Surrogates									
o-Terphenyl (S)	29	%	25-101		1	12/16/20 09:09	12/17/20 10:26	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<52.9**	ug/kg	179	52.9	1	12/10/20 12:34	12/16/20 01:28	12674-11-2	
PCB-1221 (Aroclor 1221)	**<52.9**	ug/kg	179	52.9	1	12/10/20 12:34	12/16/20 01:28	11104-28-2	
PCB-1232 (Aroclor 1232)	**<52.9**	ug/kg	179	52.9	1	12/10/20 12:34	12/16/20 01:28	11141-16-5	
PCB-1242 (Aroclor 1242)	**<52.9**	ug/kg	179	52.9	1	12/10/20 12:34	12/16/20 01:28	53469-21-9	
PCB-1248 (Aroclor 1248)	**124J**	ug/kg	179	52.9	1	12/10/20 12:34	12/16/20 01:28	12672-29-6	
PCB-1254 (Aroclor 1254)	**536**	ug/kg	179	52.9	1	12/10/20 12:34	12/16/20 01:28	11097-69-1	
PCB-1260 (Aroclor 1260)	**135J**	ug/kg	179	52.9	1	12/10/20 12:34	12/16/20 01:28	11096-82-5	
PCB, Total	**795**	ug/kg	179	52.9	1	12/10/20 12:34	12/16/20 01:28	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	82	%	50-150		1	12/10/20 12:34	12/16/20 01:28	877-09-8	
Decachlorobiphenyl (S)	84	%	50-150		1	12/10/20 12:34	12/16/20 01:28	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<8.7**	ug/kg	59.8	8.7	1	12/10/20 09:04	12/14/20 19:11	90-12-0	
2-Methylnaphthalene	**<8.7**	ug/kg	59.8	8.7	1	12/10/20 09:04	12/14/20 19:11	91-57-6	
Acenaphthene	**<7.8**	ug/kg	59.8	7.8	1	12/10/20 09:04	12/14/20 19:11	83-32-9	
Acenaphthylene	**28.3J**	ug/kg	59.8	7.5	1	12/10/20 09:04	12/14/20 19:11	208-96-8	
Anthracene	**28.3J**	ug/kg	59.8	7.4	1	12/10/20 09:04	12/14/20 19:11	120-12-7	
Benzo(a)anthracene	**151**	ug/kg	59.8	7.7	1	12/10/20 09:04	12/14/20 19:11	56-55-3	
Benzo(a)pyrene	**195**	ug/kg	59.8	6.8	1	12/10/20 09:04	12/14/20 19:11	50-32-8	
Benzo(b)fluoranthene	**222**	ug/kg	59.8	8.3	1	12/10/20 09:04	12/14/20 19:11	205-99-2	
Benzo(g,h,i)perylene	**130**	ug/kg	59.8	10.5	1	12/10/20 09:04	12/14/20 19:11	191-24-2	
Benzo(k)fluoranthene	**102**	ug/kg	59.8	7.6	1	12/10/20 09:04	12/14/20 19:11	207-08-9	
Chrysene	**184**	ug/kg	59.8	11.3	1	12/10/20 09:04	12/14/20 19:11	218-01-9	
Dibenz(a,h)anthracene	**33.7J**	ug/kg	59.8	8.3	1	12/10/20 09:04	12/14/20 19:11	53-70-3	
Fluoranthene	**256**	ug/kg	59.8	7.1	1	12/10/20 09:04	12/14/20 19:11	206-44-0	
Fluorene	**<7.2**	ug/kg	59.8	7.2	1	12/10/20 09:04	12/14/20 19:11	86-73-7	
Indeno(1,2,3-cd)pyrene	**107**	ug/kg	59.8	12.5	1	12/10/20 09:04	12/14/20 19:11	193-39-5	
Naphthalene	**14.7J**	ug/kg	59.8	5.8	1	12/10/20 09:04	12/14/20 19:11	91-20-3	
Phenanthrene	**65.1**	ug/kg	59.8	6.8	1	12/10/20 09:04	12/14/20 19:11	85-01-8	
Pyrene	**206**	ug/kg	59.8	8.8	1	12/10/20 09:04	12/14/20 19:11	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	50	%	17-100		1	12/10/20 09:04	12/14/20 19:11	321-60-8	
Terphenyl-d14 (S)	55	%	17-98		1	12/10/20 09:04	12/14/20 19:11	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBG011(0.0-0.5) **Lab ID: 40219480023** Collected: 12/05/20 10:50 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**72.1**	%	0.10	0.10	1		12/10/20 12:33		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBC011(0-1.2) **Lab ID: 40219480024** Collected: 12/05/20 11:10 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**43.6**	mg/kg	6.0	1.6	1	12/16/20 09:09	12/17/20 10:35		
Surrogates									
o-Terphenyl (S)	31	%	25-101		1	12/16/20 09:09	12/17/20 10:35	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<52.7**	ug/kg	178	52.7	1	12/10/20 12:34	12/16/20 02:33	12674-11-2	
PCB-1221 (Aroclor 1221)	**<52.7**	ug/kg	178	52.7	1	12/10/20 12:34	12/16/20 02:33	11104-28-2	
PCB-1232 (Aroclor 1232)	**<52.7**	ug/kg	178	52.7	1	12/10/20 12:34	12/16/20 02:33	11141-16-5	
PCB-1242 (Aroclor 1242)	**<52.7**	ug/kg	178	52.7	1	12/10/20 12:34	12/16/20 02:33	53469-21-9	
PCB-1248 (Aroclor 1248)	**103J**	ug/kg	178	52.7	1	12/10/20 12:34	12/16/20 02:33	12672-29-6	
PCB-1254 (Aroclor 1254)	**427**	ug/kg	178	52.7	1	12/10/20 12:34	12/16/20 02:33	11097-69-1	
PCB-1260 (Aroclor 1260)	**106J**	ug/kg	178	52.7	1	12/10/20 12:34	12/16/20 02:33	11096-82-5	
PCB, Total	**635**	ug/kg	178	52.7	1	12/10/20 12:34	12/16/20 02:33	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	82	%	50-150		1	12/10/20 12:34	12/16/20 02:33	877-09-8	
Decachlorobiphenyl (S)	83	%	50-150		1	12/10/20 12:34	12/16/20 02:33	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**72.0**	%	0.10	0.10	1		12/10/20 12:33		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBC011(1.2-2.4) **Lab ID: 40219480025** Collected: 12/05/20 11:10 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**59.0**	mg/kg	5.6	1.5	1	12/16/20 09:09	12/17/20 10:43		
Surrogates									
o-Terphenyl (S)	48	%	25-101		1	12/16/20 09:09	12/17/20 10:43	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<49.2**	ug/kg	166	49.2	1	12/10/20 12:34	12/16/20 02:55	12674-11-2	
PCB-1221 (Aroclor 1221)	**<49.2**	ug/kg	166	49.2	1	12/10/20 12:34	12/16/20 02:55	11104-28-2	
PCB-1232 (Aroclor 1232)	**<49.2**	ug/kg	166	49.2	1	12/10/20 12:34	12/16/20 02:55	11141-16-5	
PCB-1242 (Aroclor 1242)	**<49.2**	ug/kg	166	49.2	1	12/10/20 12:34	12/16/20 02:55	53469-21-9	
PCB-1248 (Aroclor 1248)	**78.4J**	ug/kg	166	49.2	1	12/10/20 12:34	12/16/20 02:55	12672-29-6	
PCB-1254 (Aroclor 1254)	**290**	ug/kg	166	49.2	1	12/10/20 12:34	12/16/20 02:55	11097-69-1	
PCB-1260 (Aroclor 1260)	**68.9J**	ug/kg	166	49.2	1	12/10/20 12:34	12/16/20 02:55	11096-82-5	
PCB, Total	**437**	ug/kg	166	49.2	1	12/10/20 12:34	12/16/20 02:55	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	83	%	50-150		1	12/10/20 12:34	12/16/20 02:55	877-09-8	
Decachlorobiphenyl (S)	83	%	50-150		1	12/10/20 12:34	12/16/20 02:55	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**70.0**	%	0.10	0.10	1		12/10/20 12:33		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Sample: DSRBC011(2.4-4.0) **Lab ID: 40219480026** Collected: 12/05/20 11:10 Received: 12/08/20 10:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**5.4**	mg/kg	2.0	0.51	1	12/16/20 09:09	12/17/20 10:51		B
Surrogates									
o-Terphenyl (S)	59	%	25-101		1	12/16/20 09:09	12/17/20 10:51	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<17.3**	ug/kg	58.6	17.3	1	12/10/20 12:34	12/16/20 03:16	12674-11-2	
PCB-1221 (Aroclor 1221)	**<17.3**	ug/kg	58.6	17.3	1	12/10/20 12:34	12/16/20 03:16	11104-28-2	
PCB-1232 (Aroclor 1232)	**<17.3**	ug/kg	58.6	17.3	1	12/10/20 12:34	12/16/20 03:16	11141-16-5	
PCB-1242 (Aroclor 1242)	**<17.3**	ug/kg	58.6	17.3	1	12/10/20 12:34	12/16/20 03:16	53469-21-9	
PCB-1248 (Aroclor 1248)	**<17.3**	ug/kg	58.6	17.3	1	12/10/20 12:34	12/16/20 03:16	12672-29-6	
PCB-1254 (Aroclor 1254)	**<17.3**	ug/kg	58.6	17.3	1	12/10/20 12:34	12/16/20 03:16	11097-69-1	
PCB-1260 (Aroclor 1260)	**<17.3**	ug/kg	58.6	17.3	1	12/10/20 12:34	12/16/20 03:16	11096-82-5	
PCB, Total	**<17.3**	ug/kg	58.6	17.3	1	12/10/20 12:34	12/16/20 03:16	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	87	%	50-150		1	12/10/20 12:34	12/16/20 03:16	877-09-8	
Decachlorobiphenyl (S)	93	%	50-150		1	12/10/20 12:34	12/16/20 03:16	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**14.7**	%	0.10	0.10	1		12/10/20 12:33		

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

QC Batch: 373780 | Analysis Method: EPA 7471
QC Batch Method: EPA 7471 | Analysis Description: 7471 Mercury
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219480001, 40219480002, 40219480003, 40219480004, 40219480005, 40219480008, 40219480009, 40219480010, 40219480011

METHOD BLANK: 2160195 | Matrix: Solid
Associated Lab Samples: 40219480001, 40219480002, 40219480003, 40219480004, 40219480005, 40219480008, 40219480009, 40219480010, 40219480011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	<0.010	0.035	0.010	12/16/20 08:53	

LABORATORY CONTROL SAMPLE: 2160196

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.83	0.90	108	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2160197 2160198

Parameter	Units	40219480004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.56	3.2	3.2	3.8	3.7	100	96	85-115	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2160199 2160200

Parameter	Units	40219480011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.35	2.4	2.4	2.6	2.6	96	95	85-115	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

QC Batch: 373305 | Analysis Method: EPA 6010
QC Batch Method: EPA 3050 | Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40219480001, 40219480002, 40219480003, 40219480004, 40219480005, 40219480008, 40219480009, 40219480010, 40219480011

METHOD BLANK: 2157454 | Matrix: Solid

Associated Lab Samples: 40219480001, 40219480002, 40219480003, 40219480004, 40219480005, 40219480008, 40219480009, 40219480010, 40219480011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	<1.5	2.5	1.5	12/09/20 21:11	
Barium	mg/kg	<0.15	0.50	0.15	12/09/20 21:11	
Cadmium	mg/kg	<0.13	0.50	0.13	12/09/20 21:11	
Chromium	mg/kg	<0.28	1.0	0.28	12/09/20 21:11	
Copper	mg/kg	<0.28	1.0	0.28	12/09/20 21:11	
Lead	mg/kg	<0.60	2.0	0.60	12/09/20 21:11	
Selenium	mg/kg	<1.3	4.0	1.3	12/09/20 21:11	
Silver	mg/kg	<0.31	1.0	0.31	12/09/20 21:11	
Zinc	mg/kg	<1.2	4.0	1.2	12/09/20 21:11	

LABORATORY CONTROL SAMPLE: 2157455

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	53.2	106	80-120	
Barium	mg/kg	50	51.0	102	80-120	
Cadmium	mg/kg	50	52.7	105	80-120	
Chromium	mg/kg	50	51.2	102	80-120	
Copper	mg/kg	50	51.8	104	80-120	
Lead	mg/kg	50	53.1	106	80-120	
Selenium	mg/kg	50	53.5	107	80-120	
Silver	mg/kg	25	25.7	103	80-120	
Zinc	mg/kg	50	54.9	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2157456 2157457

Parameter	Units	40219480004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	19.3	193	194	216	213	101	100	75-125	1	20	
Barium	mg/kg	278	193	194	488	476	109	102	75-125	3	20	
Cadmium	mg/kg	3.6	193	194	199	199	101	101	75-125	0	20	
Chromium	mg/kg	388	193	194	593	570	106	94	75-125	4	20	
Copper	mg/kg	127	193	194	325	325	102	102	75-125	0	20	
Lead	mg/kg	179	193	194	377	371	102	99	75-125	2	20	
Selenium	mg/kg	<5.1	193	194	183	184	95	95	75-125	1	20	
Silver	mg/kg	3.6J	96.6	97	101	101	101	101	75-125	0	20	
Zinc	mg/kg	625	193	194	829	804	106	92	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2157458 2157459

Parameter	Units	40219480011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	19.1	142	143	166	165	104	102	75-125	1	20	
Barium	mg/kg	251	142	143	390	381	98	91	75-125	2	20	
Cadmium	mg/kg	2.2	142	143	146	146	101	101	75-125	0	20	
Chromium	mg/kg	140	142	143	291	290	106	105	75-125	1	20	
Copper	mg/kg	56.4	142	143	209	210	107	108	75-125	1	20	
Lead	mg/kg	70.0	142	143	217	217	104	103	75-125	0	20	
Selenium	mg/kg	<3.7	142	143	150	142	105	99	75-125	5	20	
Silver	mg/kg	<0.87	71	71.6	73.9	73.9	103	103	75-125	0	20	
Zinc	mg/kg	302	142	143	464	459	114	110	75-125	1	20	

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

QC Batch: 373317
QC Batch Method: EPA 3546
Analysis Method: EPA 8015D Modified
Analysis Description: 8015 Solid GCSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219480001, 40219480002, 40219480003, 40219480005, 40219480006, 40219480007, 40219480008, 40219480009, 40219480010, 40219480012, 40219480013, 40219480014, 40219480015

METHOD BLANK: 2157488
Matrix: Solid
Associated Lab Samples: 40219480001, 40219480002, 40219480003, 40219480005, 40219480006, 40219480007, 40219480008, 40219480009, 40219480010, 40219480012, 40219480013, 40219480014, 40219480015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH - Diesel (C10-C28)	mg/kg	0.66J	1.7	0.44	12/10/20 06:52	
o-Terphenyl (S)	%	71	25-101		12/10/20 06:52	

LABORATORY CONTROL SAMPLE: 2157489

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH - Diesel (C10-C28)	mg/kg	16.7	15.1	91	60-120	
o-Terphenyl (S)	%			91	25-101	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2157490 2157491

Parameter	Units	40219343008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH - Diesel (C10-C28)	mg/kg	31.6	60.3	60.3	49.9	54.2	30	38	10-200	8	46	
o-Terphenyl (S)	%						44	59	25-101			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

QC Batch: 373892
QC Batch Method: EPA 3546
Analysis Method: EPA 8015D Modified
Analysis Description: 8015 Solid GCSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219480004, 40219480011, 40219480016, 40219480017, 40219480018, 40219480019, 40219480020, 40219480021, 40219480022, 40219480023, 40219480024, 40219480025, 40219480026

METHOD BLANK: 2160823
Matrix: Solid
Associated Lab Samples: 40219480004, 40219480011, 40219480016, 40219480017, 40219480018, 40219480019, 40219480020, 40219480021, 40219480022, 40219480023, 40219480024, 40219480025, 40219480026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH - Diesel (C10-C28)	mg/kg	0.51J	1.7	0.44	12/17/20 08:09	
o-Terphenyl (S)	%	65	25-101		12/17/20 08:09	

LABORATORY CONTROL SAMPLE: 2160824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH - Diesel (C10-C28)	mg/kg	16.6	13.0	78	60-120	
o-Terphenyl (S)	%			80	25-101	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2160825 2160826

Parameter	Units	40219480004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH - Diesel (C10-C28)	mg/kg	85.0	65.1	65.1	106	81.7	33	-5	10-200	26	46	M0
o-Terphenyl (S)	%						71	59	25-101			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2160827 2160828

Parameter	Units	40219480011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH - Diesel (C10-C28)	mg/kg	12.4	47.8	47.8	57.2	53.9	94	87	10-200	6	46	
o-Terphenyl (S)	%						76	76	25-101			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2160829 2160830

Parameter	Units	40219480017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH - Diesel (C10-C28)	mg/kg	63.2	65.7	65.3	88.0	80.5	38	27	10-200	9	46	
o-Terphenyl (S)	%						57	49	25-101			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

QC Batch: 373369
QC Batch Method: EPA 3541
Analysis Method: EPA 8082A
Analysis Description: 8082A KZOO PCB
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219480001, 40219480002, 40219480003, 40219480004, 40219480005, 40219480006, 40219480007, 40219480008, 40219480009

METHOD BLANK: 2157787 Matrix: Solid
Associated Lab Samples: 40219480001, 40219480002, 40219480003, 40219480004, 40219480005, 40219480006, 40219480007, 40219480008, 40219480009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1221 (Aroclor 1221)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1232 (Aroclor 1232)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1242 (Aroclor 1242)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1248 (Aroclor 1248)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1254 (Aroclor 1254)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1260 (Aroclor 1260)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
Decachlorobiphenyl (S)	%	92	50-150		12/10/20 11:02	
Tetrachloro-m-xylene (S)	%	88	50-150		12/10/20 11:02	

LABORATORY CONTROL SAMPLE: 2157788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	500	415	83	50-150	
PCB-1221 (Aroclor 1221)	ug/kg		<14.8			
PCB-1232 (Aroclor 1232)	ug/kg		<14.8			
PCB-1242 (Aroclor 1242)	ug/kg		<14.8			
PCB-1248 (Aroclor 1248)	ug/kg		<14.8			
PCB-1254 (Aroclor 1254)	ug/kg		<14.8			
PCB-1260 (Aroclor 1260)	ug/kg	500	463	93	50-150	
Decachlorobiphenyl (S)	%			94	50-150	
Tetrachloro-m-xylene (S)	%			89	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2157789 2157790

Parameter	Units	40219343008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<53.5	1800	1810	1440	1410	80	78	50-150	2	20	
PCB-1221 (Aroclor 1221)	ug/kg	<53.5			<53.3	<53.3					20	
PCB-1232 (Aroclor 1232)	ug/kg	<53.5			<53.3	<53.3					20	
PCB-1242 (Aroclor 1242)	ug/kg	<53.5			<53.3	<53.3					20	
PCB-1248 (Aroclor 1248)	ug/kg	<53.5			<53.3	<53.3					20	
PCB-1254 (Aroclor 1254)	ug/kg	193			<53.3	<53.3					20	
PCB-1260 (Aroclor 1260)	ug/kg	<53.5	1800	1810	1490	1480	83	82	50-150	1	20	
Decachlorobiphenyl (S)	%						80	80	50-150			
Tetrachloro-m-xylene (S)	%						89	89	50-150			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2157791 2157792

Parameter	Units	40219480004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<57.6	1940	1950	1420	1500	73	77	50-150	6	20	
PCB-1221 (Aroclor 1221)	ug/kg	<57.6			<57.5	<57.6					20	
PCB-1232 (Aroclor 1232)	ug/kg	<57.6			<57.5	<57.6					20	
PCB-1242 (Aroclor 1242)	ug/kg	<57.6			<57.5	<57.6					20	
PCB-1248 (Aroclor 1248)	ug/kg	104J			<57.5	<57.6					20	
PCB-1254 (Aroclor 1254)	ug/kg	397			466	495				6	20	
PCB-1260 (Aroclor 1260)	ug/kg	95.7J	1940	1950	1550	1650	75	80	50-150	6	20	
Decachlorobiphenyl (S)	%						78	83	50-150			
Tetrachloro-m-xylene (S)	%						86	91	50-150			

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

QC Batch: 373474
QC Batch Method: EPA 3541
Analysis Method: EPA 8082A
Analysis Description: 8082A KZOO PCB
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40219480010, 40219480011, 40219480012, 40219480013, 40219480014, 40219480015, 40219480016, 40219480017, 40219480018, 40219480019, 40219480020, 40219480021, 40219480022, 40219480023, 40219480024, 40219480025, 40219480026

METHOD BLANK: 2158378
Matrix: Solid

Associated Lab Samples: 40219480010, 40219480011, 40219480012, 40219480013, 40219480014, 40219480015, 40219480016, 40219480017, 40219480018, 40219480019, 40219480020, 40219480021, 40219480022, 40219480023, 40219480024, 40219480025, 40219480026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<14.8	50.0	14.8	12/15/20 17:51	
PCB-1221 (Aroclor 1221)	ug/kg	<14.8	50.0	14.8	12/15/20 17:51	
PCB-1232 (Aroclor 1232)	ug/kg	<14.8	50.0	14.8	12/15/20 17:51	
PCB-1242 (Aroclor 1242)	ug/kg	<14.8	50.0	14.8	12/15/20 17:51	
PCB-1248 (Aroclor 1248)	ug/kg	<14.8	50.0	14.8	12/15/20 17:51	
PCB-1254 (Aroclor 1254)	ug/kg	<14.8	50.0	14.8	12/15/20 17:51	
PCB-1260 (Aroclor 1260)	ug/kg	<14.8	50.0	14.8	12/15/20 17:51	
Decachlorobiphenyl (S)	%	95	50-150		12/15/20 17:51	
Tetrachloro-m-xylene (S)	%	84	50-150		12/15/20 17:51	

LABORATORY CONTROL SAMPLE: 2158379

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	500	426	85	50-150	
PCB-1221 (Aroclor 1221)	ug/kg		<14.8			
PCB-1232 (Aroclor 1232)	ug/kg		<14.8			
PCB-1242 (Aroclor 1242)	ug/kg		<14.8			
PCB-1248 (Aroclor 1248)	ug/kg		<14.8			
PCB-1254 (Aroclor 1254)	ug/kg		<14.8			
PCB-1260 (Aroclor 1260)	ug/kg	500	466	93	50-150	
Decachlorobiphenyl (S)	%			98	50-150	
Tetrachloro-m-xylene (S)	%			87	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2158380 2158381

Parameter	Units	40219480011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<42.2	1430	1430	1190	1160	83	81	50-150	3	20	
PCB-1221 (Aroclor 1221)	ug/kg	<42.2			<42.2	<42.2					20	
PCB-1232 (Aroclor 1232)	ug/kg	<42.2			<42.2	<42.2					20	
PCB-1242 (Aroclor 1242)	ug/kg	<42.2			<42.2	<42.2					20	
PCB-1248 (Aroclor 1248)	ug/kg	128J			<42.2	<42.2					20	
PCB-1254 (Aroclor 1254)	ug/kg	448			595	580				3	20	
PCB-1260 (Aroclor 1260)	ug/kg	112J	1430	1430	1270	1240	81	79	50-150	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2158380 2158381

Parameter	Units	40219480011 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Decachlorobiphenyl (S)	%						88	85	50-150			
Tetrachloro-m-xylene (S)	%						84	83	50-150			

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2158382 2158383

Parameter	Units	40219480017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<58.2	1970	1960	1700	1610	87	82	50-150	5	20	
PCB-1221 (Aroclor 1221)	ug/kg	<58.2			<116	<58.0					20	
PCB-1232 (Aroclor 1232)	ug/kg	<58.2			<116	<58.0					20	
PCB-1242 (Aroclor 1242)	ug/kg	<58.2			<116	<58.0					20	
PCB-1248 (Aroclor 1248)	ug/kg	149J			<116	<58.0					20	
PCB-1254 (Aroclor 1254)	ug/kg	622			822	836				2	20	
PCB-1260 (Aroclor 1260)	ug/kg	155J	1970	1960	1730	1760	80	82	50-150	2	20	
Decachlorobiphenyl (S)	%						170	88	50-150			S0
Tetrachloro-m-xylene (S)	%						165	86	50-150			S0

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

QC Batch: 373429 | Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 | Analysis Description: 8270/3546 MSSV PAH by SIM
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40219480001, 40219480002, 40219480003, 40219480004, 40219480005, 40219480006, 40219480007, 40219480012, 40219480013, 40219480014, 40219480021, 40219480022, 40219480023

METHOD BLANK: 2158122 | Matrix: Solid

Associated Lab Samples: 40219480001, 40219480002, 40219480003, 40219480004, 40219480005, 40219480006, 40219480007, 40219480012, 40219480013, 40219480014, 40219480021, 40219480022, 40219480023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	2.4	12/11/20 10:21	
2-Methylnaphthalene	ug/kg	<2.4	16.7	2.4	12/11/20 10:21	
Acenaphthene	ug/kg	<2.2	16.7	2.2	12/11/20 10:21	
Acenaphthylene	ug/kg	<2.1	16.7	2.1	12/11/20 10:21	
Anthracene	ug/kg	<2.1	16.7	2.1	12/11/20 10:21	
Benzo(a)anthracene	ug/kg	<2.2	16.7	2.2	12/11/20 10:21	
Benzo(a)pyrene	ug/kg	<1.9	16.7	1.9	12/11/20 10:21	
Benzo(b)fluoranthene	ug/kg	<2.3	16.7	2.3	12/11/20 10:21	
Benzo(g,h,i)perylene	ug/kg	<2.9	16.7	2.9	12/11/20 10:21	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	2.1	12/11/20 10:21	
Chrysene	ug/kg	<3.2	16.7	3.2	12/11/20 10:21	
Dibenz(a,h)anthracene	ug/kg	<2.3	16.7	2.3	12/11/20 10:21	
Fluoranthene	ug/kg	<2.0	16.7	2.0	12/11/20 10:21	
Fluorene	ug/kg	<2.0	16.7	2.0	12/11/20 10:21	
Indeno(1,2,3-cd)pyrene	ug/kg	<3.5	16.7	3.5	12/11/20 10:21	
Naphthalene	ug/kg	<1.6	16.7	1.6	12/11/20 10:21	
Phenanthrene	ug/kg	<1.9	16.7	1.9	12/11/20 10:21	
Pyrene	ug/kg	<2.5	16.7	2.5	12/11/20 10:21	
2-Fluorobiphenyl (S)	%	74	17-100		12/11/20 10:21	
Terphenyl-d14 (S)	%	88	17-98		12/11/20 10:21	

LABORATORY CONTROL SAMPLE: 2158123

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	243	73	58-101	
2-Methylnaphthalene	ug/kg	333	238	71	59-101	
Acenaphthene	ug/kg	333	274	82	62-97	
Acenaphthylene	ug/kg	333	270	81	67-102	
Anthracene	ug/kg	333	297	89	69-120	
Benzo(a)anthracene	ug/kg	333	266	80	59-101	
Benzo(a)pyrene	ug/kg	333	312	93	70-110	
Benzo(b)fluoranthene	ug/kg	333	281	84	66-111	
Benzo(g,h,i)perylene	ug/kg	333	285	85	64-106	
Benzo(k)fluoranthene	ug/kg	333	319	96	65-108	
Chrysene	ug/kg	333	313	94	61-102	
Dibenz(a,h)anthracene	ug/kg	333	298	89	64-120	
Fluoranthene	ug/kg	333	293	88	69-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

LABORATORY CONTROL SAMPLE: 2158123

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Fluorene	ug/kg	333	274	82	70-99	
Indeno(1,2,3-cd)pyrene	ug/kg	333	302	91	66-120	
Naphthalene	ug/kg	333	257	77	60-95	
Phenanthrene	ug/kg	333	269	81	66-98	
Pyrene	ug/kg	333	277	83	63-120	
2-Fluorobiphenyl (S)	%			78	17-100	
Terphenyl-d14 (S)	%			88	17-98	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2158124 2158125

Parameter	Units	40219480004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<9.5	1300	1300	522	450	40	34	48-101	15	25	M1
2-Methylnaphthalene	ug/kg	9.6J	1300	1300	518	447	39	34	46-101	15	21	M1
Acenaphthene	ug/kg	<8.4	1300	1300	560	531	43	40	52-97	5	20	M1
Acenaphthylene	ug/kg	17.7J	1300	1300	575	539	43	40	51-102	6	20	M1
Anthracene	ug/kg	18.7J	1300	1300	632	632	47	47	54-120	0	20	M1
Benzo(a)anthracene	ug/kg	86.4	1300	1300	639	654	43	44	34-101	2	22	
Benzo(a)pyrene	ug/kg	118	1300	1300	699	734	45	47	46-110	5	25	M1
Benzo(b)fluoranthene	ug/kg	135	1300	1300	691	744	43	47	40-111	7	23	
Benzo(g,h,i)perylene	ug/kg	78.9	1300	1300	643	728	43	50	40-120	12	24	
Benzo(k)fluoranthene	ug/kg	61.5J	1300	1300	668	758	47	54	47-108	13	24	
Chrysene	ug/kg	109	1300	1300	691	721	45	47	35-115	4	20	
Dibenz(a,h)anthracene	ug/kg	19.1J	1300	1300	643	717	48	54	46-120	11	21	
Fluoranthene	ug/kg	171	1300	1300	739	708	44	41	52-120	4	23	M1
Fluorene	ug/kg	8.4J	1300	1300	581	564	44	43	54-99	3	20	M1
Indeno(1,2,3-cd)pyrene	ug/kg	62.6J	1300	1300	663	748	46	53	46-120	12	22	
Naphthalene	ug/kg	17.9J	1300	1300	597	486	45	36	46-95	21	23	M1
Phenanthrene	ug/kg	60.5J	1300	1300	613	596	43	41	51-98	3	20	M1
Pyrene	ug/kg	149	1300	1300	639	598	38	34	46-120	7	24	M1
2-Fluorobiphenyl (S)	%						47	63	17-100			
Terphenyl-d14 (S)	%						51	63	17-98			

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

QC Batch: 373398
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219480001, 40219480002, 40219480003, 40219480004, 40219480005, 40219480006, 40219480007, 40219480008, 40219480009

SAMPLE DUPLICATE: 2158027

Parameter	Units	40219343008 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	72.3	73.0	1	10	

SAMPLE DUPLICATE: 2158028

Parameter	Units	40219480004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	74.3	74.4	0	10	

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

QC Batch: 373475
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Laboratory: Pace Analytical Services - Green Bay

Associated Lab Samples: 40219480010, 40219480011, 40219480012, 40219480013, 40219480014, 40219480015, 40219480016, 40219480017, 40219480018, 40219480019, 40219480020, 40219480021, 40219480022, 40219480023, 40219480024, 40219480025, 40219480026

SAMPLE DUPLICATE: 2158386

Parameter	Units	40219480011 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	65.1	64.9	0	10	

SAMPLE DUPLICATE: 2158387

Parameter	Units	40219480017 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	74.6	75.0	1	10	

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QUALIFIERS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 373362

[1] The default spike range of the standard used for QC evaluation is C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.

Batch: 373969

[1] The default spike range of the standard used for QC evaluation is C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40219480001	**USRBG001(0.0-0.5)**	EPA 3546	373317	EPA 8015D Modified	373362
40219480002	**USCCG002(0.0-0.5)**	EPA 3546	373317	EPA 8015D Modified	373362
40219480003	**DUP-3**	EPA 3546	373317	EPA 8015D Modified	373362
40219480004	**USCCG003(0.0-0.5)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480005	**USCCG004(0.0-0.5)**	EPA 3546	373317	EPA 8015D Modified	373362
40219480006	**DSLBG004(0.0-0.5)**	EPA 3546	373317	EPA 8015D Modified	373362
40219480007	**DSCCG005(0.0-0.5)**	EPA 3546	373317	EPA 8015D Modified	373362
40219480008	**DUP-4**	EPA 3546	373317	EPA 8015D Modified	373362
40219480009	**USCCC004(0.0-1.0)**	EPA 3546	373317	EPA 8015D Modified	373362
40219480010	**USCCC004(2.0-3.0)**	EPA 3546	373317	EPA 8015D Modified	373362
40219480011	**USCCC004(1.0-2.0)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480012	**DSRBG006(0.0-0.5)**	EPA 3546	373317	EPA 8015D Modified	373362
40219480013	**DSLBG007(0.0-0.5)**	EPA 3546	373317	EPA 8015D Modified	373362
40219480014	**DSRBG008(0.0-0.5)**	EPA 3546	373317	EPA 8015D Modified	373362
40219480015	**DSRBC008(0.0-1.25)**	EPA 3546	373317	EPA 8015D Modified	373362
40219480016	**DSRBC008(1.25-2.33)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480017	**DSLBC004(0.0-1.3)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480018	**DSLBC004(1.3-2.6)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480019	**DSLBC004(2.6-3.75)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480020	**DSLBC004(3.75-4.9)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480021	**DSLBG009(0.0-0.5)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480022	**DSRBG010(0.0-0.5)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480023	**DSRBG011(0.0-0.5)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480024	**DSRBC011(0-1.2)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480025	**DSRBC011(1.2-2.4)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480026	**DSRBC011(2.4-4.0)**	EPA 3546	373892	EPA 8015D Modified	373969
40219480001	**USRBG001(0.0-0.5)**	EPA 3541	373369	EPA 8082A	373388
40219480002	**USCCG002(0.0-0.5)**	EPA 3541	373369	EPA 8082A	373388
40219480003	**DUP-3**	EPA 3541	373369	EPA 8082A	373388
40219480004	**USCCG003(0.0-0.5)**	EPA 3541	373369	EPA 8082A	373388
40219480005	**USCCG004(0.0-0.5)**	EPA 3541	373369	EPA 8082A	373388
40219480006	**DSLBG004(0.0-0.5)**	EPA 3541	373369	EPA 8082A	373388
40219480007	**DSCCG005(0.0-0.5)**	EPA 3541	373369	EPA 8082A	373388
40219480008	**DUP-4**	EPA 3541	373369	EPA 8082A	373388
40219480009	**USCCC004(0.0-1.0)**	EPA 3541	373369	EPA 8082A	373388
40219480010	**USCCC004(2.0-3.0)**	EPA 3541	373474	EPA 8082A	373767
40219480011	**USCCC004(1.0-2.0)**	EPA 3541	373474	EPA 8082A	373767
40219480012	**DSRBG006(0.0-0.5)**	EPA 3541	373474	EPA 8082A	373767
40219480013	**DSLBG007(0.0-0.5)**	EPA 3541	373474	EPA 8082A	373767
40219480014	**DSRBG008(0.0-0.5)**	EPA 3541	373474	EPA 8082A	373767
40219480015	**DSRBC008(0.0-1.25)**	EPA 3541	373474	EPA 8082A	373767
40219480016	**DSRBC008(1.25-2.33)**	EPA 3541	373474	EPA 8082A	373767
40219480017	**DSLBC004(0.0-1.3)**	EPA 3541	373474	EPA 8082A	373767
40219480018	**DSLBC004(1.3-2.6)**	EPA 3541	373474	EPA 8082A	373767
40219480019	**DSLBC004(2.6-3.75)**	EPA 3541	373474	EPA 8082A	373767

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40219480020	**DSLBC004(3.75-4.9)**	EPA 3541	373474	EPA 8082A	373767
40219480021	**DSLBG009(0.0-0.5)**	EPA 3541	373474	EPA 8082A	373767
40219480022	**DSRBG010(0.0-0.5)**	EPA 3541	373474	EPA 8082A	373767
40219480023	**DSRBG011(0.0-0.5)**	EPA 3541	373474	EPA 8082A	373767
40219480024	**DSRBC011(0-1.2)**	EPA 3541	373474	EPA 8082A	373767
40219480025	**DSRBC011(1.2-2.4)**	EPA 3541	373474	EPA 8082A	373767
40219480026	**DSRBC011(2.4-4.0)**	EPA 3541	373474	EPA 8082A	373767
40219480001	**USRBG001(0.0-0.5)**	EPA 3050	373305	EPA 6010	373394
40219480002	**USCCG002(0.0-0.5)**	EPA 3050	373305	EPA 6010	373394
40219480003	**DUP-3**	EPA 3050	373305	EPA 6010	373394
40219480004	**USCCG003(0.0-0.5)**	EPA 3050	373305	EPA 6010	373394
40219480005	**USCCG004(0.0-0.5)**	EPA 3050	373305	EPA 6010	373394
40219480008	**DUP-4**	EPA 3050	373305	EPA 6010	373394
40219480009	**USCCC004(0.0-1.0)**	EPA 3050	373305	EPA 6010	373394
40219480010	**USCCC004(2.0-3.0)**	EPA 3050	373305	EPA 6010	373394
40219480011	**USCCC004(1.0-2.0)**	EPA 3050	373305	EPA 6010	373394
40219480001	**USRBG001(0.0-0.5)**	EPA 7471	373780	EPA 7471	373842
40219480002	**USCCG002(0.0-0.5)**	EPA 7471	373780	EPA 7471	373842
40219480003	**DUP-3**	EPA 7471	373780	EPA 7471	373842
40219480004	**USCCG003(0.0-0.5)**	EPA 7471	373780	EPA 7471	373842
40219480005	**USCCG004(0.0-0.5)**	EPA 7471	373780	EPA 7471	373842
40219480008	**DUP-4**	EPA 7471	373780	EPA 7471	373842
40219480009	**USCCC004(0.0-1.0)**	EPA 7471	373780	EPA 7471	373842
40219480010	**USCCC004(2.0-3.0)**	EPA 7471	373780	EPA 7471	373842
40219480011	**USCCC004(1.0-2.0)**	EPA 7471	373780	EPA 7471	373842
40219480001	**USRBG001(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480002	**USCCG002(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480003	**DUP-3**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480004	**USCCG003(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480005	**USCCG004(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480006	**DSLBG004(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480007	**DSCCG005(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480012	**DSRBG006(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480013	**DSLBG007(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480014	**DSRBG008(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480021	**DSLBG009(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480022	**DSRBG010(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480023	**DSRBG011(0.0-0.5)**	EPA 3546	373429	EPA 8270 by SIM	373485
40219480001	**USRBG001(0.0-0.5)**	ASTM D2974-87	373398		
40219480002	**USCCG002(0.0-0.5)**	ASTM D2974-87	373398		
40219480003	**DUP-3**	ASTM D2974-87	373398		
40219480004	**USCCG003(0.0-0.5)**	ASTM D2974-87	373398		
40219480005	**USCCG004(0.0-0.5)**	ASTM D2974-87	373398		
40219480006	**DSLBG004(0.0-0.5)**	ASTM D2974-87	373398		
40219480007	**DSCCG005(0.0-0.5)**	ASTM D2974-87	373398		
40219480008	**DUP-4**	ASTM D2974-87	373398		
40219480009	**USCCC004(0.0-1.0)**	ASTM D2974-87	373398		

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219480

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40219480010	**USCCC004(2.0-3.0)**	ASTM D2974-87	373475		
40219480011	**USCCC004(1.0-2.0)**	ASTM D2974-87	373475		
40219480012	**DSRBG006(0.0-0.5)**	ASTM D2974-87	373475		
40219480013	**DSLBG007(0.0-0.5)**	ASTM D2974-87	373475		
40219480014	**DSRBG008(0.0-0.5)**	ASTM D2974-87	373475		
40219480015	**DSRBC008(0.0-1.25)**	ASTM D2974-87	373475		
40219480016	**DSRBC008(1.25-2.33)**	ASTM D2974-87	373475		
40219480017	**DSLBC004(0.0-1.3)**	ASTM D2974-87	373475		
40219480018	**DSLBC004(1.3-2.6)**	ASTM D2974-87	373475		
40219480019	**DSLBC004(2.6-3.75)**	ASTM D2974-87	373475		
40219480020	**DSLBC004(3.75-4.9)**	ASTM D2974-87	373475		
40219480021	**DSLBG009(0.0-0.5)**	ASTM D2974-87	373475		
40219480022	**DSRBG010(0.0-0.5)**	ASTM D2974-87	373475		
40219480023	**DSRBG011(0.0-0.5)**	ASTM D2974-87	373475		
40219480024	**DSRBC011(0-1.2)**	ASTM D2974-87	373475		
40219480025	**DSRBC011(1.2-2.4)**	ASTM D2974-87	373475		
40219480026	**DSRBC011(2.4-4.0)**	ASTM D2974-87	373475		

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CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here 40219480

ALL SHADED AREAS are for LAB USE ONLY

Company: AECOM Technical Services, Inc.

Billing Information: Submit invoices to USAPImaging@aecom.com

Address: 27777 Franklin Road, Suite 2150 Southfield, MI 48034

Report To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)

Email To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)

Copy To: Alison Bitel (Alison.Bitel@aecom.com)

Site Collection Info/Address: Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080

Customer Project Name/Number: 60644031.6.2

State: MI / County/City: Comstock / Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: 248-204-4149

Email: Alison.Bitel@aecom.com

Site/Facility ID #: NA

Compliance Monitoring? [ ] Yes [x] No

Collected By (print): Jennifer Bush

Purchase Order # :

Quote #: 00084840

DW PWS ID #:

DW Location Code: Na

Collected By (signature):

Turnaround Date Required: 10 Day Standard

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: Na

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:
LAB USE ONLY:
Lab Sample # / Comments:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PCB (8082A)	PCB (MIL 8082)	MI Metals (6010D)	TPH (8015 SM)	PAHs (8270 SIM)	Lab Sample # / Comments
USRBG001(0.0-0.5)	SL	Grab	12-03-20	1600				2	X	X	X	X	X	001
USCCG002(0.0-0.5)	SL	Grab	12-03-20	1330				2	X	X	X	X	X	002
Dup-3	SL	Grab	—	—				2	X	X	X	X	X	003
USCCG003(0.0-0.5)	SL	Grab	12-03-20	1100				2	X	X	X	X	X	004
USCCG003(0.0-0.5) MS	SL	Grab	12-03-20	1100				2	X	X	X	X	X	004
USCCG003(0.0-0.5) MSD	SL	Grab	12-03-20	1100				2	X	X	X	X	X	004
USCCG004(0.0-0.5)	SL	Grab	12-03-20	0930				2	X	X	X	X	X	004
DSLBG004(0.0-0.5)	SL	Grab	12-04-20	1040				2	X	X		X	X	005
DSCCG005(0.0-0.5)	SL	Grab	12-04-20	1140				2	X	X		X	X	006
Dup-4	SL	Comp	—	—				2	X	X	X	X		007
														008

Customer Remarks / Special Conditions / Possible Hazards: Sample 2 should be USCCG002 not USCCG002

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours) : Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr Factor: oC
Cooler 1 Corrected Temp: oC
Comments:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 4

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Andrea Peak / AECOM	12/7/20 1800	Fed Ex	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Fedex	12/8/20 1020	[signature] Pace	12/8/20 1020
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

CHAIN-OF-CUSTODY Analytical Request Document

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Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here 40219480

ALL SHADED AREAS are for LAB USE ONLY

Company: **AECOM Technical Services, Inc.**

Address: **27777 Franklin Road, Suite 2150 Southfield, MI 48034**

Report To: **Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)**

Copy To: **Alison Bitel (Alison.Bitel@aecom.com)**

Billing Information: **Submit invoices to USAPImaging@aecom.com**

Email To: **Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)**

Site Collection Info/Address: **Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080**

Customer Project Name/Number: **60644031.6.2**

State: **MI** County/City: **Comstock** Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: **248-204-4149**
Email: **Alison.Bitel@aecom.com**

Site/Facility ID #: NA

Compliance Monitoring? [ ] Yes [x] No

Collected By (print): Jennifer Bush

Purchase Order # :
Quote #: **00084840**

DW PWS ID #:
DW Location Code: Na

Collected By (signature):

Turnaround Date Required: 10 day Standard

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate
[ ] Return
[ ] Archive: _____
[ ] Hold:

Rush:
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day
(Expedite Charges Apply)

Field Filtered (If applicable): [ ] Yes [X] No

Analysis: Na

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PCB (8082A)	PCB (1668)	MT Metals (6010)	TPH (8015M)	PAHs (8270SIM)						Lab Sample # / Comments
USCCC004(0.0-1.0)	SL	Comp	12/03/20	0930				2	X	X	X	X							009
USCCC004(2.0-3.0)	SL	Comp						2	X	X	X	X							010
USCCC004(1.0-2.0)	SL	Comp						2	X	X	X	X							011
USCCC004(1.0-2.0)MS	SL	Comp						2	X	X	X	X							011
USCCC004(1.0-2.0)MSD	SL	Comp						2	X	X	X	X							011
~~USCCC004(0~~																			
DSRBG006(0.0-0.5)	SL	Grab	12-04-20	1230				2	X	X		X	X						012
DSLBG007(0.0-0.5)	SL	Grab	12-04-20	1650				2	X	X		X	X						013
DSRBG008(0.0-0.5)	SL	Grab	12-04-20	1620				2	X	X		X	X						014
DSRBC008(0.0-1.25)	SL	Comp	12-04-20	1550				1	X			X							015

JB

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours) : Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips _____

LAB USE ONLY
Lab Sample # / Comments: See SWV 12/8/20 LP

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: __oC
Comments: See SWV 12/8/20 LP

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 2 of: 4

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
John Rynates AECOM	12/7/20 / 1800	FedEx	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Fedex	12/8/20 1020	[illegible] Pace	12/8/20 1020
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

CHAIN-OF-CUSTODY Analytical Request Document

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LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here: 40219480

ALL SHADED AREAS are for LAB USE ONLY

Company: **AECOM Technical Services, Inc.**

Address: **27777 Franklin Road, Suite 2150 Southfield, MI 48034**

Report To: **Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)**

Copy To: **Alison Bitel (Alison.Bitel@aecom.com)**

Billing Information: **Submit invoices to USAPImaging@aecom.com**

Email To: **Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)**

Site Collection Info/Address: **Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080**

Customer Project Name/Number: **60644031.6.2**

State: **MI** County/City: **Comstock** Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: **248-204-4149**
Email: **Alison.Bitel@aecom.com**

Site/Facility ID #: NA

Compliance Monitoring? [ ] Yes [x] No

Collected By (print): Jennifer Bush

Purchase Order # :
Quote #: **00084840**

DW PWS ID #:
DW Location Code: Na

Collected By (signature):

Turnaround Date Required: 10 Day Standard

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate
[ ] Return
[ ] Archive: _____
[ ] Hold:

Rush:
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [ ] No

Analysis: Na

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips: _____
LAB USE ONLY:
Lab Sample # / Comments:

SCW 12/8/20 VP

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PCB (8082A)	PCB (MI 1668)	MI Metals (6010D)	TPH (8015M)	PAHs (8270D SIM)	Lab Sample # / Comments
DSRBC008(1.25-2.33)	SL	comp	12-04-20	1550				1	X			X		016
DSLBC004(0.0-1.3)	SL	comp	12-04-20	1000				1	X			X		017
DSLBC004(0.0-1.3)MS	SL	Comp	12-04-20	1000				1	X			X		017
DSLBC004(0.0-1.3)MSD	SL	Comp	12-04-20	1000				1	X			X		017
DSLBC004(1.3-2.6)	SL	Comp	12-04-20	1000				1	X			X		018
DSLBC004(2.6-3.75)	SL	Comp	12-04-20	1000				1	X			X		019
DSLBC004(3.75-4.9)	SL	Comp	12-04-20	1000				1	X			X		020
DSLBG009(0.0-0.5)	SL	Grab	12-05-20	1450				2	X	X		X	X	021
DSRBG008(0.0-0.5)	SL	Grab	12-05-20	1250				2	X	X		X	X	022
DSRBG011(0.0-0.5)	SL	Grab	12-05-20	1050				2	X	X		X	X	023

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours) : Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: ___oC
Cooler 1 Therm Corr. Factor: ___oC
Cooler 1 Corrected Temp: ___oC
Comments:

SCW 12/8/20 VP

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
AECom	12/7/20 / 1800	FEDEX	
Relinquished by/Company: (Signature) Fedex	12/8/20 1020	Received by/Company: (Signature) Pace	12/8/20 1020
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Non Conformance(s): YES / NO

Page: 3 of: 4

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here: 40219480

ALL SHADED AREAS are for LAB USE ONLY

Company: **AECOM Technical Services, Inc.**

Address: **27777 Franklin Road, Suite 2150 Southfield, MI 48034**

Report To: **Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)**

Copy To: **Alison Bitel (Alison.Bitel@aecom.com)**

Billing Information: **Submit invoices to U5APImaging@aecom.com**

Email To: **Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)**

Site Collection Info/Address: **Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080**

Customer Project Name/Number: **60644031.6.2**

State: **MI** County/City: **Comstock** Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: **248-204-4149**
Email: **Alison.Bitel@aecom.com**

Site/Facility ID #: NA

Compliance Monitoring? [ ] Yes [x] No

Collected By (print): Jennifer Bush

Collected By (signature): JMT

Purchase Order # :
Quote #: **00084840**

DW PWS ID #:
DW Location Code: Na

Turnaround Date Required:

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate
[ ] Return
[ ] Archive: _____
[ ] Hold:

Rush:
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: Na

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:

LAB USE ONLY:
Lab Sample # / Comments:

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PCB (8082A)	TPH (8015M)								Lab Sample # / Comments
DSRBC011 (0-1.2)	SL	Comp	12-05-20	1110				1	X	X								024
DSRBC011 (1.2-2.4)	SL	Comp	12-05-20	1110				1	X	X								025
DSRBC011 (2.4-4.0)	SL	Comp	12-05-20	1110				1	X	X								026

JB

JB

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours) : Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp:
Comments:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Leslie Rogers / AECOM	12/7/20 / 1600	FedEx	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Fedex	12/8/20 1020	Pace	12/8/20 1020
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Non Conformance(s): YES / NO

Page: 4 of: 4

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Sample Preservation Receipt Form

Client Name: Aecom

Project # 40219480

All containers needing preservation have been checked and noted below: □Yes □No ☒N/A

Initial when completed: Date/Time:

Lab Lot# of pH paper: Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass								Plastic					Vials						Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN							
001																				2													2.5 / 5 / 10
002																				2													2.5 / 5 / 10
003																				2													2.5 / 5 / 10
004																				6													2.5 / 5 / 10
005																				2													2.5 / 5 / 10
006																				2													2.5 / 5 / 10
007																				2													2.5 / 5 / 10
008																				2													2.5 / 5 / 10
009																				2													2.5 / 5 / 10
010																				2													2.5 / 5 / 10
011																				6													2.5 / 5 / 10
012																				2													2.5 / 5 / 10
013																				2													2.5 / 5 / 10
014																				2													2.5 / 5 / 10
015																				1													2.5 / 5 / 10
016																				1													2.5 / 5 / 10
017																				3													2.5 / 5 / 10
018																				1													2.5 / 5 / 10
019																				1													2.5 / 5 / 10
020																				1													2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other:_____ Headspace in VOA Vials (>6mm) : □Yes □No ☒N/A ***If yes look in headspace column**

AG1U	1 liter amber glass
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Sample Preservation Receipt Form

Client Name: Aecom
Project #: 40219480

	Glass								Plastic					Vials						Jars				General									
Pace Lab #	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
021																				2													2.5 / 5 / 10
022																				2													2.5 / 5 / 10
023																				2													2.5 / 5 / 10
024																				1													2.5 / 5 / 10
025																				1													2.5 / 5 / 10
026																				1													2.5 / 5 / 10
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12/8/20
VP

F-GB-C-046-Rev.03 (11Feb2020) Sample Preservation Receipt Form

Page 2 of 3

Pace Analytical® 1241 Bellevue Street, Green Bay, WI 54302	Document Name: **Sample Condition Upon Receipt (SCUR)**	Document Revised: 26Mar2020
	Document No.: **ENV-FRM-GBAY-0014-Rev.00**	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO#: 40219480

40219480

Client Name: Aecom

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☐ Client ☐ Pace Other:

Tracking #: 7810 3949 4361

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used SR - 86 **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 0 /Corr: 0.5

Temp Blank Present: ☒ yes ☐ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:
Date: 12/8/20 Initials: [illegible]
Labeled By Initials: SCW

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1. +Copy 12-8-20 SCW
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume: For Analysis: ☒ Yes ☐ No	MS/MSD: ☒ Yes ☐ No ☐ N/A	8.
Correct Containers Used:	☒ Yes ☐ No	9.
-Pace Containers Used:	☒ Yes ☐ No ☐ N/A	
-Pace IR Containers Used:	☐ Yes ☐ No ☒ N/A	
Containers Intact:	☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis	☒ Yes ☐ No ☐ N/A Matrix: S	12.
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Pace Analytical®

CHAIN-OF-CUSTODY Analytical Request Document

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here 40219480

ALL SHADED AREAS are for LAB USE ONLY

Company: AECOM Technical Services, Inc.

Billing Information: Submit invoices to USAPImaging@aecom.com

Address: 27777 Franklin Road, Suite 2150 Southfield, MI 48034

Report To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)

Email To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)

Copy To: Alison Bitel (Alison.Bitel@aecom.com)

Site Collection Info/Address: Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080

Customer Project Name/Number: 60644031.6.2

State: MI / County/City: Comstock / Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: 248-204-4149

Email: Alison.Bitel@aecom.com

Site/Facility ID #: NA

Compliance Monitoring? [ ] Yes [x] No

Collected By (print): Jennifer Bush

Purchase Order # :

Quote #: 00084840

DW PWS ID #:

DW Location Code: Na

Collected By (signature):

Turnaround Date Required: 10 Day Standard

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold:

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: Na

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Analyses

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:

LAB USE ONLY:
Lab Sample # / Comments:

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Time	Composite End Date	Time	Res Cl	# of Ctns	PCB (8082A)	PCB (8082A)	Ni (M1668)	Metals (6010D)	TPH (8015 SM)	PAHs (8270 SIM)	Lab Sample # / Comments
USRBG001(0.0-0.5)	SL	Grab	12-03-20	1600				2	X	X	X	X	X		001
USCCG002(0.0-0.5)	SL	Grab	12-03-20	1330				2	X	X	X	X	X		002
Dup-3	SL	Grab	—	—				2	X	X	X	X	X		003
USCCG003(0.0-0.5)	SL	Grab	12-03-20	1100				2	X	X	X	X	X		004
USCCG003(0.0-0.5) MS	SL	Grab	12-03-20	1100				2	X	X	X	X	X		004
USCCG003(0.0-0.5) MSD	SL	Grab	12-03-20	1100				2	X	X	X	X	X		004
USCCG004(0.0-0.5)	SL	Grab	12-03-20	0930				2	X	X	X	X	X		004
DSLBG004(0.0-0.5)	SL	Grab	12-04-20	1040				2	X	X		X	X		005
DSCCG005(0.0-0.5)	SL	Grab	12-04-20	1140				2	X	X		X	X		006
Dup-4	SL	Comp	—	—				2	X	X	X	X			007
															008

Customer Remarks / Special Conditions / Possible Hazards:
~~Sample 2 should be USCCG002 not USCCG0002~~

ANB-remove comment

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours) : Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: ___oC
Cooler 1 Therm Corr Factor: ___oC
Cooler 1 Corrected Temp: ___oC
Comments:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Andrea Peak / AECOM	12/7/20 1800	Fed Ex	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Fedex	12/8/20 1020	[signature] Pace	12/8/20 1020
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Non Conformance(s): YES / NO

Page: 1 of: 4

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here 40219480

ALL SHADED AREAS are for LAB USE ONLY

Company: **AECOM Technical Services, Inc.**

Address: **27777 Franklin Road, Suite 2150 Southfield, MI 48034**

Report To: **Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)**

Copy To: **Alison Bitel (Alison.Bitel@aecom.com)**

Billing Information: **Submit invoices to USAPImaging@aecom.com**

Email To: **Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)**

Site Collection Info/Address: **Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080**

Customer Project Name/Number: **60644031.6.2**

State: **MI** County/City: **Comstock** Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: **248-204-4149**
Email: **Alison.Bitel@aecom.com**

Site/Facility ID #: NA

Compliance Monitoring? [ ] Yes [x] No

Collected By (print): Jennifer Bush

Purchase Order # :
Quote #: **00084840**

DW PWS ID #:
DW Location Code: Na

Collected By (signature):

Turnaround Date Required: 10 day Standard

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate
[ ] Return
[ ] Archive: _____
[ ] Hold:

Rush:
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day
(Expedite Charges Apply)

Field Filtered (If applicable): [ ] Yes [X] No

Analysis: Na

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Analyses

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PCB (8082A)	PCB (1668)	MT Metals (6010)	TPH (8015M)	PAHs (8270SIM)						Lab Sample # / Comments
USCCC004(0.0-1.0)	SL	Comp	12/03/20	0930				2	X	X	X	X							009
USCCC004(2.0-3.0)	SL	Comp						2	X	X	X	X							010
USCCC004(1.0-2.0)	SL	Comp						2	X	X	X	X							011
USCCC004(1.0-2.0)MS	SL	Comp						2	X	X	X	X							011
USCCC004(1.0-2.0)MSD	SL	Comp						2	X	X	X	X							011
~~USCCC004(0~~																			
DSRBG006(0.0-0.5)	SL	Grab	12-04-20	1230				2	X	X		X	X						012
DSLBG007(0.0-0.5)	SL	Grab	12-04-20	1650				2	X	X		X	X						013
DSRBG008(0.0-0.5)	SL	Grab	12-04-20	1620				2	X	X		X	X						014
DSRBC008(0.0-1.25)	SL	Comp	12-04-20	1550				1	X			X							015

JB

Customer Remarks / Special Conditions / Possible Hazards:

The first sample ID on this page should be USCCC004(0.0-1.0).

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours) : Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips: _____
Sample pH Acceptable Y N NA
pH Strips: _____
Sulfide Present Y N NA
Lead Acetate Strips _____

LAB USE ONLY
Lab Sample # / Comments: See SWV 12/8/20 LP

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#: _____
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: __oC
Comments: See SWV 12/8/20 LP

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
John Rynates AECOM	12/7/20 / 1800	FedEx	
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Fedex	12/8/20 1020	[illegible] Pace	12/8/20 1020
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Non Conformance(s): YES / NO

Page: 2 of: 4

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Tod Noltemeyer
PACE Wisconsin
6409 Odana Road
Madison WI 53719

REPORT OF LABORATORY ANALYSIS FOR PCBs

Report Information:

Pace Project #: 10541746
Sample Receipt Date: 12/10/2020
Client Project #: 40219480 AECOM, Inc
Client Sub PO #: N/A
State Cert #: 9909

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCB Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:

January 20, 2021

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
January 20, 2021

Report of Laboratory Analysis

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on seventeen samples submitted by a representative of Pace Analytical Services, LLC. The samples were analyzed for the presence or absence of selected polychlorinated biphenyl (PCB) congeners using USEPA Method 1668A. Reporting limits were set to correspond to the method detection limits, and adjusted for the total amount of sample extracted. Levels present below the calibration range were flagged "J" as estimated concentrations. In cases where the estimated reporting limits were provided the results were flagged "A".

The recoveries of the isotopically-labeled PCB internal standards in the sample extracts ranged from 24-118%. Except for one low value, which was flagged "R" on the results table, the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1668A. Since the quantification of the native congeners was based on isotope dilution and internal standard methodology, the data were automatically corrected for variation in recovery and accurate values were obtained. Incorrect isotope ratios were obtained for selected PCB congeners. The affected congeners were flagged "I" on the results tables.

A laboratory method blank was prepared and analyzed with each sample batch as part of our routine quality control procedures. The results show the blanks to contain trace levels or produce signals at the retention times of several PCB congeners. The sample extracts contained levels similar to those seen in the method blank that may have, at least partially, originated in the laboratory. Congeners present at similar levels in both the method blank and sample extracts were flagged "B" on the results tables.

Laboratory and matrix spike samples were also prepared with the sample batch using the reference or sample matrix that had been fortified with native standards. The results show that the spiked native compounds in the lab spikes were recovered at 88-117%, with relative percent differences of 0.0-7.2%. These values were within method limits, Matrix spike recoveries were impacted by the levels present in the sample material and ranged from 0-1996%, with relative percent differences of 0.4-42.3%. This suggests some level of inhomogeneity in the sample matrix.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Mississippi	MN00064
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio - VAP	CL101
Georgia	959	Ohio-DW	41244
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon- rimary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Michigan	9909	West Virginia-D	382
Minnesota	027-053-137	West Virginia-D	9952C
Minnesota-Ag	via MN 027-053	Wisconsin	999407970
Minnesota-Petr	1240	Wyoming-UST	via A2LA 2926.

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

[x] Samples Pre-Logged into eCOC.

State Of Origin: MI
Cert. Needed: [ ] Yes [x] No

Workorder: 40219480 **Workorder Name:** 60644031.6.2 MORROW DAM LOGGIN **Owner Received Date:** 12/8/2020 **Results Requested By:** 12/30/2020

Report No: 10541746_1668_209_DFR

Report To	Subcontract To
Rod Noltemeyer Pace Analytical Green Bay 1241 Bellevue Street Suite 9 Green Bay, WI 54302 Phone (920)469-2436	Pace Analytical Minnesota 1700 Elm Street SE Suite 200 Minneapolis, MN 55414 Phone (612)607-1700

Requested Analysis

WO#: 10541746

10541746

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	1668 PCB Congeners - Full List		LAB USE ONLY
1	USRBG001(0.0-0.5)	PS	12/3/2020 16:00	40219480001	Solid	1	X		001
2	USCCG002(0.0-0.5)	PS	12/3/2020 13:30	40219480002	Solid	1	X		002
3	DUP-3	PS	12/3/2020 00:00	40219480003	Solid	1	X		003
4	USCCG003(0.0-0.5)	RQS	12/3/2020 11:00	40219480004	Solid	1	X	DO MS/MSD ON THIS SAMPLE	004
5	USCCG004(0.0-0.5)	PS	12/3/2020 09:30	40219480005	Solid	1	X		005
6	DSLBG004(0.0-0.5)	PS	12/4/2020 10:40	40219480006	Solid	1	X		006
7	DSCCG005(0.0-0.5)	PS	12/4/2020 11:40	40219480007	Solid	1	X		007
8	DUP-4	PS	12/4/2020 00:00	40219480008	Solid	1	X		008
9	USCCC004(0.0-1.0)	PS	12/3/2020 09:30	40219480009	Solid	1	X		009
10	USCCC004(2.0-3.0)	PS	12/3/2020 09:30	40219480010	Solid	1	X		010
11	USCCC004(1.0-2.0)	RQS	12/3/2020 09:30	40219480011	Solid	1	X	DO MS/MSD ON THIS SAMPLE	011
12	DSRBG006(0.0-0.5)	PS	12/4/2020 12:30	40219480012	Solid	1	X		012
13	DSLBG007(0.0-0.5)	PS	12/4/2020 15:00	40219480013	Solid	1	X		013
14	DSRBG008(0.0-0.5)	PS	12/4/2020 16:20	40219480014	Solid	1	X		014
15	DSLBG009(0.0-0.5)	PS	12/5/2020 14:50	40219480021	Solid	1	X		015
16	DSRBG010(0.0-0.5)	PS	12/5/2020 12:50	40219480022	Solid	1	X		016
17	DSRBG011(0.0-0.5)	PS	12/5/2020 10:50	40219480023	Solid	1	X		017

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
	Marlene L Rodriguez	12-9-20 1700	[illegible] 845	12/10/20	

Cooler Temperature on Receipt 0.7 °C	Custody Seal Y or N	Received on Ice Y or N	Samples Intact Y or N

*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) - MN**	Document Revised: 12Aug2020 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0150 Rev.01**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: Pace GB

Project #:

WO#: 10541746
PM: SCU **Due Date: 01/04/21**
CLIENT: PASI-WI

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☐ Commercial

Tracking Number: 2677708

See Exceptions ☐ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☒ Yes ☐ No **Seals Intact?** ☒ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☒ N/A

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☒ Yes ☐ No

Thermometer: ☐ T1(0461) ☒ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☒ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☒ No **Were All Container Temps Taken?** ☐ Yes ☐ No ☒ N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 0.5 °C

Correction Factor: +0.2 **Cooler Temp Corrected w/temp blank:** 0.7 °C

Average Corrected Temp (no temp blank only): _____ °C ☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: (☐ N/A, water sample/Other: _____)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☒ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

Date/Initials of Person Examining Contents: MKH 12/10/20

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☒ Yes	☐ No		1.
Chain of Custody Relinquished?	☒ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☐ No	☒ N/A	3.
Samples Arrived within Hold Time?	☒ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☒ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other_____
Rush Turn Around Time Requested?	☐ Yes	☒ No		6.
Sufficient Volume?	☒ Yes	☐ No		7.
Correct Containers Used? -Pace Containers Used?	☒ Yes ☒ Yes	☐ No ☐ No		8.
Containers Intact?	☒ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☒ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? MKH 12/10/20 Matrix: ☒ Water ☒ Soil ☐ Oil ☐ Other_____	☒ Yes	☐ No		11. **If no, write ID/ Date/Time on Container Below:** See Exception ☐ ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☒ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☒ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☒ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** See Exception ☐ ENV-FRM-MIN4-0142
				Res. Chlorine: 0-6 Roll: 0-6 Strip: 0-14 Strip:
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☒ N/A	13. See Exception ☐ ENV-FRM-MIN4-0140
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☒ N/A	
Trip Blank Present?	☐ Yes	☐ No	☒ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☒ N/A	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION

Field Data Required? ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Sam C. Hugs **Date:** 12/10/20

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: MKH (2)

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here: 40219480

ALL SHADED AREAS are for LAB USE ONLY

Company: AECOM Technical Services, Inc.

Address: 27777 Franklin Road, Suite 2150 Southfield, MI 48034

Report To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)

Copy To: Alison Bitel (Alison.Bitel@aecom.com)

Billing Information: Submit invoices to USAPImaging@aecom.com

Email To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)

Site Collection Info/Address: Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080

Customer Project Name/Number: 60644031.6.2

State: MI / County/City: Comstock / Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: 248-204-4149
Email: Alison.Bitel@aecom.com

Site/Facility ID #: NA

Compliance Monitoring? [ ] Yes [x] No

Collected By (print): Jennifer Bush

Collected By (signature):

Purchase Order # :
Quote #: 00084840

DW PWS ID #:
DW Location Code: Na

Turnaround Date Required: 10 Day Standard

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal:
[ ] Dispose as appropriate
[ ] Return
[ ] Archive: _____
[ ] Hold:

Rush:
[ ] Same Day [ ] Next Day
[ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day
(Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: Na

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PCB (8082A)	PCB (M1668)	Metals (6010B)	TPH (8015)	VOAs (8260 SIM)						Lab Sample # / Comments
USRBG001(0.0-0.5)	SL	Grab	12-03-20	1600				2	X	X	X	X	X						001
USCCG002(0.0-0.5)	SL	Grab	12-03-20	1330				2	X	X	X	X	X						002
Dup-3	SL	Grab	—	—				2	X	X	X	X	X						003
USCCG003(0.0-0.5)	SL	Grab	12-03-20	1100				2	X	X	X	X	X						004
USCCG003(0.0-0.5) MS	SL	Grab	12-03-20	1100				2	X	X	X	X	X						004
USCCG003(0.0-0.5) MSD	SL	Grab	12-03-20	1100				2	X	X	X	X	X						004
USCCG004(0.0-0.5)	SL	Grab	12-03-20	0930				2	X	X	X	X	X						005
DSLBG004(0.0-0.5)	SL	Grab	12-04-20	1040				2	X	X		X	X						006
DSCCG005(0.0-0.5)	SL	Grab	12-04-20	1140				2	X	X		X	X						007
Dup-4	SL	Comp	—	—				2	X	X	X	X							008

Customer Remarks / Special Conditions / Possible Hazards: Sample 2 should be USCCG002 not USCCG002

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:

LAB USE ONLY:
Lab Sample # / Comments:

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr Factor: __oC
Cooler 1 Corrected Temp: __oC
Comments:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 1 of: 4

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Andrea Peak / AECOM	12/7/20 / 1800	Fed Ex	
Fedex	12/8/20 1020	[illegible] Pace	12/8/20 1020

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

CHAIN-OF-CUSTODY Analytical Request Document

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Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here 40219480

ALL SHADED AREAS are for LAB USE ONLY

Company: AECOM Technical Services, Inc.
Address: 27777 Franklin Road, Suite 2150 Southfield, MI 48034
Report To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)
Copy To: Alison Bitel (Alison.Bitel@aecom.com)
Customer Project Name/Number: 60644031.6.2
Phone: 248-204-4149
Email: Alison.Bitel@aecom.com
Collected By (print): Jennifer Bosh
Collected By (signature):
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:

Billing Information: Submit invoices to USAPImaging@aecom.com
Email To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)
Site Collection Info/Address: Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080
State: MI / County/City: Comstock / Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Site/Facility ID #: NA
Compliance Monitoring? [ ] Yes [x] No
Purchase Order # :
Quote #: 00084840
DW PWS ID #:
DW Location Code: Na
Turnaround Date Required: 10 day Standard
Immediately Packed on Ice: [ ] Yes [ ] No
Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
Field Filtered (If applicable): [ ] Yes [X] No
Analysis: Na

Container Preservative Type **
Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:
LAB USE ONLY Lab Sample # / Comments: See SCUR 12/8/20 LP

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PCB (8082A)	PCB (8082A) (M1668)	MT Metals (6010D)	TPH (8015M)	PAHs (8270SIM)						Lab Sample # / Comments
USCCC004(0.0-1.0)	SL	Comp	12/03/20	0930				2	X	X	X	X							009
USCCC004(2.0-3.0)	SL	Comp						2	X	X	X	X							010
USCCC004(1.0-2.0)	SL	Comp						2	X	X	X	X							011
USCCC004(1.0-2.0)MS	SL	Comp						2	X	X	X	X							011
USCCC004(1.0-2.0)MSD	SL	Comp						2	X	X	X	X							011
~~USCCC004(0~~																			
DSRBG006(0.0-0.5)	SL	Grab	12-04-20	1230				2	X	X		X	X						012
DSLBG007(0.0-0.5)	SL	Grab	12-04-20	1580				2	X	X		X	X						013
DSRBG008(0.0-0.5)	SL	Grab	12-04-20	1620				2	X	X		X	X						014
DSRBC008(0.0-1.25)	SL	Comp	12-04-20	1550				2	X			X							015

JB

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #:
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: __ oC
Cooler 1 Therm Corr. Factor: __ oC
Cooler 1 Corrected Temp: __ oC
Comments: See SCUR 12/8/20 LP

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Robin Rogers AECom	12/7/20 / 1800	FedEx	
Fedex	12/8/20 1020	Pace	12/8/20 1020

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 2 of: 4

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here: 40219480

ALL SHADED AREAS are for LAB USE ONLY

Company: AECOM Technical Services, Inc.
Address: 27777 Franklin Road, Suite 2150 Southfield, MI 48034
Report To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)
Copy To: Alison Bitel (Alison.Bitel@aecom.com)

Billing Information: Submit invoices to USAPImaging@aecom.com
Email To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)
Site Collection Info/Address: Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080

Customer Project Name/Number: 60644031.6.2
State: MI / County/City: Comstock / Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: 248-204-4149
Email: Alison.Bitel@aecom.com
Site/Facility ID #: NA
Compliance Monitoring? [ ] Yes [x] No

Collected By (print): Jennifer Bush
Purchase Order # :
Quote #: 00084840
DW PWS ID #:
DW Location Code: Na

Collected By (signature):
Turnaround Date Required: 10 Day Standard
Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold:
Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
Field Filtered (if applicable): [ ] Yes [X] No
Analysis: Na

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PCB (8082A)	PCB (NAFTA 608)	MI Metals (6010D)	TPH (8015M)	PAHs (8270D SIM)	Lab Sample # / Comments
DSRBL008(1.25-2.33)	SL	comp	12-04-20	1550				1	X			X		016
DSLBC004(0.0-1.3)	SL	comp	12-04-20	1000				1	X			X		017
DSLBC004(0.0-1.3)MS	SL	comp	12-04-20	1000				1	X			X		017
DSLBC004(0.0-1.3)MSD	SL	comp	12-04-20	1000				1	X			X		017
DSLBC004(1.3-2.6)	SL	comp	12-04-20	1000				1	X			X		018
DSLBC004(2.6-3.75)	SL	comp	12-04-20	1000				1	X			X		019
DSLBC004(3.75-4.9)	SL	comp	12-04-20	1000				1	X			X		020
DSLBG009(0.0-0.5)	SL	Grab	12-05-20	1450				2	X	X		X	X	021
DSRBG010(0.0-0.5)	SL	Grab	12-05-20	1250				2	X	X		X	X	022
DSRBG011(0.0-0.5)	SL	Grab	12-05-20	1050				2	X	X		X	X	023

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A
Lab Tracking #:
Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Profile/Line:
Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:
LAB USE ONLY
Lab Sample # / Comments:

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 3 of: 4

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
AECom	12/7/20	FEDEX	
Fedex	12/8/20 1020	Pace	12/8/20 1020

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical™

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here: 40219480

ALL SHADED AREAS are for LAB USE ONLY

Company: AECOM Technical Services, Inc.	Billing Information: Submit invoices to USAPImaging@aecom.com
Address: 27777 Franklin Road, Suite 2150 Southfield, MI 48034	
Report To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)	Email To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)
Copy To: Alison Bitel (Alison.Bitel@aecom.com)	Site Collection Info/Address: Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080
Customer Project Name/Number: 60644031.6.2	State: MI / County/City: Comstock / Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET
Phone: 248-204-4149 Email: Alison.Bitel@aecom.com	Site/Facility ID #: NA / Compliance Monitoring? [ ] Yes [x] No
Collected By (print): Jennifer Bush	Purchase Order # : Quote #: 00084840 / DW PWS ID #: DW Location Code: Na
Collected By (signature): [signature]	Turnaround Date Required: / Immediately Packed on Ice: [ ] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold:	Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply) / Field Filtered (if applicable): [ ] Yes [X] No / Analysis: Na

Container Preservative Type **: ____ / Lab Project Manager: ____

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

Lab Profile/Line:

Lab Sample Receipt Checklist:
- Custody Seals Present/Intact Y N NA
- Custody Signatures Present Y N NA
- Collector Signature Present Y N NA
- Bottles Intact Y N NA
- Correct Bottles Y N NA
- Sufficient Volume Y N NA
- Samples Received on Ice Y N NA
- VOA - Headspace Acceptable Y N NA
- USDA Regulated Soils Y N NA
- Samples in Holding Time Y N NA
- Residual Chlorine Present Y N NA
- Cl Strips: ____
- Sample pH Acceptable Y N NA
- pH Strips: ____
- Sulfide Present Y N NA
- Lead Acetate Strips: ____

LAB USE ONLY: Lab Sample # / Comments: ____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PCB (8082_A)	TPH (8015 M)	Lab Sample # / Comments
DSRBC011 (0-1.2)	SL	Comp	12-05-20	1110				1	X	X	024
DSRBC011 (1.2-2.4)	SL	Comp	12-05-20	1110				1	X	X	025
DSRBC011 (2.4-4.0)	SL	Comp	12-05-20	1110				1	X	X	026

JB

JB

Customer Remarks / Special Conditions / Possible Hazards:

Type of Ice Used: (Wet) Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y (N) N/A

Lab Tracking #:

Samples received via: (FEDEX) UPS Client Courier Pace Courier

LAB Sample Temperature Info:
- Temp Blank Received: Y N NA
- Therm ID#: ____
- Cooler 1 Temp Upon Receipt: ___ oC
- Cooler 1 Therm Corr. Factor: ___ oC
- Cooler 1 Corrected Temp: ___
- Comments: ____

Relinquished by/Company: (Signature) Ashlie Repetti / AECOM	Date/Time: 12/7/20 1600	Received by/Company: (Signature) FedEx	Date/Time:	MTJL LAB USE ONLY Table #:
Relinquished by/Company: (Signature) Fedex	Date/Time: 12/8/20 1020	Received by/Company: (Signature) Pace	Date/Time: 12/8/20 1020	Acctnum: Template: Prelogin: PM: PB:
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:	

Trip Blank Received: Y N NA HCL MeOH TSP Other

Non Conformance(s): YES / NO

Page: 4 of: 4

Sample Preservation Receipt Form

Client Name: Aecom

Project # 40219480

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

All containers needing preservation have been checked and noted below: □Yes □No ☒N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Initial when completed:

Date/Time:

Pace Lab #	Glass								Plastic					Vials						Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN							
001																				2													2.5 / 5 / 10
002																				2													2.5 / 5 / 10
003																				2													2.5 / 5 / 10
004																				6													2.5 / 5 / 10
005																				2													2.5 / 5 / 10
006																				2													2.5 / 5 / 10
007																				2													2.5 / 5 / 10
008																				2													2.5 / 5 / 10
009																				2													2.5 / 5 / 10
010																				2													2.5 / 5 / 10
011																				6													2.5 / 5 / 10
012																				2													2.5 / 5 / 10
013																				2													2.5 / 5 / 10
014																				2													2.5 / 5 / 10
015																				1													2.5 / 5 / 10
016																				1													2.5 / 5 / 10
017																				3													2.5 / 5 / 10
018																				1													2.5 / 5 / 10
019																				1													2.5 / 5 / 10
020																				1													2.5 / 5 / 10

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : □Yes □No ☒N/A ***If yes look in headspace column**

G1U	1 liter amber glass
G1U	1 liter clear glass
G1H	1 liter amber glass HCL
4S	125 mL amber glass H2SO4
4U	120 mL amber glass unpres
5U	100 mL amber glass unpres
2S	500 mL amber glass H2SO4
3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Pace Analytical ~~Services, LLC~~
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

Sample Preservation Receipt Form

Client Name: Aecom

Project #: 40219480

	Glass								Plastic					Vials						Jars				General									
Pace Lab #	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
021																				2													2.5 / 5 / 10
022																				2													2.5 / 5 / 10
023																				2													2.5 / 5 / 10
024																				1													2.5 / 5 / 10
025																				1													2.5 / 5 / 10
026																				1													2.5 / 5 / 10
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12/8/20 VP

Pace Analytical® 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO#: 40219480

40219480

Client Name: Aecom

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☐ Client ☐ Pace Other:

Tracking #: 7810 3949 4361

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used SR - 86 **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 0 /Corr: 0.5

Temp Blank Present: ☒ yes ☐ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:
Date: 12/8/20 Initials: [illegible]
Labeled By Initials: SKW

Chain of Custody Present:	☒Yes ☐No ☐N/A	1. Copy 12-8-20 SKW
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD:	☒Yes ☐No ☐N/A	8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: S	☒Yes ☐No ☐N/A	12.
Trip Blank Present:	☐Yes ☐No ☒N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logi

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

☐ Samples Pre-Logged into eCOC.

State Of Origin: MI
Cert. Needed: ☐ Yes ☒ No

Workorder: 40219480 **Workorder Name:** 60644031.6.2 MORROW DAM LOGGIN **Owner Received Date:** 12/8/2020 **Results Requested By:** 12/30/2020

Report To

Rod Noltemeyer
Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

Subcontract To

Pace Analytical Minnesota
1700 Elm Street SE
Suite 200
Minneapolis, MN 55414
Phone (612)607-1700

Requested Analysis

WO#: 10541746
10541746

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	1668 PCB Congeners - Full List		LAB USE ONLY
1									
2									
3									
4	USCCG003(0.0-0.5)	RQS	12/3/2020 11:00	40219480004	Solid	1	X	DO MS/MSD ON THIS SAMPLE	004
5									
6	DSLBG004(0.0-0.5)	PS	12/4/2020 10:40	40219480006	Solid	1	X		006
7	DSCCG005(0.0-0.5)	PS	12/4/2020 11:40	40219480007	Solid	1	X		007
8									
9	USCCC004(1.0-2.0)	PS	12/3/2020 09:30	40219480011	Solid	1	X	Do MS/MSD on this sample	011
10									
11									
13									
14									
15									
16									
17									

ADDITIONAL MATERIAL FOR MN WORKORDER 10541746

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
	[illegible]	12/11/20 1700	TN/Pace	121420/850	ADDITIONAL MATERIAL FOR MN WORKORDER 10541746

Cooler Temperature on Receipt 1.7 °C	Custody Seal (Y) or N	Received on Ice (Y) or N	Samples Intact (Y) or N

*In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.

This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) - MN**	Document Revised: 12Aug2020 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0150 Rev.01**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: Green Bay

Project #:

WO#: 10541746
PM: SCU **Due Date: 01/04/21**
CLIENT: PASI-WI

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☑ Commercial

Tracking Number: _____ See Exceptions ☐ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☑ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☑ No **Were All Container Temps Taken?** ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** _____ °C

Correction Factor: True **Cooler Temp Corrected w/temp blank:** 1.7 °C

Average Corrected Temp (no temp blank only): _____ °C ☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: (☑ N/A, water sample/Other: _____)

Date/Initials of Person Examining Contents: 12 14 20 TN

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☐ No	☑ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other _____
Rush Turn Around Time Requested?	☐ Yes	☑ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used?	☑ Yes	☐ No		8.
-Pace Containers Used?	☐ Yes	☑ No		
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☐ Water ☑ Soil ☐ Oil ☐ Other _____	☑ Yes	☐ No		11. If no, write ID/ Date/Time on Container Below: See Exception ☐ ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☑ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☑ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** See Exception ☐ ENV-FRM-MIN4-0142
				Res. Chlorine | 0-6 Roll | 0-6 Strip | 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☑ N/A	13. See Exception ☐ ENV-FRM-MIN4-0140
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☑ N/A	
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Scott C. Hugo **Date:** 12/14/20

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: TN (2)

Internal Transfer Chain of Custody

Pace Analytical®
www.pacelabs.com

[x] Samples Pre-Logged into eCOC.

State Of Origin: MI
Cert. Needed: [ ] Yes [x] No

Workorder: 40219480 **Workorder Name:** 60644031.6.2 MORROW DAM LOGGIN **Owner Received Date:** 12/8/2020 **Results Requested By:** 12/30/2020

Report To

Tod Noltemeyer
Pace Analytical Green Bay
1241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

Subcontract To

Pace Analytical Minnesota
1700 Elm Street SE
Suite 200
Minneapolis, MN 55414
Phone (612)607-1700

Requested Analysis

WO#: 10541746
10541746

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	1668 PCB Congeners - Full List	LAB USE ONLY
1	DSLBG007(0.0-0.5)	PS	12/4/2020 15:00	40219480013	Solid	2	X	061
2	DSRBG010(0.0-0.5)	PS	12/5/2020 12:50	40219480022	Solid	2	X	062
3	DSRBG011(0.0-0.5)	PS	12/5/2020 10:50	40219480023	Solid	2	X	063

additional material for Pace MN 10541746

Transfers	Released By	Date/Time	Received By	Date/Time	Comments
					Additional material for Pace MN #10541746
	Susan K Lifsher	1-11-21 SEW	IJ-PACE	1/12/21	9:00 1/12/21 IJ

Cooler Temperature on Receipt 1.7 °C	Custody Seal Y or N	Received on Ice Y or N	Samples Intact Y or N

**In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.*
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) - MN**	Document Revised: 12Aug2020 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0150 Rev.01**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: Green Bay

Project #:

WO#: 10541746
PM: SCU **Due Date: 01/04/21**
CLIENT: PASI-WI

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☑ Commercial

Tracking Number: _____ See Exceptions ☐ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☑ Yes ☐ No **Seals Intact?** ☑ Yes ☐ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☐ T1(0461) ☐ T2(1336) ☐ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☑ No **Were All Container Temps Taken?** ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 1.6 °C

Correction Factor: +0.1 **Cooler Temp Corrected w/temp blank:** 1.7 °C

Average Corrected Temp (no temp blank only): _____ °C ☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: (☑ N/A, water sample/Other: _____) **Date/Initials of Person Examining Contents:** 1-12-21 JN

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☑ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☑ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☐ No	☑ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other _____
Rush Turn Around Time Requested?	☑ Yes	☐ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used?	☑ Yes	☐ No		8.
-Pace Containers Used?	☐ Yes	☑ No		
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☐ Water ☐ Soil ☐ Oil ☐ Other _____	☑ Yes	☐ No		11. If no, write ID/ Date/Time on Container Below: See Exception ☐ ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☑ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☑ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No **pH Paper Lot#** See Exception ☐ ENV-FRM-MIN4-0142
				Res. Chlorine: 0-6 Roll: 0-6 Strip: 0-14 Strip:
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☑ N/A	13. See Exception ☐ ENV-FRM-MIN4-0140
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☑ N/A	
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: Sara C. Thuy **Date:** 01/12/21

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: IJP

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Reporting Flags

A = Reporting Limit based on signal to noise (EDL)

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

REPORT OF LABORATORY ANALYSIS

Appendix B

Sample Analysis Summary

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	USRBG001(0.0-0.5)		
Lab Sample ID	40219480001		
Filename	Y201225B_04		
Injected By	CVS		
Total Amount Extracted	21.0 g	Matrix	Solid
% Moisture	52.3	Dilution	NA
Dry Weight Extracted	10.00 g	Collected	12/03/2020 16:00
ICAL ID	Y201225B02	Received	12/10/2020 08:45
CCal Filename(s)	Y201225B_01	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/25/2020 16:35

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.076	3.20	2.0	0.891	45
13C-4-MoCB	3	8.209	3.20	2.0	1.01	50
13C-2,2'-DiCB	4	8.424	1.54	2.0	0.948	47
13C-4,4'-DiCB	15	14.304	1.53	2.0	1.22	61
13C-2,2',6-TrCB	19	11.513	1.09	2.0	1.08	54
13C-3,4,4'-TrCB	37	21.213	1.02	2.0	1.39	70
13C-2,2',6,6'-TeCB	54	14.540	0.80	2.0	1.02	51
13C-3,4,4',5-TeCB	81	27.775	0.84	2.0	1.43	71
13C-3,3',4,4'-TeCB	77	28.345	0.84	2.0	1.43	72
13C-2,2',4,6,6'-PeCB	104	19.989	1.56	2.0	1.45	73
13C-2,3,3',4,4'-PeCB	105	31.653	1.65	2.0	1.76	88
13C-2,3,4,4',5-PeCB	114	31.066	1.64	2.0	1.71	86
13C-2,3',4,4',5-PeCB	118	30.563	1.49	2.0	1.75	88
13C-2,3',4,4',5'-PeCB	123	30.262	1.52	2.0	1.71	86
13C-3,3',4,4',5-PeCB	126	34.655	1.57	2.0	1.83	91
13C-2,2',4,4',6,6'-HxCB	155	25.662	1.19	2.0	0.984	49
13C-HxCB(156/157)	156/157	37.511	1.25	4.0	2.39	60
13C-2,3',4,4',5,5'-HxCB	167	36.437	1.25	2.0	1.21	61
13C-3,3',4,4',5,5'-HxCB	169	40.881	1.27	2.0	1.24	62
13C-2,2',3,4',5,6,6'-HpCB	188	31.033	1.11	2.0	1.30	65
13C-2,3,3',4,4',5,5'-HpCB	189	44.146	1.09	2.0	1.30	65
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.169	0.91	2.0	1.13	56
13C-2,3,3',4,4',5,5',6-OcCB	205	48.349	0.86	2.0	1.17	59
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.776	0.79	2.0	1.00	50
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.391	0.78	2.0	1.14	57
13C-DeCB	209	55.439	0.71	2.0	0.989	49
CleanupStandards						
13C-2,4,4'-TrCB	28	17.306	1.07	2.0	1.32	66
13C-2,3,3',5,5'-PeCB	111	28.429	1.58	2.0	1.65	82
13C-2,2',3,3',5,5',6-HpCB	178	33.967	1.11	2.0	1.27	63
Recovery Standards						
13C-2,5-DiCB	9	10.435	1.63	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.101	0.81	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.847	1.55	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.531	1.31	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.486	0.94	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses
Results reported on a dry weight basis

* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USRBG001(0.0-0.5)
Lab Sample ID 40219480001
Filename Y201225B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.088	3.65	---	IJ	6.27	2.29
2		8.053	3.12	6.70	J	---	3.25
3		8.233	3.26	12.9	J	---	2.54
4		8.436	1.48	25.4	B	---	6.99
5		---	---	ND		---	1.95
6		10.830	1.77	16.7	J	---	3.68
7		10.615	1.30	---	IJ	4.42	3.05
8		11.250	1.62	47.3		---	4.39
9		10.435	1.66	3.91	J	---	3.35
10		---	---	ND		---	3.23
11		13.717	1.55	65.7	B	---	18.8
12	12/13	14.017	1.42	14.0	J	---	4.79
13	12/13	14.017	1.42	(14.0)	J	---	4.79
14		---	---	ND		---	2.84
15		14.316	1.53	64.8		---	7.16
16		14.233	1.18	53.3		---	1.97
17		13.801	1.05	78.5		---	1.77
18	18/30	13.394	1.08	166		---	25.0
19		11.513	1.12	19.4	J	---	3.17
20	20/28	17.323	1.10	432		---	20.9
21	21/33	17.541	1.11	192		---	12.6
22		17.927	1.14	102		---	8.59
23		---	---	ND		---	2.03
24		---	---	ND		---	3.03
25		16.736	1.13	51.5		---	2.46
26	26/29	16.501	1.08	67.9		---	3.95
27		14.005	1.18	13.1	J	---	2.21
28	20/28	17.323	1.10	(432)		---	20.9
29	26/29	16.501	1.08	(67.9)		---	3.95
30	18/30	13.394	1.08	(166)		---	25.0
31		17.038	1.08	327		---	17.2
32		14.774	1.03	66.9		---	5.39
33	21/33	17.541	1.11	(192)		---	12.6
34		16.082	1.98	---	IJ	3.03	1.74
35		20.828	1.35	---	IJ	4.01	3.28
36		---	---	ND		---	2.70
37		21.230	1.10	108		---	5.74
38		---	---	ND		---	1.41
39		19.855	0.96	3.04	J	---	1.95
40	40/41/71	21.063	0.78	371		---	9.88
41	40/41/71	21.063	0.78	(371)		---	9.88
42		20.576	0.78	184		---	5.25
43	43/73	19.319	0.84	25.9	J	---	8.27
44	44/47/65	20.056	0.76	738		---	14.4

Conc = Concentration
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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USRBG001(0.0-0.5)
Lab Sample ID 40219480001
Filename Y201225B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.357	0.78	111		---	6.52
46		17.642	0.84	34.8		---	3.47
47	44/47/65	20.056	0.76	(738)		---	14.4
48		19.855	0.70	114		---	3.57
49	49/69	19.604	0.76	460		---	8.45
50	50/53	16.736	0.77	89.2		---	8.55
51	45/51	17.357	0.78	(111)		---	6.52
52		19.118	0.80	814		---	18.2
53	50/53	16.736	0.77	(89.2)		---	8.55
54		14.523	0.80	2.75	J	---	2.67
55		---	---	ND		---	3.73
56		24.824	0.82	313		---	5.66
57		22.862	0.70	11.8	J	---	4.67
58		---	---	ND		---	1.35
59	59/62/75	20.392	0.78	48.2	J	---	8.58
60		25.059	0.76	209		---	5.69
61	61/70/74/76	23.834	0.80	1290		---	24.5
62	59/62/75	20.392	0.78	(48.2)	J	---	8.58
63		23.482	0.76	27.7		---	2.92
64		21.281	0.77	355		---	7.02
65	44/47/65	20.056	0.76	(738)		---	14.4
66		24.153	0.81	795		---	10.5
67		23.248	0.80	12.8	J	---	3.78
68		22.459	0.82	7.36	J	---	3.44
69	49/69	19.604	0.76	(460)		---	8.45
70	61/70/74/76	23.834	0.80	(1290)		---	24.5
71	40/41/71	21.063	0.78	(371)		---	9.88
72		22.158	0.74	9.33	J	---	2.60
73	43/73	19.319	0.84	(25.9)	J	---	8.27
74	61/70/74/76	23.834	0.80	(1290)		---	24.5
75	59/62/75	20.392	0.78	(48.2)	J	---	8.58
76	61/70/74/76	23.834	0.80	(1290)		---	24.5
77		28.362	0.79	80.8		---	4.40
78		---	---	ND		---	3.93
79		26.802	0.87	7.13	J	---	3.06
80		25.394	0.88	4.42	J	---	3.11
81		27.792	0.87	5.28	J	---	4.94
82		27.926	1.55	147		---	12.1
83		26.232	1.62	55.2		---	10.8
84		23.969	1.56	275		---	6.32
85	85/116/117	27.507	1.56	281		---	11.5
86	86/87/97/108/119/125	26.903	1.55	713		---	26.7
87	86/87/97/108/119/125	26.903	1.55	(713)		---	26.7
88	88/91	23.784	1.58	171		---	13.0

Conc = Concentration
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ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USRBG001(0.0-0.5)
Lab Sample ID 40219480001
Filename Y201225B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.455	1.59	14.0	J	---	4.06
90	90/101/113	25.863	1.54	720		---	14.4
91	88/91	23.784	1.58	(171)		---	13.0
92		25.394	1.51	202		---	5.92
93	93/98/100/102	23.281	1.72	47.8	J	---	10.5
94		22.510	1.67	5.67	J	---	3.30
95		22.929	1.59	710		---	11.3
96		20.341	1.49	8.24	J	---	5.15
97	86/87/97/108/119/125	26.903	1.55	(713)		---	26.7
98	93/98/100/102	23.281	1.72	(47.8)	J	---	10.5
99		26.383	1.53	511		---	10.1
100	93/98/100/102	23.281	1.72	(47.8)	J	---	10.5
101	90/101/113	25.863	1.54	(720)		---	14.4
102	93/98/100/102	23.281	1.72	(47.8)	J	---	10.5
103		22.309	1.62	8.04	J	---	5.05
104		---	---	ND		---	7.31
105		31.687	1.60	469		---	3.89
106		---	---	ND		---	3.25
107	107/124	29.926	1.62	39.2	J	---	5.47
108	86/87/97/108/119/125	26.903	1.55	(713)		---	26.7
109		30.161	1.64	65.0		---	2.83
110	110/115	27.674	1.58	1480		---	8.90
111		---	---	ND		---	3.48
112		---	---	ND		---	4.50
113	90/101/113	25.863	1.54	(720)		---	14.4
114		31.066	1.62	25.5		---	4.80
115	110/115	27.674	1.58	(1480)		---	8.90
116	85/116/117	27.507	1.56	(281)		---	11.5
117	85/116/117	27.507	1.56	(281)		---	11.5
118		30.580	1.58	1060		---	9.46
119	86/87/97/108/119/125	26.903	1.55	(713)		---	26.7
120		28.882	1.23	---	IJ	4.56	2.54
121		---	---	ND		---	4.74
122		30.882	1.61	13.7	J	---	2.78
123		30.245	1.49	32.4		---	5.94
124	107/124	29.926	1.62	(39.2)	J	---	5.47
125	86/87/97/108/119/125	26.903	1.55	(713)		---	26.7
126		34.655	1.28	---	IJ	6.17	2.98
127		---	---	ND		---	3.29
128	128/166	34.722	1.27	295		---	6.80
129	129/138/163	33.548	1.25	1620		---	27.3
130		32.928	1.22	101		---	4.48
131		30.195	1.37	17.8	J	---	7.49
132		30.631	1.26	408		---	10.8

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USRBG001(0.0-0.5)
Lab Sample ID 40219480001
Filename Y201225B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		31.201	1.36	20.0		---	3.99
134	134/143	29.625	1.14	63.0		---	9.43
135	135/151	28.580	1.33	318		---	15.1
136		26.215	1.30	104		---	7.74
137		33.146	1.23	87.1		---	4.56
138	129/138/163	33.548	1.25	(1620)		---	27.3
139	139/140	30.027	1.08	26.6	J	---	7.83
140	139/140	30.027	1.08	(26.6)	J	---	7.83
141		32.559	1.17	187		---	5.42
142		---	---	ND		---	2.54
143	134/143	29.625	1.14	(63.0)		---	9.43
144		29.116	1.34	45.8		---	15.5
145		---	---	ND		---	6.22
146		31.788	1.24	184		---	6.06
147	147/149	29.457	1.25	773		---	28.1
148		---	---	ND		---	11.6
149	147/149	29.457	1.25	(773)		---	28.1
150		---	---	ND		---	7.31
151	135/151	28.580	1.33	(318)		---	15.1
152		---	---	ND		---	7.95
153	153/168	32.391	1.26	978		---	12.9
154		28.865	1.25	12.4	J	---	8.05
155		---	---	ND		---	4.80
156	156/157	37.511	1.26	181		---	7.79
157	156/157	37.511	1.26	(181)		---	7.79
158		33.934	1.22	136		---	3.75
159		---	---	ND		---	5.98
160		---	---	ND		---	5.11
161		---	---	ND		---	3.94
162		36.001	1.06	5.71	J	---	3.83
163	129/138/163	33.548	1.25	(1620)		---	27.3
164		33.246	1.22	97.1		---	3.42
165		---	---	ND		---	4.84
166	128/166	34.722	1.27	(295)		---	6.80
167		36.454	1.17	70.7		---	4.42
168	153/168	32.391	1.26	(978)		---	12.9
169		---	---	ND		---	4.95
170		40.160	1.04	208		---	5.96
171	171/173	36.655	0.96	66.0		---	7.93
172		38.265	0.94	33.8		---	2.63
173	171/173	36.655	0.96	(66.0)		---	7.93
174		35.649	1.03	173		---	4.22
175		34.621	0.96	7.80	J	---	3.94
176		32.190	1.04	21.6		---	6.74

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ng's = Nanograms

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USRBG001(0.0-0.5)
Lab Sample ID 40219480001
Filename Y201225B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.069	1.08	110		---	9.21
178		33.984	1.09	37.1		---	4.51
179		31.352	1.00	68.2		---	9.67
180	180/193	38.886	1.07	385		---	7.46
181		---	---	ND		---	1.83
182		---	---	ND		---	5.46
183	183/185	35.465	1.04	113		---	6.95
184		---	---	ND		---	7.62
185	183/185	35.465	1.04	(113)		---	6.95
186		---	---	ND		---	3.88
187		34.856	1.05	202		---	8.30
188		---	---	ND		---	3.66
189		44.124	1.13	10.7	J	---	2.72
190		40.780	1.04	42.5		---	6.37
191		39.255	1.03	8.06	J	---	5.48
192		---	---	ND		---	2.84
193	180/193	38.886	1.07	(385)		---	7.46
194		47.529	0.98	90.8		---	5.19
195		43.758	0.89	35.8		---	6.50
196		41.786	0.93	45.9		---	4.32
197	197/200	---	---	ND		---	16.0
198	198/199	40.998	0.88	117		---	15.4
199	198/199	40.998	0.88	(117)		---	15.4
200	197/200	---	---	ND		---	16.0
201		37.058	0.98	11.9	J	---	7.29
202		36.186	0.87	26.4		---	3.91
203		42.021	0.82	69.9		---	5.16
204		---	---	ND		---	5.95
205		---	---	ND		---	4.81
206		51.840	0.73	89.2		---	7.79
207		44.771	0.90	---	IJ	10.4	5.76
208		43.413	0.86	31.0		---	7.31
209		55.504	0.72	66.9		---	5.73

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	USRBG001(0.0-0.5)
Lab Sample ID	40219480001
Filename	Y201225B_04

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	19.6
Total Dichloro Biphenyls	238
Total Trichloro Biphenyls	1680
Total Tetrachloro Biphenyls	6120
Total Pentachloro Biphenyls	7050
Total Hexachloro Biphenyls	5730
Total Heptachloro Biphenyls	1490
Total Octachloro Biphenyls	398
Total Nonachloro Biphenyls	120
DecachloroBiphenyls	66.9
Total PCBs	22900

ND = Not Detected
Results reported on a dry weight basis

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Minneapolis, MN 55414

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	USCCG002(0.0-0.5)		
Lab Sample ID	40219480002		
Filename	Y201224A_14		
Injected By	CVS		
Total Amount Extracted	12.3 g	Matrix	Solid
% Moisture	18.4	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	12/03/2020 13:30
ICAL ID	Y201224A02	Received	12/10/2020 08:45
CCal Filename(s)	Y201224A_03	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/24/2020 22:04

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.088	2.70	2.0	0.891	45
13C-4-MoCB	3	8.221	2.87	2.0	0.918	46
13C-2,2'-DiCB	4	8.448	1.63	2.0	0.933	47
13C-4,4'-DiCB	15	14.317	1.60	2.0	1.14	57
13C-2,2',6-TrCB	19	11.538	1.06	2.0	1.04	52
13C-3,4,4'-TrCB	37	21.214	1.02	2.0	1.19	59
13C-2,2',6,6'-TeCB	54	14.557	0.80	2.0	0.990	49
13C-3,4,4',5-TeCB	81	27.759	0.81	2.0	1.30	65
13C-3,3',4,4'-TeCB	77	28.313	0.78	2.0	1.29	64
13C-2,2',4,6,6'-PeCB	104	19.973	1.54	2.0	1.21	60
13C-2,3,3',4,4'-PeCB	105	31.638	1.53	2.0	1.36	68
13C-2,3,4,4',5-PeCB	114	31.034	1.63	2.0	1.40	70
13C-2,3',4,4',5-PeCB	118	30.548	1.56	2.0	1.37	69
13C-2,3',4,4',5'-PeCB	123	30.229	1.54	2.0	1.42	71
13C-3,3',4,4',5-PeCB	126	34.623	1.61	2.0	1.37	69
13C-2,2',4,4',6,6'-HxCB	155	25.546	1.18	2.0	1.19	60
13C-HxCB(156/157)	156/157	37.496	1.28	4.0	2.54	64
13C-2,3',4,4',5,5'-HxCB	167	36.422	1.28	2.0	1.31	65
13C-3,3',4,4',5,5'-HxCB	169	40.833	1.28	2.0	1.27	64
13C-2,2',3,4',5,6,6'-HpCB	188	31.034	1.10	2.0	1.39	70
13C-2,3,3',4,4',5,5'-HpCB	189	44.105	1.05	2.0	1.39	69
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.154	0.93	2.0	1.31	65
13C-2,3,3',4,4',5,5',6-OcCB	205	48.308	0.91	2.0	1.29	65
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.757	0.84	2.0	1.30	65
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.372	0.82	2.0	1.35	67
13C-DeCB	209	55.442	0.70	2.0	1.28	64
CleanupStandards						
13C-2,4,4'-TrCB	28	17.307	1.05	2.0	1.21	61
13C-2,3,3',5,5'-PeCB	111	28.396	1.58	2.0	1.27	63
13C-2,2',3,3',5,5',6-HpCB	178	33.952	1.10	2.0	1.34	67
Recovery Standards						
13C-2,5-DiCB	9	10.471	1.56	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.101	0.80	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.764	1.56	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.516	1.29	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.467	0.90	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
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REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG002(0.0-0.5)
Lab Sample ID 40219480002
Filename Y201224A_14

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.100	3.13	4.88	J	---	2.29
2		---	---	ND		---	3.25
3		8.233	2.54	---	IJ	4.00	2.54
4		8.460	1.31	---	I	37.1	6.98
5		---	---	ND		---	1.95
6		10.867	1.37	17.6	J	---	3.68
7		10.651	1.90	---	IJ	3.37	3.05
8		11.286	1.41	31.8		---	4.39
9		10.495	1.56	3.54	J	---	3.35
10		---	---	ND		---	3.23
11		13.730	1.48	44.7	B	---	18.8
12	12/13	14.006	1.54	6.62	J	---	4.79
13	12/13	14.006	1.54	(6.62)	J	---	4.79
14		---	---	ND		---	2.84
15		14.329	1.45	27.9		---	7.15
16		14.257	1.13	23.7	B	---	1.97
17		13.826	1.01	48.9		---	1.77
18	18/30	13.406	1.06	77.2		---	25.0
19		11.550	1.24	---	IJ	12.7	3.17
20	20/28	17.324	1.07	204		---	20.9
21	21/33	17.542	1.14	79.6		---	12.6
22		17.927	1.08	46.3		---	8.58
23		---	---	ND		---	2.03
24		---	---	ND		---	3.03
25		16.737	1.04	48.1		---	2.46
26	26/29	16.502	1.07	59.5		---	3.95
27		14.017	1.29	---	IJ	8.75	2.21
28	20/28	17.324	1.07	(204)		---	20.9
29	26/29	16.502	1.07	(59.5)		---	3.95
30	18/30	13.406	1.06	(77.2)		---	25.0
31		17.039	1.04	145		---	17.2
32		14.792	1.01	38.1		---	5.38
33	21/33	17.542	1.14	(79.6)		---	12.6
34		---	---	ND		---	1.74
35		20.879	1.60	---	IJ	4.05	3.28
36		---	---	ND		---	2.70
37		21.231	1.16	46.9	B	---	5.73
38		---	---	ND		---	1.41
39		---	---	ND		---	1.95
40	40/41/71	21.046	0.89	115		---	9.87
41	40/41/71	21.046	0.89	(115)		---	9.87
42		20.577	0.86	75.2		---	5.24
43	43/73	19.319	0.75	8.71	J	---	8.26
44	44/47/65	20.057	0.78	316		---	14.4

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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG002(0.0-0.5)
Lab Sample ID 40219480002
Filename Y201224A_14

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.357	0.73	38.6	J	---	6.51
46		17.659	0.77	13.2	J	---	3.47
47	44/47/65	20.057	0.78	(316)		---	14.4
48		19.856	0.80	25.8		---	3.57
49	49/69	19.604	0.78	233		---	8.44
50	50/53	16.737	0.79	38.0	J	---	8.54
51	45/51	17.357	0.73	(38.6)	J	---	6.51
52		19.118	0.82	517		---	18.2
53	50/53	16.737	0.79	(38.0)	J	---	8.54
54		---	---	ND		---	2.67
55		---	---	ND		---	3.73
56		24.724	0.76	92.5		---	5.65
57		---	---	ND		---	4.67
58		---	---	ND	A	---	1.53
59	59/62/75	20.409	0.83	19.3	J	---	8.57
60		24.925	0.77	28.9		---	5.68
61	61/70/74/76	23.768	0.78	420		---	24.5
62	59/62/75	20.409	0.83	(19.3)	J	---	8.57
63		23.449	0.84	9.74	J	---	2.92
64		21.281	0.74	121		---	7.01
65	44/47/65	20.057	0.78	(316)		---	14.4
66		24.104	0.80	226		---	10.5
67		23.215	0.61	---	IJ	4.96	3.78
68		22.410	0.66	6.06	J	---	3.44
69	49/69	19.604	0.78	(233)		---	8.44
70	61/70/74/76	23.768	0.78	(420)		---	24.5
71	40/41/71	21.046	0.89	(115)		---	9.87
72		22.158	0.73	6.00	J	---	2.60
73	43/73	19.319	0.75	(8.71)	J	---	8.26
74	61/70/74/76	23.768	0.78	(420)		---	24.5
75	59/62/75	20.409	0.83	(19.3)	J	---	8.57
76	61/70/74/76	23.768	0.78	(420)		---	24.5
77		28.329	0.89	28.8	B	---	4.40
78		---	---	ND		---	3.93
79		26.820	0.80	4.99	J	---	3.06
80		---	---	ND		---	3.11
81		---	---	ND		---	4.94
82		27.927	1.55	72.7		---	12.1
83		26.216	1.60	38.7		---	10.8
84		23.936	1.57	171		---	6.31
85	85/116/117	27.491	1.66	96.4		---	11.5
86	86/87/97/108/119/125	26.904	1.54	380		---	26.7
87	86/87/97/108/119/125	26.904	1.54	(380)		---	26.7
88	88/91	23.751	1.60	78.1		---	13.0

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Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG002(0.0-0.5)
Lab Sample ID 40219480002
Filename Y201224A_14

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.405	1.48	5.27	J	---	4.06
90	90/101/113	25.797	1.58	533		---	14.4
91	88/91	23.751	1.60	(78.1)		---	13.0
92		25.227	1.63	117		---	5.91
93	93/98/100/102	23.248	1.51	21.5	J	---	10.5
94		---	---	ND		---	3.30
95		22.913	1.54	423		---	11.3
96		---	---	ND		---	5.14
97	86/87/97/108/119/125	26.904	1.54	(380)		---	26.7
98	93/98/100/102	23.248	1.51	(21.5)	J	---	10.5
99		26.351	1.51	252		---	10.1
100	93/98/100/102	23.248	1.51	(21.5)	J	---	10.5
101	90/101/113	25.797	1.58	(533)		---	14.4
102	93/98/100/102	23.248	1.51	(21.5)	J	---	10.5
103		22.292	1.38	6.08	J	---	5.05
104		---	---	ND		---	7.30
105		31.671	1.66	184		---	3.89
106		---	---	ND		---	3.25
107	107/124	29.910	1.63	16.0	J	---	5.46
108	86/87/97/108/119/125	26.904	1.54	(380)		---	26.7
109		30.145	1.57	36.1		---	2.83
110	110/115	27.659	1.54	793		---	8.89
111		---	---	ND		---	3.48
112		---	---	ND		---	4.50
113	90/101/113	25.797	1.58	(533)		---	14.4
114		31.068	1.69	8.82	J	---	4.80
115	110/115	27.659	1.54	(793)		---	8.89
116	85/116/117	27.491	1.66	(96.4)		---	11.5
117	85/116/117	27.491	1.66	(96.4)		---	11.5
118		30.565	1.56	487		---	9.45
119	86/87/97/108/119/125	26.904	1.54	(380)		---	26.7
120		---	---	ND		---	2.54
121		---	---	ND		---	4.74
122		30.867	1.63	6.29	J	---	2.78
123		30.263	1.36	7.90	J	---	5.93
124	107/124	29.910	1.63	(16.0)	J	---	5.46
125	86/87/97/108/119/125	26.904	1.54	(380)		---	26.7
126		---	---	ND		---	2.98
127		---	---	ND		---	3.29
128	128/166	34.707	1.28	80.5		---	6.79
129	129/138/163	33.533	1.24	453		---	27.3
130		32.929	1.32	30.3		---	4.48
131		30.196	1.24	7.88	J	---	7.48
132		30.598	1.26	152		---	10.8

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG002(0.0-0.5)
Lab Sample ID 40219480002
Filename Y201224A_14

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		31.168	1.36	5.98	J	---	3.99
134	134/143	29.609	1.20	23.5	J	---	9.42
135	135/151	28.581	1.27	102		---	15.1
136		26.183	1.31	41.0		---	7.73
137		33.147	1.23	25.1		---	4.56
138	129/138/163	33.533	1.24	(453)		---	27.3
139	139/140	30.011	1.09	7.84	J	---	7.82
140	139/140	30.011	1.09	(7.84)	J	---	7.82
141		32.543	1.18	52.2		---	5.41
142		---	---	ND		---	2.54
143	134/143	29.609	1.20	(23.5)	J	---	9.42
144		29.101	1.10	16.1	J	---	15.5
145		---	---	ND		---	6.21
146		31.806	1.13	46.3		---	6.05
147	147/149	29.458	1.19	271		---	28.1
148		---	---	ND		---	11.6
149	147/149	29.458	1.19	(271)		---	28.1
150		---	---	ND		---	7.30
151	135/151	28.581	1.27	(102)		---	15.1
152		---	---	ND		---	7.94
153	153/168	32.376	1.26	267		---	12.9
154		---	---	ND		---	8.04
155		---	---	ND		---	4.80
156	156/157	37.496	1.27	51.8		---	7.78
157	156/157	37.496	1.27	(51.8)		---	7.78
158		33.918	1.32	38.8		---	3.75
159		---	---	ND		---	5.97
160		---	---	ND		---	5.10
161		---	---	ND		---	3.94
162		---	---	ND		---	3.83
163	129/138/163	33.533	1.24	(453)		---	27.3
164		33.248	1.11	24.5		---	3.42
165		---	---	ND		---	4.84
166	128/166	34.707	1.28	(80.5)		---	6.79
167		36.439	1.35	16.5	J	---	4.42
168	153/168	32.376	1.26	(267)		---	12.9
169		---	---	ND		---	4.95
170		40.145	0.97	35.8		---	5.95
171	171/173	36.674	1.38	---	IJ	9.90	7.92
172		38.234	1.11	6.36	J	---	2.63
173	171/173	36.674	1.38	---	IJ	(9.90)	7.92
174		35.634	1.09	34.8		---	4.22
175		---	---	ND		---	3.94
176		---	---	ND		---	6.73

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG002(0.0-0.5)
Lab Sample ID 40219480002
Filename Y201224A_14

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.037	0.96	21.9		---	9.20
178		34.002	1.11	7.74	J	---	4.51
179		31.336	1.00	14.3	J	---	9.66
180	180/193	38.871	1.04	64.8		---	7.45
181		---	---	ND		---	1.83
182		---	---	ND		---	5.45
183	183/185	35.433	1.11	23.3	J	---	6.94
184		---	---	ND		---	7.61
185	183/185	35.433	1.11	(23.3)	J	---	6.94
186		---	---	ND		---	3.88
187		34.841	1.12	40.2		---	8.29
188		---	---	ND		---	3.66
189		---	---	ND		---	2.72
190		40.766	1.05	7.51	J	---	6.36
191		---	---	ND		---	5.47
192		---	---	ND		---	2.84
193	180/193	38.871	1.04	(64.8)		---	7.45
194		47.511	1.00	9.17	J	---	5.18
195		---	---	ND		---	6.49
196		41.755	1.14	---	IJ	6.20	4.32
197	197/200	---	---	ND		---	16.0
198	198/199	---	---	ND		---	15.4
199	198/199	---	---	ND		---	15.4
200	197/200	---	---	ND		---	16.0
201		---	---	ND		---	7.28
202		---	---	ND		---	3.91
203		42.040	0.94	8.46	J	---	5.15
204		---	---	ND		---	5.94
205		---	---	ND		---	4.81
206		51.735	0.98	---	IJ	8.85	7.78
207		---	---	ND		---	5.75
208		---	---	ND		---	7.30
209		55.442	0.65	7.87	J	---	5.72

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	USCCG002(0.0-0.5)
Lab Sample ID	40219480002
Filename	Y201224A_14

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	4.88
Total Dichloro Biphenyls	132
Total Trichloro Biphenyls	818
Total Tetrachloro Biphenyls	2340
Total Pentachloro Biphenyls	3740
Total Hexachloro Biphenyls	1710
Total Heptachloro Biphenyls	257
Total Octachloro Biphenyls	17.6
Total Nonachloro Biphenyls	ND
DecachloroBiphenyls	7.87
Total PCBs	9030

ND = Not Detected
Results reported on a dry weight basis

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DUP-3		
Lab Sample ID	40219480003		
Filename	Y201225A_04		
Injected By	CVS		
Total Amount Extracted	12.6 g	Matrix	Solid
% Moisture	17.7	Dilution	NA
Dry Weight Extracted	10.4 g	Collected	12/03/2020
ICAL ID	Y201225A02	Received	12/10/2020 08:45
CCal Filename(s)	Y201225A_01	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/25/2020 02:57

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.100	3.06	2.0	1.16	58
13C-4-MoCB	3	8.221	2.86	2.0	1.25	62
13C-2,2'-DiCB	4	8.448	1.65	2.0	1.21	61
13C-4,4'-DiCB	15	14.317	1.53	2.0	1.45	73
13C-2,2',6-TrCB	19	11.537	1.11	2.0	1.34	67
13C-3,4,4'-TrCB	37	21.213	1.06	2.0	1.53	76
13C-2,2',6,6'-TeCB	54	14.557	0.81	2.0	1.21	60
13C-3,4,4',5-TeCB	81	27.741	0.82	2.0	1.56	78
13C-3,3',4,4'-TeCB	77	28.311	0.83	2.0	1.54	77
13C-2,2',4,6,6'-PeCB	104	19.989	1.60	2.0	1.46	73
13C-2,3,3',4,4'-PeCB	105	31.653	1.61	2.0	1.69	84
13C-2,3,4,4',5-PeCB	114	31.033	1.60	2.0	1.68	84
13C-2,3',4,4',5-PeCB	118	30.546	1.65	2.0	1.68	84
13C-2,3',4,4',5'-PeCB	123	30.228	1.60	2.0	1.66	83
13C-3,3',4,4',5-PeCB	126	34.621	1.61	2.0	1.77	89
13C-2,2',4,4',6,6'-HxCB	155	25.545	1.20	2.0	1.40	70
13C-HxCB(156/157)	156/157	37.494	1.30	4.0	3.06	77
13C-2,3',4,4',5,5'-HxCB	167	36.421	1.31	2.0	1.55	78
13C-3,3',4,4',5,5'-HxCB	169	40.847	1.32	2.0	1.55	78
13C-2,2',3,4',5,6,6'-HpCB	188	31.016	1.08	2.0	1.57	79
13C-2,3,3',4,4',5,5'-HpCB	189	44.103	1.08	2.0	1.63	82
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.152	0.97	2.0	1.49	75
13C-2,3,3',4,4',5,5',6-OcCB	205	48.305	0.90	2.0	1.51	75
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.754	0.76	2.0	1.49	75
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.391	0.80	2.0	1.51	76
13C-DeCB	209	55.439	0.68	2.0	1.45	73
CleanupStandards						
13C-2,4,4'-TrCB	28	17.307	1.10	2.0	1.39	70
13C-2,3,3',5,5'-PeCB	111	28.395	1.52	2.0	1.52	76
13C-2,2',3,3',5,5',6-HpCB	178	33.967	1.11	2.0	1.54	77
Recovery Standards						
13C-2,5-DiCB	9	10.495	1.51	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.084	0.81	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.763	1.63	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.514	1.25	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.443	0.90	2.0	NA	NA

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REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-3
Lab Sample ID 40219480003
Filename Y201225A_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.112	2.80	6.81	J	---	2.21
2		---	---	ND		---	3.13
3		8.233	3.45	6.79	J	---	2.45
4		8.460	1.37	41.1	B	---	6.74
5		---	---	ND		---	1.88
6		10.878	1.74	20.7		---	3.55
7		10.663	1.39	5.18	J	---	2.94
8		11.286	1.50	50.4		---	4.23
9		10.519	1.54	4.75	J	---	3.23
10		---	---	ND		---	3.11
11		13.742	1.62	38.9	B	---	18.1
12	12/13	14.005	1.53	7.74	J	---	4.62
13	12/13	14.005	1.53	(7.74)	J	---	4.62
14		---	---	ND		---	2.74
15		14.341	1.64	40.8		---	6.90
16		14.257	1.18	33.4	B	---	1.90
17		13.825	1.05	66.1		---	1.71
18	18/30	13.406	1.05	107		---	24.1
19		11.549	0.99	15.9	J	---	3.06
20	20/28	17.323	1.07	232		---	20.1
21	21/33	17.542	1.09	106		---	12.1
22		17.910	1.07	50.5		---	8.28
23		---	---	ND		---	1.96
24		---	---	ND		---	2.92
25		16.737	1.07	35.6		---	2.37
26	26/29	16.502	1.04	47.7		---	3.81
27		14.017	1.24	---	IJ	12.9	2.13
28	20/28	17.323	1.07	(232)		---	20.1
29	26/29	16.502	1.04	(47.7)		---	3.81
30	18/30	13.406	1.05	(107)		---	24.1
31		17.038	1.09	169		---	16.6
32		14.792	1.11	49.6		---	5.20
33	21/33	17.542	1.09	(106)		---	12.1
34		16.049	1.19	2.86	J	---	1.68
35		20.828	0.91	4.96	J	---	3.16
36		---	---	ND		---	2.60
37		21.230	1.13	61.6	B	---	5.53
38		---	---	ND		---	1.36
39		---	---	ND		---	1.88
40	40/41/71	21.063	0.76	149		---	9.52
41	40/41/71	21.063	0.76	(149)		---	9.52
42		20.576	0.81	90.1		---	5.06
43	43/73	19.285	0.65	15.5	J	---	7.97
44	44/47/65	20.056	0.78	435		---	13.9

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-3
Lab Sample ID 40219480003
Filename Y201225A_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.357	0.86	51.0		---	6.29
46		17.659	0.81	16.6	J	---	3.35
47	44/47/65	20.056	0.78	(435)		---	13.9
48		19.855	0.76	37.0		---	3.44
49	49/69	19.604	0.80	308		---	8.15
50	50/53	16.720	0.81	47.1		---	8.24
51	45/51	17.357	0.86	(51.0)		---	6.29
52		19.118	0.79	697		---	17.5
53	50/53	16.720	0.81	(47.1)		---	8.24
54		---	---	ND		---	2.57
55		---	---	ND		---	3.60
56		24.723	0.78	130		---	5.46
57		---	---	ND		---	4.50
58		23.013	0.78	3.18	J	---	1.30
59	59/62/75	20.375	0.73	27.4	J	---	8.27
60		24.924	0.90	---	I	36.2	5.49
61	61/70/74/76	23.784	0.79	610		---	23.6
62	59/62/75	20.375	0.73	(27.4)	J	---	8.27
63		23.465	0.74	14.2	J	---	2.81
64		21.264	0.82	154		---	6.77
65	44/47/65	20.056	0.78	(435)		---	13.9
66		24.103	0.79	315		---	10.1
67		23.214	0.77	7.55	J	---	3.64
68		22.426	0.71	6.50	J	---	3.32
69	49/69	19.604	0.80	(308)		---	8.15
70	61/70/74/76	23.784	0.79	(610)		---	23.6
71	40/41/71	21.063	0.76	(149)		---	9.52
72		22.141	0.71	9.66	J	---	2.51
73	43/73	19.285	0.65	(15.5)	J	---	7.97
74	61/70/74/76	23.784	0.79	(610)		---	23.6
75	59/62/75	20.375	0.73	(27.4)	J	---	8.27
76	61/70/74/76	23.784	0.79	(610)		---	23.6
77		28.311	0.82	31.5	B	---	4.24
78		---	---	ND		---	3.79
79		26.802	0.86	6.47	J	---	2.95
80		---	---	ND		---	3.00
81		---	---	ND		---	4.76
82		27.925	1.64	89.3		---	11.7
83		26.198	1.58	48.6		---	10.4
84		23.918	1.58	206		---	6.09
85	85/116/117	27.490	1.54	120		---	11.1
86	86/87/97/108/119/125	26.886	1.57	486		---	25.7
87	86/87/97/108/119/125	26.886	1.57	(486)		---	25.7
88	88/91	23.750	1.58	96.9		---	12.5

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-3
Lab Sample ID 40219480003
Filename Y201225A_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.404	1.75	5.98	J	---	3.91
90	90/101/113	25.796	1.59	653		---	13.9
91	88/91	23.750	1.58	(96.9)		---	12.5
92		25.226	1.53	134		---	5.71
93	93/98/100/102	23.264	1.68	24.0	J	---	10.1
94		---	---	ND		---	3.18
95		22.912	1.54	546		---	10.9
96		---	---	ND		---	4.96
97	86/87/97/108/119/125	26.886	1.57	(486)		---	25.7
98	93/98/100/102	23.264	1.68	(24.0)	J	---	10.1
99		26.349	1.64	286		---	9.74
100	93/98/100/102	23.264	1.68	(24.0)	J	---	10.1
101	90/101/113	25.796	1.59	(653)		---	13.9
102	93/98/100/102	23.264	1.68	(24.0)	J	---	10.1
103		22.292	1.40	5.42	J	---	4.87
104		---	---	ND		---	7.05
105		31.670	1.64	218		---	3.75
106		---	---	ND		---	3.13
107	107/124	29.926	1.61	20.6	J	---	5.27
108	86/87/97/108/119/125	26.886	1.57	(486)		---	25.7
109		30.144	1.48	41.1		---	2.73
110	110/115	27.657	1.56	934		---	8.58
111		---	---	ND		---	3.35
112		---	---	ND		---	4.34
113	90/101/113	25.796	1.59	(653)		---	13.9
114		31.066	1.61	10.6	J	---	4.63
115	110/115	27.657	1.56	(934)		---	8.58
116	85/116/117	27.490	1.54	(120)		---	11.1
117	85/116/117	27.490	1.54	(120)		---	11.1
118		30.563	1.60	609		---	9.12
119	86/87/97/108/119/125	26.886	1.57	(486)		---	25.7
120		28.864	1.50	3.52	J	---	2.45
121		---	---	ND		---	4.57
122		30.865	1.70	7.01	J	---	2.68
123		30.261	1.53	8.42	J	---	5.73
124	107/124	29.926	1.61	(20.6)	J	---	5.27
125	86/87/97/108/119/125	26.886	1.57	(486)		---	25.7
126		34.655	1.58	4.28	JA	---	3.10
127		---	---	ND		---	3.17
128	128/166	34.722	1.21	103		---	6.56
129	129/138/163	33.548	1.27	562		---	26.3
130		32.944	1.18	36.1		---	4.32
131		30.161	1.15	7.37	J	---	7.22
132		30.614	1.18	175		---	10.4

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-3
Lab Sample ID 40219480003
Filename Y201225A_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		31.167	1.32	7.04	J	---	3.85
134	134/143	29.607	1.24	29.5	J	---	9.09
135	135/151	28.563	1.31	118		---	14.6
136		26.182	1.32	47.4		---	7.46
137		33.129	1.12	26.1		---	4.40
138	129/138/163	33.548	1.27	(562)		---	26.3
139	139/140	29.993	1.32	9.80	J	---	7.55
140	139/140	29.993	1.32	(9.80)	J	---	7.55
141		32.542	1.22	65.9		---	5.22
142		---	---	ND		---	2.45
143	134/143	29.607	1.24	(29.5)	J	---	9.09
144		29.116	1.35	15.5	J	---	14.9
145		---	---	ND		---	6.00
146		31.787	1.26	59.5		---	5.84
147	147/149	29.440	1.16	295		---	27.1
148		---	---	ND		---	11.2
149	147/149	29.440	1.16	(295)		---	27.1
150		---	---	ND		---	7.05
151	135/151	28.563	1.31	(118)		---	14.6
152		---	---	ND		---	7.66
153	153/168	32.374	1.27	314		---	12.4
154		---	---	ND		---	7.76
155		---	---	ND		---	4.63
156	156/157	37.510	1.28	68.6		---	7.51
157	156/157	37.510	1.28	(68.6)		---	7.51
158		33.917	1.22	49.8		---	3.61
159		---	---	ND		---	5.76
160		---	---	ND		---	4.93
161		---	---	ND		---	3.80
162		---	---	ND		---	3.69
163	129/138/163	33.548	1.27	(562)		---	26.3
164		33.246	1.20	36.8		---	3.30
165		---	---	ND		---	4.67
166	128/166	34.722	1.21	(103)		---	6.56
167		36.454	1.27	23.7		---	4.26
168	153/168	32.374	1.27	(314)		---	12.4
169		---	---	ND		---	4.77
170		40.143	1.09	45.3		---	5.75
171	171/173	36.655	1.06	14.9	J	---	7.64
172		38.248	1.03	7.35	J	---	2.54
173	171/173	36.655	1.06	(14.9)	J	---	7.64
174		35.632	1.00	36.3		---	4.07
175		---	---	ND		---	3.80
176		---	---	ND		---	6.50

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ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-3
Lab Sample ID 40219480003
Filename Y201225A_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.051	1.20	23.0		---	8.88
178		34.001	1.16	10.0	J	---	4.35
179		31.318	1.04	15.3	J	---	9.32
180	180/193	38.868	1.08	82.1		---	7.19
181		---	---	ND		---	1.76
182		---	---	ND		---	5.26
183	183/185	35.448	1.03	26.9	J	---	6.70
184		---	---	ND		---	7.35
185	183/185	35.448	1.03	(26.9)	J	---	6.70
186		---	---	ND		---	3.74
187		34.839	0.98	43.8		---	8.00
188		---	---	ND		---	3.53
189		44.189	1.16	4.06	J	---	2.62
190		40.730	1.13	10.0	J	---	6.14
191		---	---	ND		---	5.28
192		---	---	ND		---	2.74
193	180/193	38.868	1.08	(82.1)		---	7.19
194		47.508	1.00	13.3	J	---	5.00
195		---	---	ND		---	6.27
196		41.786	0.89	7.90	J	---	4.16
197	197/200	---	---	ND		---	15.4
198	198/199	40.965	1.01	17.3	J	---	14.8
199	198/199	40.965	1.01	(17.3)	J	---	14.8
200	197/200	---	---	ND		---	15.4
201		---	---	ND		---	7.03
202		36.186	0.75	---	IJ	5.70	3.77
203		42.021	1.00	10.3	J	---	4.97
204		---	---	ND		---	5.74
205		---	---	ND		---	4.64
206		51.797	1.27	---	IJ	7.65	7.51
207		---	---	ND		---	5.55
208		---	---	ND		---	7.05
209		55.547	0.52	---	IJ	8.47	5.52

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REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DUP-3
Lab Sample ID	40219480003
Filename	Y201225A_04

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	13.6
Total Dichloro Biphenyls	210
Total Trichloro Biphenyls	982
Total Tetrachloro Biphenyls	3160
Total Pentachloro Biphenyls	4560
Total Hexachloro Biphenyls	2050
Total Heptachloro Biphenyls	319
Total Octachloro Biphenyls	48.8
Total Nonachloro Biphenyls	ND
DecachloroBiphenyls	ND
Total PCBs	11300

ND = Not Detected
Results reported on a dry weight basis

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	USCCG003(0.0-0.5)		
Lab Sample ID	40219480004		
Filename	Y201224A_13		
Injected By	CVS		
Total Amount Extracted	39.0 g	Matrix	Solid
% Moisture	74.3	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	12/03/2020 11:00
ICAL ID	Y201224A02	Received	12/10/2020 08:45
CCal Filename(s)	Y201224A_03	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/24/2020 21:06

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.088	3.11	2.0	0.709	35
13C-4-MoCB	3	8.220	3.07	2.0	0.754	38
13C-2,2'-DiCB	4	8.448	1.77	2.0	0.673	34
13C-4,4'-DiCB	15	14.316	1.52	2.0	0.792	40
13C-2,2',6-TrCB	19	11.525	1.11	2.0	0.664	33
13C-3,4,4'-TrCB	37	21.229	0.96	2.0	0.745	37
13C-2,2',6,6'-TeCB	54	14.556	0.85	2.0	0.606	30
13C-3,4,4',5-TeCB	81	27.806	0.81	2.0	0.819	41
13C-3,3',4,4'-TeCB	77	28.343	0.82	2.0	0.824	41
13C-2,2',4,6,6'-PeCB	104	20.005	1.65	2.0	0.950	47
13C-2,3,3',4,4'-PeCB	105	31.684	1.46	2.0	1.14	57
13C-2,3,4,4',5-PeCB	114	31.081	1.71	2.0	1.10	55
13C-2,3',4,4',5-PeCB	118	30.578	1.66	2.0	1.08	54
13C-2,3',4,4',5'-PeCB	123	30.259	1.63	2.0	1.11	55
13C-3,3',4,4',5-PeCB	126	34.668	1.64	2.0	1.13	57
13C-2,2',4,4',6,6'-HxCB	155	25.794	1.22	2.0	0.544	27
13C-HxCB(156/157)	156/157	37.524	1.29	4.0	1.51	38
13C-2,3',4,4',5,5'-HxCB	167	36.468	1.42	2.0	0.773	39
13C-3,3',4,4',5,5'-HxCB	169	40.894	1.24	2.0	0.799	40
13C-2,2',3,4',5,6,6'-HpCB	188	31.064	1.11	2.0	0.702	35
13C-2,3,3',4,4',5,5'-HpCB	189	44.163	0.99	2.0	0.781	39
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.166	0.90	2.0	0.681	34
13C-2,3,3',4,4',5,5',6-OcCB	205	48.366	0.94	2.0	0.767	38
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.792	0.80	2.0	0.705	35
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.409	0.78	2.0	0.771	39
13C-DeCB	209	55.521	0.74	2.0	0.700	35
CleanupStandards						
13C-2,4,4'-TrCB	28	17.322	1.09	2.0	1.22	61
13C-2,3,3',5,5'-PeCB	111	28.427	1.51	2.0	1.83	92
13C-2,2',3,3',5,5',6-HpCB	178	33.998	1.06	2.0	1.27	64
Recovery Standards						
13C-2,5-DiCB	9	10.447	1.60	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.116	0.80	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.979	1.57	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.545	1.25	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.504	0.89	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG003(0.0-0.5)
Lab Sample ID 40219480004
Filename Y201224A_13

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.100	2.96	26.0		---	2.29
2		8.065	3.09	44.6		---	3.24
3		8.233	3.16	60.5		---	2.54
4		8.460	1.58	46.0	B	---	6.98
5		---	---	ND		---	1.95
6		10.854	1.58	62.3		---	3.67
7		10.626	1.41	12.1	J	---	3.05
8		11.273	1.53	198		---	4.38
9		10.471	1.41	14.1	J	---	3.34
10		---	---	ND		---	3.22
11		13.741	1.55	169	B	---	18.8
12	12/13	14.017	1.60	69.1		---	4.78
13	12/13	14.017	1.60	(69.1)		---	4.78
14		---	---	ND		---	2.84
15		14.340	1.62	319		---	7.15
16		14.244	1.01	130		---	1.97
17		13.825	1.11	248		---	1.77
18	18/30	13.418	1.05	371		---	25.0
19		11.549	1.26	---	I	37.2	3.16
20	20/28	17.339	1.07	1500		---	20.9
21	21/33	17.574	1.07	936		---	12.6
22		17.943	1.04	318		---	8.58
23		---	---	ND		---	2.03
24		---	---	ND		---	3.03
25		16.752	1.14	217		---	2.46
26	26/29	16.535	1.08	266		---	3.94
27		14.029	1.03	36.2		---	2.21
28	20/28	17.339	1.07	(1500)		---	20.9
29	26/29	16.535	1.08	(266)		---	3.94
30	18/30	13.418	1.05	(371)		---	25.0
31		17.054	1.06	914		---	17.2
32		14.791	1.11	163		---	5.38
33	21/33	17.574	1.07	(936)		---	12.6
34		16.065	1.10	41.1		---	1.74
35		20.843	1.38	---	I	26.2	3.27
36		---	---	ND		---	2.70
37		21.262	1.06	598		---	5.73
38		---	---	ND		---	1.41
39		19.871	1.64	---	IJ	14.9	1.95
40	40/41/71	21.078	0.80	1160		---	9.86
41	40/41/71	21.078	0.80	(1160)		---	9.86
42		20.592	0.84	890		---	5.24
43	43/73	19.317	0.78	101		---	8.26
44	44/47/65	20.072	0.79	2870		---	14.4

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REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG003(0.0-0.5)
Lab Sample ID 40219480004
Filename Y201224A_13

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.389	0.76	291		---	6.51
46		17.691	0.78	124		---	3.46
47	44/47/65	20.072	0.79	(2870)		---	14.4
48		19.888	0.78	282		---	3.56
49	49/69	19.619	0.78	2670		---	8.44
50	50/53	16.752	0.82	262		---	8.54
51	45/51	17.389	0.76	(291)		---	6.51
52		19.150	0.78	4370		---	18.2
53	50/53	16.752	0.82	(262)		---	8.54
54		14.590	0.77	3.68	J	---	2.67
55		24.285	0.73	103	A	---	4.00
56		24.838	0.80	1210		---	5.65
57		22.844	0.80	15.1	J	---	4.66
58		23.095	0.81	56.7	A	---	3.76
59	59/62/75	20.424	0.69	217		---	8.57
60		25.073	0.75	219		---	5.68
61	61/70/74/76	23.849	0.78	4920		---	24.5
62	59/62/75	20.424	0.69	(217)		---	8.57
63		23.514	0.78	155	A	---	3.83
64		21.296	0.78	1150		---	7.01
65	44/47/65	20.072	0.79	(2870)		---	14.4
66		24.168	0.78	3020		---	10.5
67		23.263	0.80	68.5		---	3.77
68		22.458	0.74	71.2		---	3.43
69	49/69	19.619	0.78	(2670)		---	8.44
70	61/70/74/76	23.849	0.78	(4920)		---	24.5
71	40/41/71	21.078	0.80	(1160)		---	9.86
72		22.206	0.77	136	A	---	3.54
73	43/73	19.317	0.78	(101)		---	8.26
74	61/70/74/76	23.849	0.78	(4920)		---	24.5
75	59/62/75	20.424	0.69	(217)		---	8.57
76	61/70/74/76	23.849	0.78	(4920)		---	24.5
77		28.359	0.80	366	A	---	4.40
78		---	---	ND	A	---	4.34
79		26.851	0.68	65.0	A	---	3.65
80		25.442	0.83	15.6	JA	---	3.54
81		27.806	0.56	---	IJ	5.83	4.93
82		27.974	1.52	1050		---	12.1
83		26.280	1.52	404		---	10.8
84		23.983	1.58	2500		---	6.31
85	85/116/117	27.538	1.54	1510		---	11.5
86	86/87/97/108/119/125	26.934	1.58	5860		---	26.7
87	86/87/97/108/119/125	26.934	1.58	(5860)		---	26.7
88	88/91	23.799	1.48	1440		---	13.0

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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG003(0.0-0.5)
Lab Sample ID 40219480004
Filename Y201224A_13

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.486	1.35	67.0		---	4.05
90	90/101/113	25.979	1.56	6690		---	14.4
91	88/91	23.799	1.48	(1440)		---	13.0
92		25.492	1.55	1930		---	5.91
93	93/98/100/102	23.313	1.64	348		---	10.5
94		22.542	1.45	36.1		---	3.29
95		22.944	1.56	6440		---	11.3
96		20.374	1.70	53.4		---	5.14
97	86/87/97/108/119/125	26.934	1.58	(5860)		---	26.7
98	93/98/100/102	23.313	1.64	(348)		---	10.5
99		26.414	1.56	4380		---	10.1
100	93/98/100/102	23.313	1.64	(348)		---	10.5
101	90/101/113	25.979	1.56	(6690)		---	14.4
102	93/98/100/102	23.313	1.64	(348)		---	10.5
103		22.340	1.67	116		---	5.04
104		---	---	ND		---	7.30
105		31.701	1.60	2630	A	---	13.2
106		---	---	ND	A	---	4.92
107	107/124	29.957	1.60	245		---	5.46
108	86/87/97/108/119/125	26.934	1.58	(5860)		---	26.7
109		30.175	1.63	780	A	---	4.55
110	110/115	27.705	1.57	12500		---	8.89
111		28.443	1.55	8.61	J	---	3.47
112		---	---	ND		---	4.49
113	90/101/113	25.979	1.56	(6690)		---	14.4
114		31.097	1.71	108	A	---	14.0
115	110/115	27.705	1.57	(12500)		---	8.89
116	85/116/117	27.538	1.54	(1510)		---	11.5
117	85/116/117	27.538	1.54	(1510)		---	11.5
118		30.611	1.59	9330	A	---	13.6
119	86/87/97/108/119/125	26.934	1.58	(5860)		---	26.7
120		28.896	1.77	73.8		---	2.54
121		---	---	ND		---	4.73
122		30.913	1.60	72.7	A	---	5.41
123		30.293	1.59	122		---	5.93
124	107/124	29.957	1.60	(245)		---	5.46
125	86/87/97/108/119/125	26.934	1.58	(5860)		---	26.7
126		34.668	1.65	28.6	A	---	4.78
127		33.176	1.19	---	IJA	11.8	5.22
128	128/166	34.736	1.22	2000		---	6.79
129	129/138/163	33.579	1.24	11400		---	27.3
130		32.958	1.22	847		---	4.47
131		30.226	1.32	180		---	7.48
132		30.645	1.25	3710		---	10.8

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG003(0.0-0.5)
Lab Sample ID 40219480004
Filename Y201224A_13

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		31.215	1.22	162		---	3.98
134	134/143	29.639	1.25	591		---	9.41
135	135/151	28.594	1.32	2810		---	15.1
136		26.280	1.31	711		---	7.73
137		33.160	1.23	516		---	4.55
138	129/138/163	33.579	1.24	(11400)		---	27.3
139	139/140	30.041	1.17	208		---	7.82
140	139/140	30.041	1.17	(208)		---	7.82
141		32.573	1.23	1350		---	5.41
142		---	---	ND		---	2.54
143	134/143	29.639	1.25	(591)		---	9.41
144		29.131	1.25	380		---	15.5
145		---	---	ND		---	6.21
146		31.835	1.22	1430		---	6.05
147	147/149	29.488	1.25	6900		---	28.1
148		---	---	ND		---	11.6
149	147/149	29.488	1.25	(6900)		---	28.1
150		26.046	1.09	13.4	J	---	7.30
151	135/151	28.594	1.32	(2810)		---	15.1
152		25.945	1.23	8.62	J	---	7.94
153	153/168	32.422	1.26	7720		---	12.9
154		28.879	1.33	122		---	8.04
155		---	---	ND		---	4.79
156	156/157	37.524	1.26	1440		---	7.78
157	156/157	37.524	1.26	(1440)		---	7.78
158		33.947	1.21	940		---	3.74
159		---	---	ND		---	5.97
160		---	---	ND		---	5.10
161		---	---	ND		---	3.93
162		35.998	1.26	24.3		---	3.82
163	129/138/163	33.579	1.24	(11400)		---	27.3
164		33.277	1.22	720		---	3.41
165		---	---	ND		---	4.83
166	128/166	34.736	1.22	(2000)		---	6.79
167		36.484	1.28	448		---	4.41
168	153/168	32.422	1.26	(7720)		---	12.9
169		---	---	ND	A	---	6.24
170		40.173	1.05	1560		---	5.95
171	171/173	36.669	1.08	515		---	7.92
172		38.262	1.12	266		---	2.63
173	171/173	36.669	1.08	(515)		---	7.92
174		35.663	1.05	1390		---	4.21
175		34.635	0.96	62.4		---	3.93
176		32.204	1.02	187		---	6.73

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG003(0.0-0.5)
Lab Sample ID 40219480004
Filename Y201224A_13

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.082	1.04	912		---	9.20
178		34.015	1.04	294		---	4.50
179		31.382	1.02	552		---	9.65
180	180/193	38.899	1.05	2800		---	7.45
181		36.468	1.13	25.0		---	1.83
182		35.088	0.89	11.7	J	---	5.45
183	183/185	35.479	1.05	953		---	6.94
184		---	---	ND		---	7.61
185	183/185	35.479	1.05	(953)		---	6.94
186		---	---	ND		---	3.87
187		34.886	1.04	1510		---	8.29
188		---	---	ND		---	3.65
189		44.206	1.01	73.3	A	---	4.39
190		40.810	1.01	308		---	6.36
191		39.268	1.01	57.4		---	5.47
192		---	---	ND		---	2.84
193	180/193	38.899	1.05	(2800)		---	7.45
194		47.525	0.91	582		---	5.18
195		43.754	0.87	220		---	6.49
196		41.816	0.86	305		---	4.31
197	197/200	37.993	0.86	108		---	16.0
198	198/199	41.011	0.89	684		---	15.4
199	198/199	41.011	0.89	(684)		---	15.4
200	197/200	37.993	0.86	(108)		---	16.0
201		37.071	0.85	77.5		---	7.28
202		36.199	0.89	143		---	3.90
203		42.051	0.84	397		---	5.15
204		---	---	ND		---	5.94
205		48.409	0.92	35.6		---	4.80
206		51.900	0.79	337		---	7.78
207		44.810	0.71	36.4		---	5.75
208		43.452	0.80	90.5		---	7.30
209		55.585	0.69	169		---	5.72

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Minneapolis, MN 55414

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Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	USCCG003(0.0-0.5)
Lab Sample ID	40219480004
Filename	Y201224A_13

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	131
Total Dichloro Biphenyls	890
Total Trichloro Biphenyls	5750
Total Tetrachloro Biphenyls	24800
Total Pentachloro Biphenyls	58700
Total Hexachloro Biphenyls	44700
Total Heptachloro Biphenyls	11500
Total Octachloro Biphenyls	2550
Total Nonachloro Biphenyls	464
DecachloroBiphenyls	169
Total PCBs	150000

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	USCCG004(0.0-0.5)		
Lab Sample ID	40219480005		
Filename	Y201225A_05		
Injected By	CVS		
Total Amount Extracted	30.8 g	Matrix	Solid
% Moisture	67.3	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	12/03/2020 09:30
ICAL ID	Y201225A02	Received	12/10/2020 08:45
CCal Filename(s)	Y201225A_01	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/25/2020 03:55

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.088	3.00	2.0	1.16	58
13C-4-MoCB	3	8.233	2.75	2.0	1.29	64
13C-2,2'-DiCB	4	8.460	1.61	2.0	1.23	62
13C-4,4'-DiCB	15	14.316	1.52	2.0	1.48	74
13C-2,2',6-TrCB	19	11.537	0.98	2.0	1.32	66
13C-3,4,4'-TrCB	37	21.246	1.14	2.0	1.62	81
13C-2,2',6,6'-TeCB	54	14.573	0.80	2.0	1.25	63
13C-3,4,4',5-TeCB	81	27.806	0.86	2.0	1.62	81
13C-3,3',4,4'-TeCB	77	28.359	0.78	2.0	1.60	80
13C-2,2',4,6,6'-PeCB	104	20.005	1.52	2.0	1.74	87
13C-2,3,3',4,4'-PeCB	105	31.734	1.59	2.0	1.76	88
13C-2,3,4,4',5-PeCB	114	31.147	1.58	2.0	1.77	89
13C-2,3',4,4',5-PeCB	118	30.611	1.61	2.0	1.71	86
13C-2,3',4,4',5'-PeCB	123	30.292	1.60	2.0	1.75	87
13C-3,3',4,4',5-PeCB	126	34.702	1.61	2.0	1.81	91
13C-2,2',4,4',6,6'-HxCB	155	25.677	1.23	2.0	1.35	68
13C-HxCB(156/157)	156/157	37.574	1.25	4.0	2.72	68
13C-2,3',4,4',5,5'-HxCB	167	36.501	1.28	2.0	1.43	72
13C-3,3',4,4',5,5'-HxCB	169	40.960	1.35	2.0	1.37	68
13C-2,2',3,4',5,6,6'-HpCB	188	31.097	1.10	2.0	1.63	81
13C-2,3,3',4,4',5,5'-HpCB	189	44.227	1.14	2.0	1.50	75
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.216	0.94	2.0	1.42	71
13C-2,3,3',4,4',5,5',6-OcCB	205	48.494	0.88	2.0	1.39	69
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.899	0.76	2.0	1.40	70
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.473	0.79	2.0	1.50	75
13C-DeCB	209	55.649	0.74	2.0	1.33	66
CleanupStandards						
13C-2,4,4'-TrCB	28	17.323	1.13	2.0	1.49	75
13C-2,3,3',5,5'-PeCB	111	28.460	1.63	2.0	1.71	86
13C-2,2',3,3',5,5',6-HpCB	178	34.031	1.08	2.0	1.48	74
Recovery Standards						
13C-2,5-DiCB	9	10.435	1.55	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.117	0.83	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.861	1.55	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.578	1.27	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.589	0.89	2.0	NA	NA

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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG004(0.0-0.5)
Lab Sample ID 40219480005
Filename Y201225A_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.112	2.91	52.3		---	2.27
2		8.077	3.20	43.5		---	3.22
3		8.257	2.92	70.8		---	2.52
4		8.472	1.56	85.1		---	6.93
5		11.118	2.30	---	IJ	4.69	1.93
6		10.842	1.62	83.5		---	3.65
7		10.615	1.55	21.5		---	3.02
8		11.274	1.64	273		---	4.35
9		10.459	1.52	22.6		---	3.32
10		8.640	1.42	6.05	J	---	3.20
11		13.741	1.59	137	B	---	18.6
12	12/13	14.029	1.64	97.3		---	4.75
13	12/13	14.029	1.64	(97.3)		---	4.75
14		---	---	ND		---	2.81
15		14.340	1.63	391		---	7.10
16		14.256	1.04	103		---	1.95
17		13.837	1.07	204		---	1.75
18	18/30	13.418	1.04	288		---	24.8
19		11.549	1.07	47.2		---	3.14
20	20/28	17.339	1.08	1280		---	20.7
21	21/33	17.557	1.04	927		---	12.5
22		17.943	1.08	259		---	8.51
23		---	---	ND		---	2.01
24		---	---	ND		---	3.00
25		16.753	1.07	226		---	2.44
26	26/29	16.535	1.04	266		---	3.91
27		14.041	1.02	48.9		---	2.19
28	20/28	17.339	1.08	(1280)		---	20.7
29	26/29	16.535	1.04	(266)		---	3.91
30	18/30	13.418	1.04	(288)		---	24.8
31		17.054	1.06	699		---	17.0
32		14.808	1.04	135		---	5.34
33	21/33	17.557	1.04	(927)		---	12.5
34		16.082	1.07	37.6		---	1.72
35		20.860	1.12	25.0		---	3.25
36		---	---	ND		---	2.68
37		21.262	1.07	591		---	5.69
38		---	---	ND		---	1.40
39		19.871	1.09	8.52	J	---	1.93
40	40/41/71	21.095	0.80	999		---	9.79
41	40/41/71	21.095	0.80	(999)		---	9.79
42		20.592	0.80	612		---	5.20
43	43/73	19.318	0.85	90.5		---	8.20
44	44/47/65	20.089	0.81	2520		---	14.3

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG004(0.0-0.5)
Lab Sample ID 40219480005
Filename Y201225A_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.389	0.79	264		---	6.46
46		17.675	0.82	92.1		---	3.44
47	44/47/65	20.089	0.81	(2520)		---	14.3
48		19.888	0.78	217		---	3.54
49	49/69	19.619	0.79	2090		---	8.37
50	50/53	16.753	0.79	259		---	8.47
51	45/51	17.389	0.79	(264)		---	6.46
52		19.150	0.79	3960		---	18.0
53	50/53	16.753	0.79	(259)		---	8.47
54		14.573	0.81	7.58	J	---	2.65
55		---	---	ND		---	3.70
56		24.872	0.78	1130		---	5.61
57		22.827	0.79	8.02	J	---	4.63
58		23.095	0.82	44.2	A	---	2.94
59	59/62/75	20.458	0.77	199		---	8.50
60		25.107	0.80	242		---	5.64
61	61/70/74/76	23.866	0.78	4050		---	24.3
62	59/62/75	20.458	0.77	(199)		---	8.50
63		23.531	0.77	128	A	---	2.93
64		21.313	0.79	984		---	6.96
65	44/47/65	20.089	0.81	(2520)		---	14.3
66		24.185	0.78	2840		---	10.4
67		23.263	0.74	57.0		---	3.75
68		22.475	0.75	61.8		---	3.41
69	49/69	19.619	0.79	(2090)		---	8.37
70	61/70/74/76	23.866	0.78	(4050)		---	24.3
71	40/41/71	21.095	0.80	(999)		---	9.79
72		22.190	0.75	93.2	A	---	2.78
73	43/73	19.318	0.85	(90.5)		---	8.20
74	61/70/74/76	23.866	0.78	(4050)		---	24.3
75	59/62/75	20.458	0.77	(199)		---	8.50
76	61/70/74/76	23.866	0.78	(4050)		---	24.3
77		28.393	0.81	324	A	---	5.25
78		---	---	ND		---	3.89
79		26.850	0.72	55.3		---	3.03
80		25.409	0.73	37.5		---	3.08
81		27.823	0.99	---	IJ	9.32	4.90
82		27.974	1.54	1060		---	12.0
83		26.280	1.53	643		---	10.7
84		24.000	1.57	2340		---	6.26
85	85/116/117	27.555	1.55	1570		---	11.4
86	86/87/97/108/119/125	26.934	1.57	5980		---	26.5
87	86/87/97/108/119/125	26.934	1.57	(5980)		---	26.5
88	88/91	23.816	1.54	1250		---	12.9

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG004(0.0-0.5)
Lab Sample ID 40219480005
Filename Y201225A_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.470	1.70	80.6		---	4.02
90	90/101/113	25.895	1.56	7490		---	14.3
91	88/91	23.816	1.54	(1250)		---	12.9
92		25.409	1.57	1920		---	5.87
93	93/98/100/102	23.313	1.53	338		---	10.4
94		22.525	1.62	38.3		---	3.27
95		22.961	1.57	6250		---	11.2
96		20.340	1.53	49.8		---	5.10
97	86/87/97/108/119/125	26.934	1.57	(5980)		---	26.5
98	93/98/100/102	23.313	1.53	(338)		---	10.4
99		26.414	1.58	3780		---	10.0
100	93/98/100/102	23.313	1.53	(338)		---	10.4
101	90/101/113	25.895	1.56	(7490)		---	14.3
102	93/98/100/102	23.313	1.53	(338)		---	10.4
103		22.340	1.62	102		---	5.00
104		---	---	ND		---	7.24
105		31.751	1.60	2790		---	3.86
106		---	---	ND	A	---	12.3
107	107/124	30.007	1.55	239	A	---	13.1
108	86/87/97/108/119/125	26.934	1.57	(5980)		---	26.5
109		30.225	1.55	664	A	---	11.8
110	110/115	27.705	1.57	12400		---	8.82
111		28.493	1.46	10.7	J	---	3.45
112		---	---	ND		---	4.46
113	90/101/113	25.895	1.56	(7490)		---	14.3
114		31.164	1.62	120	A	---	10.5
115	110/115	27.705	1.57	(12400)		---	8.82
116	85/116/117	27.555	1.55	(1570)		---	11.4
117	85/116/117	27.555	1.55	(1570)		---	11.4
118		30.645	1.61	9030	A	---	14.4
119	86/87/97/108/119/125	26.934	1.57	(5980)		---	26.5
120		28.913	1.66	66.0		---	2.52
121		---	---	ND		---	4.70
122		30.946	1.28	---	IA	43.8	14.1
123		30.326	1.51	128	A	---	14.9
124	107/124	30.007	1.55	(239)	A	---	13.1
125	86/87/97/108/119/125	26.934	1.57	(5980)		---	26.5
126		34.702	1.66	28.2	A	---	3.47
127		---	---	ND	A	---	14.0
128	128/166	34.769	1.23	2070		---	6.74
129	129/138/163	33.612	1.25	11800		---	27.1
130		32.992	1.21	834		---	4.44
131		30.259	1.21	160		---	7.42
132		30.678	1.24	3640		---	10.7

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG004(0.0-0.5)
Lab Sample ID 40219480005
Filename Y201225A_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		31.298	1.30	159		---	3.95
134	134/143	29.655	1.25	572		---	9.35
135	135/151	28.627	1.29	2730		---	15.0
136		26.247	1.31	1010		---	7.67
137		33.209	1.19	583		---	4.52
138	129/138/163	33.612	1.25	(11800)		---	27.1
139	139/140	30.091	1.22	214		---	7.76
140	139/140	30.091	1.22	(214)		---	7.76
141		32.606	1.26	1370		---	5.37
142		---	---	ND		---	2.52
143	134/143	29.655	1.25	(572)		---	9.35
144		29.164	1.31	365		---	15.4
145		---	---	ND		---	6.16
146		31.868	1.25	1410		---	6.01
147	147/149	29.504	1.26	6560		---	27.8
148		28.057	1.17	11.7	J	---	11.5
149	147/149	29.504	1.26	(6560)		---	27.8
150		25.962	1.41	9.72	J	---	7.24
151	135/151	28.627	1.29	(2730)		---	15.0
152		25.794	1.45	---	IJ	8.70	7.88
153	153/168	32.455	1.25	7110		---	12.8
154		28.896	1.36	113		---	7.98
155		---	---	ND		---	4.76
156	156/157	37.574	1.28	1460		---	7.72
157	156/157	37.574	1.28	(1460)		---	7.72
158		33.981	1.25	879		---	3.72
159		---	---	ND		---	5.93
160		---	---	ND		---	5.06
161		---	---	ND		---	3.90
162		36.031	1.18	19.0	J	---	3.80
163	129/138/163	33.612	1.25	(11800)		---	27.1
164		33.310	1.25	686		---	3.39
165		31.449	1.12	7.58	J	---	4.80
166	128/166	34.769	1.23	(2070)		---	6.74
167		36.534	1.25	469		---	4.38
168	153/168	32.455	1.25	(7110)		---	12.8
169		---	---	ND	A	---	7.14
170		40.223	1.07	1490		---	5.91
171	171/173	36.719	1.04	485		---	7.86
172		38.295	0.98	249		---	2.61
173	171/173	36.719	1.04	(485)		---	7.86
174		35.696	1.04	1250		---	4.18
175		34.651	1.11	60.9		---	3.90
176		32.254	1.04	172		---	6.68

Conc = Concentration
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B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

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ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCG004(0.0-0.5)
Lab Sample ID 40219480005
Filename Y201225A_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
177		36.115	1.02	812	---	9.13
178		34.048	1.04	269	---	4.47
179		31.432	1.03	511	---	9.58
180	180/193	38.949	1.04	2740	---	7.39
181		36.518	1.01	23.9	---	1.81
182		35.104	1.16	10.4 J	---	5.41
183	183/185	35.495	1.05	834	---	6.89
184		---	---	ND	---	7.55
185	183/185	35.495	1.05	(834)	---	6.89
186		---	---	ND	---	3.85
187		34.920	1.03	1410	---	8.23
188		---	---	ND	---	3.63
189		44.292	1.16	74.8	---	2.70
190		40.843	1.00	285	---	6.31
191		39.301	1.11	51.9	---	5.43
192		---	---	ND	---	2.81
193	180/193	38.949	1.04	(2740)	---	7.39
194		47.654	0.89	570	---	5.14
195		43.839	0.95	215	---	6.44
196		41.849	0.91	313	---	4.28
197	197/200	38.043	0.85	103	---	15.9
198	198/199	41.061	0.90	766	---	15.3
199	198/199	41.061	0.90	(766)	---	15.3
200	197/200	38.043	0.85	(103)	---	15.9
201		37.138	0.85	77.5	---	7.23
202		36.232	0.91	160	---	3.88
203		42.100	0.91	430	---	5.11
204		---	---	ND	---	5.90
205		48.559	0.95	32.3	---	4.77
206		51.964	0.80	437	---	7.72
207		44.895	0.83	47.8	---	5.71
208		43.516	0.79	148	---	7.24
209		55.671	0.70	336	---	5.68

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	USCCG004(0.0-0.5)
Lab Sample ID	40219480005
Filename	Y201225A_05

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	167
Total Dichloro Biphenyls	1120
Total Trichloro Biphenyls	5140
Total Tetrachloro Biphenyls	21400
Total Pentachloro Biphenyls	58300
Total Hexachloro Biphenyls	44200
Total Heptachloro Biphenyls	10700
Total Octachloro Biphenyls	2670
Total Nonachloro Biphenyls	633
DecachloroBiphenyls	336
Total PCBs	145000

ND = Not Detected
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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DSLBG004(0.0-0.5)		
Lab Sample ID	40219480006		
Filename	Y201225B_05		
Injected By	CVS		
Total Amount Extracted	43.2 g	Matrix	Solid
% Moisture	76.8	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	12/04/2020 10:40
ICAL ID	Y201225B02	Received	12/10/2020 08:45
CCal Filename(s)	Y201225B_01	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/25/2020 17:33

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.112	2.97	2.0	0.838	42
13C-4-MoCB	3	8.257	2.84	2.0	1.02	51
13C-2,2'-DiCB	4	8.472	1.67	2.0	0.992	50
13C-4,4'-DiCB	15	14.341	1.55	2.0	1.23	62
13C-2,2',6-TrCB	19	11.550	1.05	2.0	1.04	52
13C-3,4,4'-TrCB	37	21.265	1.07	2.0	1.42	71
13C-2,2',6,6'-TeCB	54	14.591	0.83	2.0	1.13	56
13C-3,4,4',5-TeCB	81	27.860	0.82	2.0	1.44	72
13C-3,3',4,4'-TeCB	77	28.447	0.82	2.0	1.38	69
13C-2,2',4,6,6'-PeCB	104	20.041	1.54	2.0	1.68	84
13C-2,3,3',4,4'-PeCB	105	31.756	1.64	2.0	1.86	93
13C-2,3,4,4',5-PeCB	114	31.152	1.59	2.0	1.93	96
13C-2,3',4,4',5-PeCB	118	30.649	1.68	2.0	1.76	88
13C-2,3',4,4',5'-PeCB	123	30.330	1.57	2.0	1.85	92
13C-3,3',4,4',5-PeCB	126	34.741	1.54	2.0	1.86	93
13C-2,2',4,4',6,6'-HxCB	155	25.798	1.17	2.0	0.985	49
13C-HxCB(156/157)	156/157	37.597	1.25	4.0	2.52	63
13C-2,3',4,4',5,5'-HxCB	167	36.540	1.32	2.0	1.26	63
13C-3,3',4,4',5,5'-HxCB	169	41.001	1.36	2.0	1.38	69
13C-2,2',3,4',5,6,6'-HpCB	188	31.135	1.11	2.0	1.22	61
13C-2,3,3',4,4',5,5'-HpCB	189	44.256	1.01	2.0	1.19	59
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.238	0.91	2.0	1.06	53
13C-2,3,3',4,4',5,5',6-OcCB	205	48.545	0.87	2.0	1.20	60
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.972	0.79	2.0	1.18	59
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.502	0.77	2.0	1.18	59
13C-DeCB	209	55.744	0.72	2.0	1.17	59
CleanupStandards						
13C-2,4,4'-TrCB	28	17.341	1.03	2.0	1.45	72
13C-2,3,3',5,5'-PeCB	111	28.548	1.54	2.0	1.98	99
13C-2,2',3,3',5,5',6-HpCB	178	34.053	1.14	2.0	1.42	71
Recovery Standards						
13C-2,5-DiCB	9	10.447	1.57	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.152	0.79	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.965	1.54	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.600	1.31	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.640	0.89	2.0	NA	NA

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG004(0.0-0.5)
Lab Sample ID 40219480006
Filename Y201225B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.124	3.19	46.5		---	2.28
2		8.089	3.23	72.2		---	3.24
3		8.269	3.26	117		---	2.53
4		8.484	1.53	84.1		---	6.96
5		11.142	2.30	---	IJ	7.06	1.94
6		10.867	1.65	151		---	3.67
7		10.639	1.80	35.7		---	3.04
8		11.298	1.62	480		---	4.37
9		10.471	1.73	27.9		---	3.34
10		8.652	1.01	---	IJ	5.41	3.22
11		13.778	1.54	170	B	---	18.7
12	12/13	14.054	1.51	159		---	4.77
13	12/13	14.054	1.51	(159)		---	4.77
14		---	---	ND		---	2.83
15		14.365	1.57	576		---	7.13
16		14.281	1.07	256		---	1.96
17		13.862	1.05	400		---	1.76
18	18/30	13.443	1.05	619		---	24.9
19		11.561	1.12	64.8		---	3.16
20	20/28	17.375	1.07	2700		---	20.8
21	21/33	17.593	1.05	2010		---	12.6
22		17.961	1.04	531		---	8.56
23		16.251	1.33	---	IJ	4.15	2.02
24		14.161	1.31	---	IJ	7.75	3.02
25		16.788	1.07	437		---	2.45
26	26/29	16.553	1.06	523		---	3.93
27		14.066	1.11	75.0		---	2.20
28	20/28	17.375	1.07	(2700)		---	20.8
29	26/29	16.553	1.06	(523)		---	3.93
30	18/30	13.443	1.05	(619)		---	24.9
31		17.090	1.08	1590		---	17.1
32		14.825	1.04	259		---	5.37
33	21/33	17.593	1.05	(2010)		---	12.6
34		16.100	1.09	89.3		---	1.73
35		20.896	1.05	45.6		---	3.27
36		---	---	ND		---	2.69
37		21.281	1.06	1180		---	5.72
38		---	---	ND		---	1.40
39		19.906	1.07	21.8		---	1.94
40	40/41/71	21.114	0.79	2120		---	9.84
41	40/41/71	21.114	0.79	(2120)		---	9.84
42		20.628	0.80	1430		---	5.23
43	43/73	19.353	0.72	184		---	8.24
44	44/47/65	20.108	0.79	5530		---	14.3

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG004(0.0-0.5)
Lab Sample ID 40219480006
Filename Y201225B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.408	0.78	516		---	6.49
46		17.710	0.79	189		---	3.46
47	44/47/65	20.108	0.79	(5530)		---	14.3
48		19.923	0.80	522		---	3.56
49	49/69	19.655	0.78	4730		---	8.42
50	50/53	16.771	0.79	464		---	8.52
51	45/51	17.408	0.78	(516)		---	6.49
52		19.169	0.78	8550		---	18.1
53	50/53	16.771	0.79	(464)		---	8.52
54		14.608	0.76	7.27	J	---	2.66
55		---	---	ND		---	3.72
56		24.892	0.79	2380		---	5.64
57		22.880	0.77	29.6		---	4.65
58		23.131	0.74	88.0	A	---	3.09
59	59/62/75	20.493	0.80	388		---	8.55
60		25.143	0.75	474		---	5.67
61	61/70/74/76	23.886	0.78	9790		---	24.4
62	59/62/75	20.493	0.80	(388)		---	8.55
63		23.551	0.77	279	A	---	3.15
64		21.332	0.78	2180		---	6.99
65	44/47/65	20.108	0.79	(5530)		---	14.3
66		24.221	0.77	5920		---	10.5
67		23.316	0.73	125		---	3.77
68		22.511	0.79	129		---	3.43
69	49/69	19.655	0.78	(4730)		---	8.42
70	61/70/74/76	23.886	0.78	(9790)		---	24.4
71	40/41/71	21.114	0.79	(2120)		---	9.84
72		22.226	0.79	224	A	---	2.96
73	43/73	19.353	0.72	(184)		---	8.24
74	61/70/74/76	23.886	0.78	(9790)		---	24.4
75	59/62/75	20.493	0.80	(388)		---	8.55
76	61/70/74/76	23.886	0.78	(9790)		---	24.4
77		28.480	0.79	702		---	4.38
78		---	---	ND		---	3.91
79		26.904	0.74	97.4	A	---	3.08
80		25.529	0.77	71.0		---	3.10
81		27.860	0.83	19.8	J	---	4.92
82		28.028	1.58	2090		---	12.1
83		26.334	1.61	821		---	10.8
84		24.037	1.55	4870		---	6.30
85	85/116/117	27.592	1.56	2990		---	11.5
86	86/87/97/108/119/125	26.988	1.56	12000		---	26.6
87	86/87/97/108/119/125	26.988	1.56	(12000)		---	26.6
88	88/91	23.836	1.56	2580		---	12.9

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Sample Analysis Results

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Lab Sample ID 40219480006
Filename Y201225B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.506	1.57	145		---	4.04
90	90/101/113	25.982	1.56	13100		---	14.3
91	88/91	23.836	1.56	(2580)		---	12.9
92		25.513	1.56	3700		---	5.90
93	93/98/100/102	23.349	1.54	648		---	10.5
94		22.545	1.61	74.6		---	3.29
95		22.980	1.57	13200		---	11.3
96		20.376	1.69	100		---	5.13
97	86/87/97/108/119/125	26.988	1.56	(12000)		---	26.6
98	93/98/100/102	23.349	1.54	(648)		---	10.5
99		26.485	1.59	7750		---	10.1
100	93/98/100/102	23.349	1.54	(648)		---	10.5
101	90/101/113	25.982	1.56	(13100)		---	14.3
102	93/98/100/102	23.349	1.54	(648)		---	10.5
103		22.377	1.59	218		---	5.03
104		---	---	ND		---	7.28
105		31.772	1.63	5790	A	---	16.7
106		---	---	ND	A	---	11.7
107	107/124	30.028	1.49	472	A	---	10.9
108	86/87/97/108/119/125	26.988	1.56	(12000)		---	26.6
109		30.247	1.56	1440	A	---	9.76
110	110/115	27.743	1.59	24700		---	8.87
111		28.548	1.39	17.0	J	---	3.47
112		---	---	ND		---	4.48
113	90/101/113	25.982	1.56	(13100)		---	14.3
114		31.169	1.50	229	A	---	20.4
115	110/115	27.743	1.59	(24700)		---	8.87
116	85/116/117	27.592	1.56	(2990)		---	11.5
117	85/116/117	27.592	1.56	(2990)		---	11.5
118		30.666	1.58	19700	A	---	18.3
119	86/87/97/108/119/125	26.988	1.56	(12000)		---	26.6
120		28.967	1.46	134		---	2.53
121		---	---	ND		---	4.72
122		31.001	1.38	114	A	---	11.7
123		30.347	1.43	214	A	---	12.5
124	107/124	30.028	1.49	(472)	A	---	10.9
125	86/87/97/108/119/125	26.988	1.56	(12000)		---	26.6
126		34.724	1.45	42.0	A	---	5.70
127		33.215	1.60	16.3	JA	---	11.6
128	128/166	34.808	1.23	3990		---	6.77
129	129/138/163	33.634	1.25	21700		---	27.2
130		33.014	1.24	1620		---	4.46
131		30.280	1.18	339		---	7.46
132		30.716	1.26	7660		---	10.8

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B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
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RT = Retention Time
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ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG004(0.0-0.5)
Lab Sample ID 40219480006
Filename Y201225B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		31.303	1.29	315		---	3.97
134	134/143	29.710	1.23	1230		---	9.39
135	135/151	28.698	1.32	5370		---	15.0
136		26.317	1.33	1420		---	7.71
137		33.232	1.22	1040		---	4.54
138	129/138/163	33.634	1.25	(21700)		---	27.2
139	139/140	30.112	1.24	441		---	7.80
140	139/140	30.112	1.24	(441)		---	7.80
141		32.628	1.25	2560		---	5.40
142		---	---	ND		---	2.53
143	134/143	29.710	1.23	(1230)		---	9.39
144		29.201	1.29	659		---	15.4
145		26.619	1.36	9.29	J	---	6.20
146		31.890	1.26	3000		---	6.04
147	147/149	29.542	1.25	13300		---	28.0
148		28.078	1.33	18.9	J	---	11.6
149	147/149	29.542	1.25	(13300)		---	28.0
150		26.049	1.23	18.3	J	---	7.28
151	135/151	28.698	1.32	(5370)		---	15.0
152		25.932	1.14	15.5	J	---	7.92
153	153/168	32.477	1.26	14700		---	12.8
154		28.950	1.25	225		---	8.02
155		---	---	ND		---	4.78
156	156/157	37.613	1.25	2830		---	7.76
157	156/157	37.613	1.25	(2830)		---	7.76
158		34.020	1.25	1780		---	3.74
159		35.785	1.37	7.16	J	---	5.96
160		---	---	ND		---	5.09
161		---	---	ND		---	3.92
162		36.087	1.26	64.8		---	3.82
163	129/138/163	33.634	1.25	(21700)		---	27.2
164		33.349	1.26	1260		---	3.41
165		31.471	1.35	11.2	J	---	4.82
166	128/166	34.808	1.23	(3990)		---	6.77
167		36.574	1.27	923		---	4.40
168	153/168	32.477	1.26	(14700)		---	12.8
169		---	---	ND	A	---	5.62
170		40.263	1.06	2660		---	5.94
171	171/173	36.758	1.06	887		---	7.90
172		38.334	1.04	453		---	2.62
173	171/173	36.758	1.06	(887)		---	7.90
174		35.718	1.06	2280		---	4.20
175		34.674	1.05	104		---	3.92
176		32.276	1.05	317		---	6.71

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG004(0.0-0.5)
Lab Sample ID 40219480006
Filename Y201225B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.138	1.06	1450		---	9.17
178		34.070	1.02	473		---	4.49
179		31.437	1.05	928		---	9.63
180	180/193	38.972	1.05	4770		---	7.43
181		36.540	0.98	52.4		---	1.82
182		35.126	0.97	15.4	J	---	5.44
183	183/185	35.534	1.06	1450		---	6.92
184		---	---	ND		---	7.59
185	183/185	35.534	1.06	(1450)		---	6.92
186		---	---	ND		---	3.86
187		34.942	1.04	2470		---	8.27
188		---	---	ND		---	3.65
189		44.321	0.98	137	A	---	3.02
190		40.883	1.08	482		---	6.35
191		39.341	1.09	100		---	5.46
192		---	---	ND		---	2.83
193	180/193	38.972	1.05	(4770)		---	7.43
194		47.705	0.91	1020		---	5.17
195		43.868	0.89	384		---	6.47
196		41.889	0.92	525		---	4.30
197	197/200	38.083	0.89	165		---	15.9
198	198/199	41.101	0.89	1190		---	15.3
199	198/199	41.101	0.89	(1190)		---	15.3
200	197/200	38.083	0.89	(165)		---	15.9
201		37.161	0.94	133		---	7.26
202		36.255	0.88	263		---	3.89
203		42.158	0.89	720		---	5.14
204		---	---	ND		---	5.93
205		48.610	0.84	51.9		---	4.79
206		52.037	0.82	639		---	7.76
207		44.903	0.75	73.0		---	5.74
208		43.545	0.80	194		---	7.28
209		55.701	0.72	331		---	5.71

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DSLBG004(0.0-0.5)
Lab Sample ID	40219480006
Filename	Y201225B_05

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	236
Total Dichloro Biphenyls	1680
Total Trichloro Biphenyls	10800
Total Tetrachloro Biphenyls	47100
Total Pentachloro Biphenyls	117000
Total Hexachloro Biphenyls	86500
Total Heptachloro Biphenyls	19000
Total Octachloro Biphenyls	4450
Total Nonachloro Biphenyls	906
DecachloroBiphenyls	331
Total PCBs	288000

ND = Not Detected
Results reported on a dry weight basis

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Minneapolis, MN 55414

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DSCCG005(0.0-0.5)		
Lab Sample ID	40219480007		
Filename	Y201225A_06		
Injected By	CVS		
Total Amount Extracted	38.9 g	Matrix	Solid
% Moisture	74.2	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	12/04/2020 11:40
ICAL ID	Y201225A02	Received	12/10/2020 08:45
CCal Filename(s)	Y201225A_01	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/25/2020 04:54

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.100	2.93	2.0	0.873	44
13C-4-MoCB	3	8.245	3.07	2.0	0.880	44
13C-2,2'-DiCB	4	8.460	1.79	2.0	0.822	41
13C-4,4'-DiCB	15	14.329	1.58	2.0	0.934	47
13C-2,2',6-TrCB	19	11.537	1.13	2.0	0.799	40
13C-3,4,4'-TrCB	37	21.247	1.05	2.0	1.01	50
13C-2,2',6,6'-TeCB	54	14.573	0.80	2.0	0.712	36
13C-3,4,4',5-TeCB	81	27.808	0.85	2.0	0.937	47
13C-3,3',4,4'-TeCB	77	28.345	0.83	2.0	0.966	48
13C-2,2',4,6,6'-PeCB	104	20.006	1.51	2.0	0.947	47
13C-2,3,3',4,4'-PeCB	105	31.704	1.67	2.0	1.02	51
13C-2,3,4,4',5-PeCB	114	31.100	1.42	2.0	1.01	50
13C-2,3',4,4',5-PeCB	118	30.580	1.55	2.0	1.02	51
13C-2,3',4,4',5'-PeCB	123	30.278	1.53	2.0	0.999	50
13C-3,3',4,4',5-PeCB	126	34.672	1.75	2.0	1.01	50
13C-2,2',4,4',6,6'-HxCB	155	25.646	1.21	2.0	0.815	41
13C-HxCB(156/157)	156/157	37.527	1.26	4.0	1.74	44
13C-2,3',4,4',5,5'-HxCB	167	36.471	1.30	2.0	0.891	45
13C-3,3',4,4',5,5'-HxCB	169	40.915	1.25	2.0	0.859	43
13C-2,2',3,4',5,6,6'-HpCB	188	31.083	1.12	2.0	0.866	43
13C-2,3,3',4,4',5,5'-HpCB	189	44.167	1.06	2.0	0.796	40
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.169	0.97	2.0	0.758	38
13C-2,3,3',4,4',5,5',6-OcCB	205	48.413	0.98	2.0	0.783	39
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.819	0.80	2.0	0.756	38
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.413	0.73	2.0	0.815	41
13C-DeCB	209	55.504	0.76	2.0	0.762	38
CleanupStandards						
13C-2,4,4'-TrCB	28	17.323	1.07	2.0	1.36	68
13C-2,3,3',5,5'-PeCB	111	28.446	1.56	2.0	1.62	81
13C-2,2',3,3',5,5',6-HpCB	178	34.001	1.10	2.0	1.47	73
Recovery Standards						
13C-2,5-DiCB	9	10.447	1.62	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.118	0.83	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.847	1.59	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.549	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.530	0.96	2.0	NA	NA

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSCCG005(0.0-0.5)
Lab Sample ID 40219480007
Filename Y201225A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.112	3.31	17.4	J	---	2.29
2		8.089	2.91	28.9		---	3.24
3		8.257	2.95	37.6		---	2.53
4		8.472	1.64	57.7	B	---	6.98
5		---	---	ND		---	1.95
6		10.854	1.54	46.9		---	3.67
7		10.615	1.40	13.9	J	---	3.04
8		11.274	1.64	114		---	4.38
9		10.459	1.69	12.1	J	---	3.34
10		---	---	ND		---	3.22
11		13.730	1.64	109	B	---	18.8
12	12/13	14.029	1.63	41.6		---	4.78
13	12/13	14.029	1.63	(41.6)		---	4.78
14		---	---	ND		---	2.83
15		14.341	1.61	173		---	7.15
16		14.257	0.96	42.5	B	---	1.97
17		13.837	1.01	119		---	1.77
18	18/30	13.418	1.03	153		---	25.0
19		11.561	0.91	31.6		---	3.16
20	20/28	17.357	1.06	582		---	20.9
21	21/33	17.575	1.03	317		---	12.6
22		17.944	1.07	125		---	8.57
23		---	---	ND		---	2.03
24		---	---	ND		---	3.02
25		16.770	1.08	136		---	2.46
26	26/29	16.535	1.02	178		---	3.94
27		14.041	1.17	23.8		---	2.21
28	20/28	17.357	1.06	(582)		---	20.9
29	26/29	16.535	1.02	(178)		---	3.94
30	18/30	13.418	1.03	(153)		---	25.0
31		17.055	1.01	366		---	17.2
32		14.808	1.04	73.2		---	5.38
33	21/33	17.575	1.03	(317)		---	12.6
34		16.083	0.95	11.2	J	---	1.74
35		20.878	1.12	15.5	J	---	3.27
36		---	---	ND		---	2.69
37		21.264	1.05	231		---	5.73
38		---	---	ND		---	1.41
39		19.872	1.50	---	IJ	3.73	1.95
40	40/41/71	21.080	0.78	422		---	9.86
41	40/41/71	21.080	0.78	(422)		---	9.86
42		20.610	0.80	257		---	5.24
43	43/73	19.319	0.85	41.8		---	8.25
44	44/47/65	20.073	0.77	1110		---	14.4

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSCCG005(0.0-0.5)
Lab Sample ID 40219480007
Filename Y201225A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.390	0.72	128		---	6.51
46		17.692	0.91	---	I	38.0	3.46
47	44/47/65	20.073	0.77	(1110)		---	14.4
48		19.889	0.79	87.5		---	3.56
49	49/69	19.621	0.79	885		---	8.43
50	50/53	16.753	0.82	130		---	8.53
51	45/51	17.390	0.72	(128)		---	6.51
52		19.151	0.78	1580		---	18.2
53	50/53	16.753	0.82	(130)		---	8.53
54		14.557	1.00	---	IJ	5.77	2.66
55		---	---	ND		---	3.72
56		24.840	0.80	454		---	5.65
57		22.845	0.80	8.71	J	---	4.66
58		23.080	0.67	14.1	JA	---	1.72
59	59/62/75	20.425	0.76	79.9		---	8.56
60		25.075	0.72	121		---	5.68
61	61/70/74/76	23.851	0.78	1720		---	24.5
62	59/62/75	20.425	0.76	(79.9)		---	8.56
63		23.516	0.70	50.3		---	2.91
64		21.314	0.78	421		---	7.01
65	44/47/65	20.073	0.77	(1110)		---	14.4
66		24.170	0.79	1130		---	10.5
67		23.281	0.68	23.9		---	3.77
68		22.476	0.77	25.2		---	3.43
69	49/69	19.621	0.79	(885)		---	8.43
70	61/70/74/76	23.851	0.78	(1720)		---	24.5
71	40/41/71	21.080	0.78	(422)		---	9.86
72		22.191	0.72	36.6		---	2.59
73	43/73	19.319	0.85	(41.8)		---	8.25
74	61/70/74/76	23.851	0.78	(1720)		---	24.5
75	59/62/75	20.425	0.76	(79.9)		---	8.56
76	61/70/74/76	23.851	0.78	(1720)		---	24.5
77		28.378	0.75	126		---	4.39
78		---	---	ND		---	3.92
79		26.853	0.77	24.4		---	3.05
80		---	---	ND		---	3.10
81		---	---	ND		---	4.93
82		27.959	1.56	373		---	12.1
83		26.266	1.60	222		---	10.8
84		24.002	1.56	839		---	6.31
85	85/116/117	27.540	1.56	575		---	11.5
86	86/87/97/108/119/125	26.920	1.55	2090		---	26.6
87	86/87/97/108/119/125	26.920	1.55	(2090)		---	26.6
88	88/91	23.801	1.58	466		---	13.0

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSCCG005(0.0-0.5)
Lab Sample ID 40219480007
Filename Y201225A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.455	1.63	26.6		---	4.05
90	90/101/113	25.864	1.56	2610		---	14.4
91	88/91	23.801	1.58	(466)		---	13.0
92		25.360	1.57	693		---	5.91
93	93/98/100/102	23.298	1.53	127		---	10.5
94		22.527	1.40	16.2	J	---	3.29
95		22.946	1.56	2190		---	11.3
96		20.375	1.63	19.1	J	---	5.14
97	86/87/97/108/119/125	26.920	1.55	(2090)		---	26.6
98	93/98/100/102	23.298	1.53	(127)		---	10.5
99		26.400	1.54	1410		---	10.1
100	93/98/100/102	23.298	1.53	(127)		---	10.5
101	90/101/113	25.864	1.56	(2610)		---	14.4
102	93/98/100/102	23.298	1.53	(127)		---	10.5
103		22.326	1.35	35.4		---	5.04
104		---	---	ND		---	7.30
105		31.721	1.63	1070		---	3.88
106		---	---	ND		---	3.24
107	107/124	29.977	1.60	90.6		---	5.46
108	86/87/97/108/119/125	26.920	1.55	(2090)		---	26.6
109		30.195	1.59	243		---	2.82
110	110/115	27.691	1.57	4300		---	8.88
111		---	---	ND		---	3.47
112		---	---	ND		---	4.49
113	90/101/113	25.864	1.56	(2610)		---	14.4
114		31.117	1.48	43.1		---	4.79
115	110/115	27.691	1.57	(4300)		---	8.88
116	85/116/117	27.540	1.56	(575)		---	11.5
117	85/116/117	27.540	1.56	(575)		---	11.5
118		30.614	1.58	3180		---	9.44
119	86/87/97/108/119/125	26.920	1.55	(2090)		---	26.6
120		28.915	1.50	21.4		---	2.53
121		---	---	ND		---	4.73
122		30.966	1.52	20.0	A	---	3.09
123		30.312	1.73	43.0		---	5.93
124	107/124	29.977	1.60	(90.6)		---	5.46
125	86/87/97/108/119/125	26.920	1.55	(2090)		---	26.6
126		34.672	1.71	10.2	JA	---	3.87
127		---	---	ND		---	3.28
128	128/166	34.756	1.23	819		---	6.79
129	129/138/163	33.582	1.23	4100		---	27.2
130		32.961	1.21	314		---	4.47
131		30.228	1.05	62.6		---	7.48
132		30.647	1.23	1360		---	10.8

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EMPC = Estimated Maximum Possible Concentration
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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSCCG005(0.0-0.5)
Lab Sample ID 40219480007
Filename Y201225A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
133		31.251	1.37	58.6	---	3.98
134	134/143	29.641	1.26	209	---	9.41
135	135/151	28.613	1.31	1020	---	15.1
136		26.232	1.31	382	---	7.72
137		33.163	1.17	217	---	4.55
138	129/138/163	33.582	1.23	(4100)	---	27.2
139	139/140	30.077	1.21	81.6	---	7.81
140	139/140	30.077	1.21	(81.6)	---	7.81
141		32.576	1.22	554	---	5.41
142		---	---	ND	---	2.53
143	134/143	29.641	1.26	(209)	---	9.41
144		29.150	1.26	131	---	15.5
145		---	---	ND	---	6.21
146		31.838	1.26	530	---	6.05
147	147/149	29.490	1.23	2360	---	28.0
148		---	---	ND	---	11.6
149	147/149	29.490	1.23	(2360)	---	28.0
150		---	---	ND	---	7.30
151	135/151	28.613	1.31	(1020)	---	15.1
152		---	---	ND	---	7.93
153	153/168	32.425	1.23	2690	---	12.9
154		28.898	1.42	40.9	---	8.03
155		---	---	ND	---	4.79
156	156/157	37.544	1.29	574	---	7.77
157	156/157	37.544	1.29	(574)	---	7.77
158		33.968	1.23	325	---	3.74
159		---	---	ND	---	5.97
160		---	---	ND	---	5.10
161		---	---	ND	---	3.93
162		36.001	1.18	7.10 J	---	3.82
163	129/138/163	33.582	1.23	(4100)	---	27.2
164		33.280	1.29	272	---	3.41
165		---	---	ND	---	4.83
166	128/166	34.756	1.23	(819)	---	6.79
167		36.488	1.29	189	---	4.41
168	153/168	32.425	1.23	(2690)	---	12.9
169		---	---	ND	---	4.94
170		40.194	1.03	610	---	5.95
171	171/173	36.689	1.08	190	---	7.91
172		38.282	0.99	99.5	---	2.62
173	171/173	36.689	1.08	(190)	---	7.91
174		35.666	1.02	502	---	4.21
175		34.621	0.90	24.0	---	3.93
176		32.224	1.05	66.6	---	6.73

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSCCG005(0.0-0.5)
Lab Sample ID 40219480007
Filename Y201225A_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.085	1.07	323		---	9.19
178		34.035	0.96	105		---	4.50
179		31.402	1.02	202		---	9.65
180	180/193	38.902	1.06	1150		---	7.45
181		36.471	1.23	---	IJ	11.0	1.83
182		---	---	ND		---	5.45
183	183/185	35.482	1.04	344		---	6.94
184		---	---	ND		---	7.60
185	183/185	35.482	1.04	(344)		---	6.94
186		---	---	ND		---	3.87
187		34.890	1.06	589		---	8.28
188		---	---	ND		---	3.65
189		44.232	1.03	31.6	A	---	4.39
190		40.797	1.11	120		---	6.36
191		39.288	0.85	---	I	21.4	5.47
192		---	---	ND		---	2.83
193	180/193	38.902	1.06	(1150)		---	7.45
194		47.573	0.99	247		---	5.18
195		43.801	1.06	---	I	88.4	6.49
196		41.820	0.83	128		---	4.31
197	197/200	38.014	0.84	44.2		---	16.0
198	198/199	41.015	0.90	335		---	15.4
199	198/199	41.015	0.90	(335)		---	15.4
200	197/200	38.014	0.84	(44.2)		---	16.0
201		37.108	0.99	31.5		---	7.28
202		36.186	0.93	71.6		---	3.90
203		42.071	0.94	176		---	5.15
204		---	---	ND		---	5.94
205		---	---	ND		---	4.80
206		51.862	0.77	205		---	7.77
207		44.835	0.84	25.6		---	5.75
208		43.456	0.71	67.2		---	7.30
209		55.547	0.76	157		---	5.72

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REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DSCCG005(0.0-0.5)
Lab Sample ID	40219480007
Filename	Y201225A_06

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	83.9
Total Dichloro Biphenyls	569
Total Trichloro Biphenyls	2410
Total Tetrachloro Biphenyls	8880
Total Pentachloro Biphenyls	20700
Total Hexachloro Biphenyls	16300
Total Heptachloro Biphenyls	4360
Total Octachloro Biphenyls	1030
Total Nonachloro Biphenyls	298
DecachloroBiphenyls	157
Total PCBs	54800

ND = Not Detected
Results reported on a dry weight basis

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Minneapolis, MN 55414

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DUP-4		
Lab Sample ID	40219480008		
Filename	Y201225B_06		
Injected By	CVS		
Total Amount Extracted	20.7 g	Matrix	Solid
% Moisture	51.4	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	12/04/2020
ICAL ID	Y201225B02	Received	12/10/2020 08:45
CCal Filename(s)	Y201225B_01	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/25/2020 18:32

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.100	2.92	2.0	0.995	50
13C-4-MoCB	3	8.245	2.80	2.0	1.11	55
13C-2,2'-DiCB	4	8.472	1.73	2.0	1.05	52
13C-4,4'-DiCB	15	14.352	1.56	2.0	1.22	61
13C-2,2',6-TrCB	19	11.561	1.15	2.0	1.14	57
13C-3,4,4'-TrCB	37	21.264	1.07	2.0	1.42	71
13C-2,2',6,6'-TeCB	54	14.590	0.80	2.0	1.12	56
13C-3,4,4',5-TeCB	81	27.842	0.78	2.0	1.51	75
13C-3,3',4,4'-TeCB	77	28.379	0.79	2.0	1.58	79
13C-2,2',4,6,6'-PeCB	104	20.040	1.60	2.0	1.58	79
13C-2,3,3',4,4'-PeCB	105	31.721	1.69	2.0	1.80	90
13C-2,3,4,4',5-PeCB	114	31.101	1.52	2.0	1.79	90
13C-2,3',4,4',5-PeCB	118	30.631	1.64	2.0	1.80	90
13C-2,3',4,4',5'-PeCB	123	30.313	1.60	2.0	1.79	90
13C-3,3',4,4',5-PeCB	126	34.706	1.62	2.0	1.80	90
13C-2,2',4,4',6,6'-HxCB	155	25.780	1.27	2.0	1.01	51
13C-HxCB(156/157)	156/157	37.612	1.29	4.0	2.58	64
13C-2,3',4,4',5,5'-HxCB	167	36.522	1.31	2.0	1.35	68
13C-3,3',4,4',5,5'-HxCB	169	40.965	1.20	2.0	1.36	68
13C-2,2',3,4',5,6,6'-HpCB	188	31.101	1.13	2.0	1.27	63
13C-2,3,3',4,4',5,5'-HpCB	189	44.232	1.01	2.0	1.31	66
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.220	0.92	2.0	1.12	56
13C-2,3,3',4,4',5,5',6-OcCB	205	48.436	0.92	2.0	1.20	60
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.884	0.87	2.0	1.13	56
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.478	0.79	2.0	1.20	60
13C-DeCB	209	55.591	0.75	2.0	1.08	54
CleanupStandards						
13C-2,4,4'-TrCB	28	17.357	1.14	2.0	1.49	75
13C-2,3,3',5,5'-PeCB	111	28.463	1.57	2.0	2.03	101
13C-2,2',3,3',5,5',6-HpCB	178	34.035	1.16	2.0	1.43	71
Recovery Standards						
13C-2,5-DiCB	9	10.507	1.61	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.151	0.82	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.948	1.55	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.582	1.27	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.595	0.89	2.0	NA	NA

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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-4
Lab Sample ID 40219480008
Filename Y201225B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.112	2.78	17.8	J	---	2.28
2		8.101	2.90	30.0		---	3.24
3		8.269	3.27	38.2		---	2.53
4		8.496	1.44	49.9	B	---	6.96
5		---	---	ND		---	1.94
6		10.902	1.50	63.8		---	3.67
7		10.675	1.49	12.8	J	---	3.04
8		11.309	1.50	270		---	4.37
9		10.531	1.39	13.2	J	---	3.34
10		---	---	ND		---	3.22
11		13.765	1.61	111	B	---	18.7
12	12/13	14.065	1.77	63.6		---	4.77
13	12/13	14.065	1.77	(63.6)		---	4.77
14		---	---	ND		---	2.83
15		14.364	1.51	274		---	7.13
16		14.280	1.05	198		---	1.96
17		13.849	1.06	331		---	1.76
18	18/30	13.442	1.06	524		---	24.9
19		11.573	1.07	47.1		---	3.16
20	20/28	17.373	1.07	1760		---	20.8
21	21/33	17.591	1.08	1330		---	12.6
22		17.960	1.09	357		---	8.56
23		---	---	ND		---	2.02
24		---	---	ND		---	3.02
25		16.787	1.13	169		---	2.45
26	26/29	16.552	1.05	225		---	3.94
27		14.065	1.13	42.7		---	2.20
28	20/28	17.373	1.07	(1760)		---	20.8
29	26/29	16.552	1.05	(225)		---	3.94
30	18/30	13.442	1.06	(524)		---	24.9
31		17.088	1.08	1090		---	17.1
32		14.825	1.09	195		---	5.37
33	21/33	17.591	1.08	(1330)		---	12.6
34		16.116	1.10	56.9		---	1.73
35		20.912	1.12	31.8		---	3.27
36		---	---	ND		---	2.69
37		21.281	1.07	709		---	5.72
38		---	---	ND		---	1.40
39		19.922	1.09	16.8	J	---	1.94
40	40/41/71	21.113	0.79	1530		---	9.84
41	40/41/71	21.113	0.79	(1530)		---	9.84
42		20.626	0.77	1120		---	5.23
43	43/73	19.335	0.77	161		---	8.24
44	44/47/65	20.107	0.78	4240		---	14.3

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-4
Lab Sample ID 40219480008
Filename Y201225B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.407	0.79	380		---	6.50
46		17.709	0.80	145		---	3.46
47	44/47/65	20.107	0.78	(4240)		---	14.3
48		19.905	0.79	433		---	3.56
49	49/69	19.637	0.78	3950		---	8.42
50	50/53	16.787	0.79	350		---	8.52
51	45/51	17.407	0.79	(380)		---	6.50
52		19.168	0.78	6930		---	18.1
53	50/53	16.787	0.79	(350)		---	8.52
54		14.606	1.02	---	IJ	3.84	2.66
55		---	---	ND		---	3.72
56		24.874	0.79	1720		---	5.64
57		22.879	0.65	21.0		---	4.65
58		23.114	0.81	68.7	A	---	2.65
59	59/62/75	20.492	0.76	303		---	8.55
60		25.109	0.78	297		---	5.67
61	61/70/74/76	23.868	0.78	7910		---	24.4
62	59/62/75	20.492	0.76	(303)		---	8.55
63		23.549	0.81	219		---	2.91
64		21.331	0.80	1630		---	6.99
65	44/47/65	20.107	0.78	(4240)		---	14.3
66		24.204	0.79	4620		---	10.5
67		23.298	0.81	93.9		---	3.77
68		22.510	0.80	95.9		---	3.43
69	49/69	19.637	0.78	(3950)		---	8.42
70	61/70/74/76	23.868	0.78	(7910)		---	24.4
71	40/41/71	21.113	0.79	(1530)		---	9.84
72		22.225	0.81	186		---	2.59
73	43/73	19.335	0.77	(161)		---	8.24
74	61/70/74/76	23.868	0.78	(7910)		---	24.4
75	59/62/75	20.492	0.76	(303)		---	8.55
76	61/70/74/76	23.868	0.78	(7910)		---	24.4
77		28.396	0.79	525		---	4.38
78		---	---	ND		---	3.92
79		26.870	0.69	89.8		---	3.05
80		25.511	0.68	55.2		---	3.10
81		27.842	0.67	14.7	J	---	4.92
82		28.010	1.55	1550		---	12.1
83		26.299	1.57	601		---	10.8
84		24.002	1.58	3730		---	6.30
85	85/116/117	27.574	1.55	2220		---	11.5
86	86/87/97/108/119/125	26.886	1.59	9310		---	26.6
87	86/87/97/108/119/125	26.886	1.59	(9310)		---	26.6
88	88/91	23.835	1.59	2090		---	13.0

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-4
Lab Sample ID 40219480008
Filename Y201225B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.489	1.63	102		---	4.04
90	90/101/113	25.964	1.58	10500		---	14.3
91	88/91	23.835	1.59	(2090)		---	13.0
92		25.495	1.59	2820		---	5.90
93	93/98/100/102	23.348	1.47	522		---	10.5
94		22.560	1.36	53.8		---	3.29
95		22.979	1.58	10300		---	11.3
96		20.375	1.73	76.1		---	5.13
97	86/87/97/108/119/125	26.886	1.59	(9310)		---	26.6
98	93/98/100/102	23.348	1.47	(522)		---	10.5
99		26.434	1.58	6830		---	10.1
100	93/98/100/102	23.348	1.47	(522)		---	10.5
101	90/101/113	25.964	1.58	(10500)		---	14.3
102	93/98/100/102	23.348	1.47	(522)		---	10.5
103		22.359	1.53	166		---	5.03
104		---	---	ND		---	7.28
105		31.738	1.60	4180	A	---	107
106		---	---	ND	A	---	7.18
107	107/124	29.994	1.62	398	A	---	20.7
108	86/87/97/108/119/125	26.886	1.59	(9310)		---	26.6
109		30.229	1.58	1120	A	---	18.6
110	110/115	27.725	1.58	18800		---	8.87
111		28.496	1.83	---	IJ	13.1	3.47
112		---	---	ND		---	4.48
113	90/101/113	25.964	1.58	(10500)		---	14.3
114		31.134	1.63	192	A	---	6.11
115	110/115	27.725	1.58	(18800)		---	8.87
116	85/116/117	27.574	1.55	(2220)		---	11.5
117	85/116/117	27.574	1.55	(2220)		---	11.5
118		30.648	1.62	14400		---	9.42
119	86/87/97/108/119/125	26.886	1.59	(9310)		---	26.6
120		28.916	1.48	101		---	2.53
121		---	---	ND		---	4.72
122		30.950	1.78	127	A	---	22.4
123		30.329	1.71	188	A	---	23.4
124	107/124	29.994	1.62	(398)	A	---	20.7
125	86/87/97/108/119/125	26.886	1.59	(9310)		---	26.6
126		34.706	1.69	32.8		---	2.97
127		---	---	ND	A	---	22.2
128	128/166	34.790	1.26	2820		---	6.77
129	129/138/163	33.616	1.25	15600		---	27.2
130		32.995	1.30	1210		---	4.46
131		30.262	1.28	257		---	7.46
132		30.681	1.26	5420		---	10.8

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EMPC = Estimated Maximum Possible Concentration
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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-4
Lab Sample ID 40219480008
Filename Y201225B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		31.251	1.25	223		---	3.98
134	134/143	29.675	1.22	927		---	9.39
135	135/151	28.631	1.32	3980		---	15.0
136		26.283	1.33	1160		---	7.71
137		33.214	1.27	842		---	4.54
138	129/138/163	33.616	1.25	(15600)		---	27.2
139	139/140	30.094	1.27	330		---	7.80
140	139/140	30.094	1.27	(330)		---	7.80
141		32.610	1.25	2030		---	5.40
142		---	---	ND		---	2.53
143	134/143	29.675	1.22	(927)		---	9.39
144		29.167	1.27	562		---	15.4
145		26.568	1.31	6.48	J	---	6.20
146		31.872	1.28	2110		---	6.04
147	147/149	29.507	1.26	10300		---	28.0
148		28.060	1.42	15.9	J	---	11.6
149	147/149	29.507	1.26	(10300)		---	28.0
150		26.048	1.38	14.2	J	---	7.28
151	135/151	28.631	1.32	(3980)		---	15.0
152		25.931	1.26	12.3	J	---	7.92
153	153/168	32.459	1.25	10800		---	12.9
154		28.899	1.34	173		---	8.02
155		---	---	ND		---	4.78
156	156/157	37.612	1.29	2180		---	7.76
157	156/157	37.612	1.29	(2180)		---	7.76
158		34.001	1.25	1140		---	3.74
159		35.784	1.12	6.29	J	---	5.96
160		---	---	ND		---	5.09
161		---	---	ND		---	3.93
162		36.069	1.18	57.1		---	3.82
163	129/138/163	33.616	1.25	(15600)		---	27.2
164		33.314	1.24	975		---	3.41
165		31.402	1.58	---	IJ	7.19	4.82
166	128/166	34.790	1.26	(2820)		---	6.77
167		36.555	1.27	664		---	4.40
168	153/168	32.459	1.25	(10800)		---	12.9
169		---	---	ND	A	---	5.36
170		40.244	1.07	1880		---	5.94
171	171/173	36.740	1.04	613		---	7.90
172		38.333	1.05	306		---	2.62
173	171/173	36.740	1.04	(613)		---	7.90
174		35.700	1.07	1550		---	4.20
175		34.655	0.90	70.1		---	3.93
176		32.258	1.05	228		---	6.71

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-4
Lab Sample ID 40219480008
Filename Y201225B_06

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.119	1.06	899		---	9.18
178		34.052	1.04	291		---	4.49
179		31.402	1.02	619		---	9.63
180	180/193	38.953	1.06	3230		---	7.43
181		36.522	0.95	33.2		---	1.82
182		35.125	0.95	9.25	J	---	5.44
183	183/185	35.516	1.04	997		---	6.92
184		---	---	ND		---	7.59
185	183/185	35.516	1.04	(997)		---	6.92
186		---	---	ND		---	3.87
187		34.924	1.02	1640		---	8.27
188		---	---	ND		---	3.65
189		44.276	0.97	103	A	---	4.75
190		40.848	1.06	345		---	6.35
191		39.322	1.02	68.6		---	5.46
192		---	---	ND		---	2.83
193	180/193	38.953	1.06	(3230)		---	7.43
194		47.638	0.92	682		---	5.17
195		43.845	0.90	263		---	6.48
196		41.871	0.89	364		---	4.30
197	197/200	38.115	0.91	119		---	15.9
198	198/199	41.066	0.87	835		---	15.3
199	198/199	41.066	0.87	(835)		---	15.3
200	197/200	38.115	0.91	(119)		---	15.9
201		37.159	0.95	85.7		---	7.26
202		36.254	0.91	180		---	3.90
203		42.105	0.90	511		---	5.14
204		---	---	ND		---	5.93
205		48.479	0.95	36.3		---	4.79
206		51.927	0.77	456		---	7.76
207		44.901	0.85	58.7		---	5.74
208		43.500	0.82	144		---	7.28
209		55.678	0.73	298		---	5.71

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DUP-4
Lab Sample ID	40219480008
Filename	Y201225B_06

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	86.0
Total Dichloro Biphenyls	858
Total Trichloro Biphenyls	7080
Total Tetrachloro Biphenyls	37100
Total Pentachloro Biphenyls	90400
Total Hexachloro Biphenyls	63800
Total Heptachloro Biphenyls	12900
Total Octachloro Biphenyls	3080
Total Nonachloro Biphenyls	659
DecachloroBiphenyls	298
Total PCBs	216000

ND = Not Detected
Results reported on a dry weight basis

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Minneapolis, MN 55414

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	USCCC004(0.0-1.0)		
Lab Sample ID	40219480009		
Filename	Y201223A_17		
Injected By	CVS		
Total Amount Extracted	31.7 g	Matrix	Solid
% Moisture	68.3	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	12/03/2020 09:30
ICAL ID	Y201223A10	Received	12/10/2020 08:45
CCal Filename(s)	Y201223A_09	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/24/2020 02:48

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.100	3.04	2.0	0.892	45
13C-4-MoCB	3	8.245	3.04	2.0	1.02	51
13C-2,2'-DiCB	4	8.460	1.65	2.0	0.998	50
13C-4,4'-DiCB	15	14.316	1.54	2.0	1.33	67
13C-2,2',6-TrCB	19	11.525	1.03	2.0	1.05	53
13C-3,4,4'-TrCB	37	21.229	1.04	2.0	1.46	73
13C-2,2',6,6'-TeCB	54	14.556	0.80	2.0	1.11	55
13C-3,4,4',5-TeCB	81	27.807	0.82	2.0	1.57	79
13C-3,3',4,4'-TeCB	77	28.377	0.84	2.0	1.60	80
13C-2,2',4,6,6'-PeCB	104	20.005	1.57	2.0	1.65	83
13C-2,3,3',4,4'-PeCB	105	31.736	1.64	2.0	1.90	95
13C-2,3,4,4',5-PeCB	114	31.132	1.67	2.0	1.90	95
13C-2,3',4,4',5-PeCB	118	30.612	1.56	2.0	1.84	92
13C-2,3',4,4',5'-PeCB	123	30.294	1.60	2.0	1.87	93
13C-3,3',4,4',5-PeCB	126	34.686	1.57	2.0	1.96	98
13C-2,2',4,4',6,6'-HxCB	155	25.795	1.24	2.0	1.04	52
13C-HxCB(156/157)	156/157	37.542	1.25	4.0	2.66	66
13C-2,3',4,4',5,5'-HxCB	167	36.486	1.26	2.0	1.37	69
13C-3,3',4,4',5,5'-HxCB	169	40.929	1.29	2.0	1.32	66
13C-2,2',3,4',5,6,6'-HpCB	188	31.098	1.06	2.0	1.31	65
13C-2,3,3',4,4',5,5'-HpCB	189	44.207	1.06	2.0	1.37	68
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.201	0.89	2.0	1.26	63
13C-2,3,3',4,4',5,5',6-OcCB	205	48.431	0.94	2.0	1.23	61
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.879	0.78	2.0	1.31	65
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.453	0.74	2.0	1.28	64
13C-DeCB	209	55.543	0.76	2.0	1.20	60
CleanupStandards						
13C-2,4,4'-TrCB	28	17.323	1.09	2.0	1.44	72
13C-2,3,3',5,5'-PeCB	111	28.478	1.59	2.0	1.86	93
13C-2,2',3,3',5,5',6-HpCB	178	33.999	1.12	2.0	1.43	72
Recovery Standards						
13C-2,5-DiCB	9	10.435	1.59	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.117	0.79	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.963	1.56	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.563	1.28	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.548	0.90	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(0.0-1.0)
Lab Sample ID 40219480009
Filename Y201223A_17

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.112	2.77	24.9		---	2.28
2		8.089	3.11	46.3		---	3.23
3		8.257	2.99	60.3		---	2.52
4		8.484	1.56	60.6	B	---	6.95
5		---	---	ND		---	1.94
6		10.842	1.59	63.4		---	3.66
7		10.615	1.36	16.2	J	---	3.03
8		11.274	1.64	186		---	4.36
9		10.447	1.63	14.8	J	---	3.33
10		8.640	1.36	3.62	J	---	3.21
11		13.729	1.63	122	B	---	18.7
12	12/13	14.041	1.61	77.9		---	4.76
13	12/13	14.041	1.61	(77.9)		---	4.76
14		---	---	ND		---	2.82
15		14.340	1.60	308		---	7.12
16		14.257	1.13	79.4		---	1.96
17		13.825	1.06	161		---	1.76
18	18/30	13.418	1.06	215		---	24.8
19		11.561	1.14	40.8		---	3.15
20	20/28	17.356	1.06	1090		---	20.8
21	21/33	17.558	1.09	709		---	12.5
22		17.943	1.05	232		---	8.54
23		---	---	ND		---	2.02
24		14.113	1.10	4.07	J	---	3.01
25		16.753	1.07	221		---	2.45
26	26/29	16.518	1.05	250		---	3.93
27		14.029	1.03	39.8		---	2.20
28	20/28	17.356	1.06	(1090)		---	20.8
29	26/29	16.518	1.05	(250)		---	3.93
30	18/30	13.418	1.06	(215)		---	24.8
31		17.055	1.06	606		---	17.1
32		14.791	1.08	115		---	5.36
33	21/33	17.558	1.09	(709)		---	12.5
34		16.065	1.09	27.2		---	1.73
35		20.860	1.05	21.1		---	3.26
36		---	---	ND		---	2.68
37		21.263	1.03	460		---	5.71
38		---	---	ND		---	1.40
39		19.871	0.99	7.61	J	---	1.94
40	40/41/71	21.078	0.80	734		---	9.82
41	40/41/71	21.078	0.80	(734)		---	9.82
42		20.609	0.72	453		---	5.22
43	43/73	19.318	0.84	65.3		---	8.22
44	44/47/65	20.072	0.78	1760		---	14.3

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(0.0-1.0)
Lab Sample ID 40219480009
Filename Y201223A_17

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.373	0.75	191		---	6.48
46		17.675	0.78	66.0		---	3.45
47	44/47/65	20.072	0.78	(1760)		---	14.3
48		19.888	0.74	132		---	3.55
49	49/69	19.620	0.78	1460		---	8.40
50	50/53	16.753	0.77	192		---	8.50
51	45/51	17.373	0.75	(191)		---	6.48
52		19.150	0.79	2820		---	18.1
53	50/53	16.753	0.77	(192)		---	8.50
54		14.590	0.68	7.27	J	---	2.65
55		---	---	ND		---	3.71
56		24.873	0.78	897		---	5.63
57		22.827	0.81	7.50	J	---	4.64
58		23.096	0.79	31.0		---	1.34
59	59/62/75	20.441	0.78	120		---	8.53
60		25.091	0.83	200		---	5.66
61	61/70/74/76	23.867	0.78	3190		---	24.4
62	59/62/75	20.441	0.78	(120)		---	8.53
63		23.532	0.88	100		---	2.90
64		21.296	0.78	703		---	6.98
65	44/47/65	20.072	0.78	(1760)		---	14.3
66		24.185	0.81	2110		---	10.4
67		23.280	0.79	46.5		---	3.76
68		22.476	0.84	52.6		---	3.42
69	49/69	19.620	0.78	(1460)		---	8.40
70	61/70/74/76	23.867	0.78	(3190)		---	24.4
71	40/41/71	21.078	0.80	(734)		---	9.82
72		22.190	0.79	67.3		---	2.58
73	43/73	19.318	0.84	(65.3)		---	8.22
74	61/70/74/76	23.867	0.78	(3190)		---	24.4
75	59/62/75	20.441	0.78	(120)		---	8.53
76	61/70/74/76	23.867	0.78	(3190)		---	24.4
77		28.411	0.80	246		---	4.37
78		---	---	ND		---	3.91
79		26.868	0.72	55.6		---	3.04
80		25.493	0.83	30.4		---	3.09
81		27.824	0.73	9.34	J	---	4.91
82		27.975	1.53	700		---	12.0
83		26.298	1.55	263		---	10.7
84		24.001	1.56	1550		---	6.28
85	85/116/117	27.539	1.56	1080		---	11.4
86	86/87/97/108/119/125	26.952	1.57	3930		---	26.5
87	86/87/97/108/119/125	26.952	1.57	(3930)		---	26.5
88	88/91	23.817	1.52	810		---	12.9

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(0.0-1.0)
Lab Sample ID 40219480009
Filename Y201223A_17

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.487	1.58	54.9		---	4.04
90	90/101/113	25.979	1.57	4550		---	14.3
91	88/91	23.817	1.52	(810)		---	12.9
92		25.493	1.55	1240		---	5.88
93	93/98/100/102	23.330	1.54	217		---	10.4
94		22.526	1.43	25.2		---	3.28
95		22.945	1.58	4070		---	11.2
96		20.358	1.61	31.8		---	5.12
97	86/87/97/108/119/125	26.952	1.57	(3930)		---	26.5
98	93/98/100/102	23.330	1.54	(217)		---	10.4
99		26.432	1.57	2710		---	10.0
100	93/98/100/102	23.330	1.54	(217)		---	10.4
101	90/101/113	25.979	1.57	(4550)		---	14.3
102	93/98/100/102	23.330	1.54	(217)		---	10.4
103		22.341	1.57	67.6		---	5.02
104		---	---	ND		---	7.27
105		31.752	1.53	2020	A	---	5.47
106		---	---	ND	A	---	6.02
107	107/124	29.992	1.58	180	A	---	6.11
108	86/87/97/108/119/125	26.952	1.57	(3930)		---	26.5
109		30.210	1.60	546	A	---	5.99
110	110/115	27.706	1.57	8300		---	8.85
111		28.478	1.71	6.59	J	---	3.46
112		---	---	ND		---	4.47
113	90/101/113	25.979	1.57	(4550)		---	14.3
114		31.149	1.57	81.4		---	4.77
115	110/115	27.706	1.57	(8300)		---	8.85
116	85/116/117	27.539	1.56	(1080)		---	11.4
117	85/116/117	27.539	1.56	(1080)		---	11.4
118		30.629	1.60	6370	A	---	9.96
119	86/87/97/108/119/125	26.952	1.57	(3930)		---	26.5
120		28.914	1.56	45.3		---	2.52
121		---	---	ND		---	4.71
122		30.931	1.55	28.4	A	---	6.73
123		30.310	1.67	105	A	---	6.35
124	107/124	29.992	1.58	(180)	A	---	6.11
125	86/87/97/108/119/125	26.952	1.57	(3930)		---	26.5
126		34.686	1.55	23.7		---	2.96
127		33.194	1.31	---	IJA	10.8	6.29
128	128/166	34.753	1.23	1530		---	6.76
129	129/138/163	33.597	1.25	8480		---	27.1
130		32.976	1.19	604		---	4.45
131		30.243	1.31	124		---	7.44
132		30.663	1.24	2680		---	10.7

Conc = Concentration
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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(0.0-1.0)
Lab Sample ID 40219480009
Filename Y201223A_17

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
133		31.266	1.18	119	---	3.97
134	134/143	29.656	1.22	405	---	9.37
135	135/151	28.645	1.33	1820	---	15.0
136		26.281	1.30	463	---	7.69
137		33.177	1.19	415	---	4.53
138	129/138/163	33.597	1.25	(8480)	---	27.1
139	139/140	30.076	1.25	156	---	7.78
140	139/140	30.076	1.25	(156)	---	7.78
141		32.590	1.24	1060	---	5.39
142		---	---	ND	---	2.52
143	134/143	29.656	1.22	(405)	---	9.37
144		29.148	1.31	248	---	15.4
145		---	---	ND	---	6.18
146		31.853	1.23	1030	---	6.02
147	147/149	29.506	1.25	4700	---	27.9
148		---	---	ND	---	11.5
149	147/149	29.506	1.25	(4700)	---	27.9
150		---	---	ND	---	7.27
151	135/151	28.645	1.33	(1820)	---	15.0
152		---	---	ND	---	7.90
153	153/168	32.440	1.24	5260	---	12.8
154		28.897	1.27	80.1	---	8.00
155		---	---	ND	---	4.77
156	156/157	37.558	1.26	1050	---	7.74
157	156/157	37.558	1.26	(1050)	---	7.74
158		33.965	1.22	649	---	3.73
159		---	---	ND	---	5.94
160		---	---	ND	---	5.08
161		---	---	ND	---	3.92
162		36.050	1.23	43.1	---	3.81
163	129/138/163	33.597	1.25	(8480)	---	27.1
164		33.295	1.25	520	---	3.40
165		---	---	ND	---	4.81
166	128/166	34.753	1.23	(1530)	---	6.76
167		36.519	1.28	344	---	4.39
168	153/168	32.440	1.24	(5260)	---	12.8
169		---	---	ND	---	4.92
170		40.208	1.03	1100	---	5.92
171	171/173	36.703	1.06	361	---	7.88
172		38.296	1.12	194	---	2.61
173	171/173	36.703	1.06	(361)	---	7.88
174		35.681	1.04	933	---	4.19
175		34.636	1.06	41.6	---	3.92
176		32.238	1.06	121	---	6.70

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(0.0-1.0)
Lab Sample ID 40219480009
Filename Y201223A_17

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
177		36.100	1.06	620	---	9.15
178		34.033	1.03	188	---	4.48
179		31.417	1.07	367	---	9.61
180	180/193	38.917	1.05	2010	---	7.41
181		36.486	1.05	18.3 J	---	1.82
182		35.089	1.24	--- IJ	7.59	5.43
183	183/185	35.480	1.07	617	---	6.91
184		---	---	ND	---	7.57
185	183/185	35.480	1.07	(617)	---	6.91
186		---	---	ND	---	3.86
187		34.904	1.07	984	---	8.25
188		---	---	ND	---	3.64
189		44.207	1.07	57.6	---	2.70
190		40.828	1.00	209	---	6.33
191		39.285	1.05	40.5	---	5.45
192		---	---	ND	---	2.82
193	180/193	38.917	1.05	(2010)	---	7.41
194		47.612	0.89	439	---	5.16
195		43.798	0.96	167	---	6.46
196		41.834	0.90	220	---	4.29
197	197/200	38.028	0.96	75.3	---	15.9
198	198/199	41.046	0.89	535	---	15.3
199	198/199	41.046	0.89	(535)	---	15.3
200	197/200	38.028	0.96	(75.3)	---	15.9
201		37.123	0.87	52.9	---	7.25
202		36.217	0.88	115	---	3.89
203		42.102	0.88	300	---	5.13
204		---	---	ND	---	5.91
205		48.539	0.87	25.4	---	4.78
206		51.944	0.78	334	---	7.74
207		44.832	0.83	35.6	---	5.73
208		43.475	0.75	111	---	7.27
209		55.651	0.72	231	---	5.70

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	USCCC004(0.0-1.0)
Lab Sample ID	40219480009
Filename	Y201223A_17

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	132
Total Dichloro Biphenyls	852
Total Trichloro Biphenyls	4280
Total Tetrachloro Biphenyls	15800
Total Pentachloro Biphenyls	39000
Total Hexachloro Biphenyls	31800
Total Heptachloro Biphenyls	7870
Total Octachloro Biphenyls	1930
Total Nonachloro Biphenyls	481
DecachloroBiphenyls	231
Total PCBs	102000

ND = Not Detected
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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	USCCC004(2.0-3.0)		
Lab Sample ID	40219480010		
Filename	Y201225A_10		
Injected By	CVS		
Total Amount Extracted	21.0 g	Matrix	Solid
% Moisture	52.1	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	12/03/2020 09:30
ICAL ID	Y201225A02	Received	12/10/2020 08:45
CCal Filename(s)	Y201225A_01	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/25/2020 08:47

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.100	2.72	2.0	0.638	32
13C-4-MoCB	3	8.245	2.82	2.0	0.729	36
13C-2,2'-DiCB	4	8.460	1.67	2.0	0.681	34
13C-4,4'-DiCB	15	14.340	1.57	2.0	0.895	45
13C-2,2',6-TrCB	19	11.537	1.03	2.0	0.791	40
13C-3,4,4'-TrCB	37	21.247	1.06	2.0	0.921	46
13C-2,2',6,6'-TeCB	54	14.573	0.84	2.0	0.741	37
13C-3,4,4',5-TeCB	81	27.826	0.82	2.0	0.993	50
13C-3,3',4,4'-TeCB	77	28.363	0.82	2.0	0.999	50
13C-2,2',4,6,6'-PeCB	104	20.023	1.63	2.0	1.17	59
13C-2,3,3',4,4'-PeCB	105	31.688	1.57	2.0	1.34	67
13C-2,3,4,4',5-PeCB	114	31.084	1.62	2.0	1.37	68
13C-2,3',4,4',5-PeCB	118	30.598	1.61	2.0	1.34	67
13C-2,3',4,4',5'-PeCB	123	30.280	1.57	2.0	1.37	69
13C-3,3',4,4',5-PeCB	126	34.673	1.67	2.0	1.36	68
13C-2,2',4,4',6,6'-HxCB	155	25.780	1.27	2.0	0.639	32
13C-HxCB(156/157)	156/157	37.596	1.23	4.0	1.72	43
13C-2,3',4,4',5,5'-HxCB	167	36.489	1.31	2.0	0.902	45
13C-3,3',4,4',5,5'-HxCB	169	40.916	1.35	2.0	0.915	46
13C-2,2',3,4',5,6,6'-HpCB	188	31.084	1.09	2.0	0.852	43
13C-2,3,3',4,4',5,5'-HpCB	189	44.169	1.11	2.0	0.920	46
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.188	0.88	2.0	0.786	39
13C-2,3,3',4,4',5,5',6-OcCB	205	48.394	0.91	2.0	0.845	42
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.842	0.73	2.0	0.821	41
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.437	0.82	2.0	0.862	43
13C-DeCB	209	55.593	0.72	2.0	0.782	39
CleanupStandards						
13C-2,4,4'-TrCB	28	17.340	1.02	2.0	0.857	43
13C-2,3,3',5,5'-PeCB	111	28.447	1.54	2.0	1.20	60
13C-2,2',3,3',5,5',6-HpCB	178	34.019	1.10	2.0	0.859	43
Recovery Standards						
13C-2,5-DiCB	9	10.471	1.59	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.134	0.81	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.948	1.54	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.567	1.23	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.532	0.91	2.0	NA	NA

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Minneapolis, MN 55414

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(2.0-3.0)
Lab Sample ID 40219480010
Filename Y201225A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.112	2.98	21.1		---	2.28
2		8.089	2.96	34.1		---	3.23
3		8.245	2.78	38.6		---	2.52
4		8.484	1.46	49.5	B	---	6.95
5		---	---	ND		---	1.94
6		10.866	1.62	59.2		---	3.66
7		10.651	1.66	10.9	J	---	3.03
8		11.298	1.63	257		---	4.36
9		10.495	1.62	12.1	J	---	3.33
10		---	---	ND		---	3.21
11		13.766	1.54	114	B	---	18.7
12	12/13	14.041	1.44	68.3		---	4.76
13	12/13	14.041	1.44	(68.3)		---	4.76
14		---	---	ND		---	2.82
15		14.352	1.56	283		---	7.12
16		14.269	1.05	180		---	1.96
17		13.837	1.03	327		---	1.76
18	18/30	13.430	1.04	525		---	24.9
19		11.561	1.21	---	I	42.0	3.15
20	20/28	17.357	1.07	1650		---	20.8
21	21/33	17.575	1.06	1230		---	12.5
22		17.961	1.10	359		---	8.54
23		---	---	ND		---	2.02
24		---	---	ND		---	3.01
25		16.770	1.11	168		---	2.45
26	26/29	16.552	1.08	215		---	3.93
27		14.065	1.00	38.4		---	2.20
28	20/28	17.357	1.07	(1650)		---	20.8
29	26/29	16.552	1.08	(215)		---	3.93
30	18/30	13.430	1.04	(525)		---	24.9
31		17.072	1.07	1060		---	17.1
32		14.808	1.09	196		---	5.36
33	21/33	17.575	1.06	(1230)		---	12.5
34		16.082	1.04	49.2		---	1.73
35		20.895	1.04	33.2		---	3.26
36		---	---	ND		---	2.68
37		21.281	1.07	686		---	5.71
38		---	---	ND		---	1.40
39		19.906	0.95	16.5	J	---	1.94
40	40/41/71	21.096	0.80	1390		---	9.82
41	40/41/71	21.096	0.80	(1390)		---	9.82
42		20.610	0.77	1000		---	5.22
43	43/73	19.336	0.75	135		---	8.22
44	44/47/65	20.090	0.78	3840		---	14.3

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(2.0-3.0)
Lab Sample ID 40219480010
Filename Y201225A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.407	0.80	351		---	6.48
46		17.692	0.81	138		---	3.45
47	44/47/65	20.090	0.78	(3840)		---	14.3
48		19.906	0.74	405		---	3.55
49	49/69	19.637	0.79	3530		---	8.40
50	50/53	16.770	0.77	329		---	8.50
51	45/51	17.407	0.80	(351)		---	6.48
52		19.151	0.78	6290		---	18.1
53	50/53	16.770	0.77	(329)		---	8.50
54		14.590	0.51	---	IJ	2.69	2.65
55		---	---	ND		---	3.71
56		24.858	0.80	1500		---	5.63
57		22.862	0.63	---	IJ	14.3	4.64
58		23.097	0.74	66.0	A	---	3.23
59	59/62/75	20.476	0.82	283		---	8.53
60		25.093	0.72	270		---	5.66
61	61/70/74/76	23.852	0.77	6730		---	24.4
62	59/62/75	20.476	0.82	(283)		---	8.53
63		23.533	0.78	188	A	---	3.22
64		21.314	0.78	1460		---	6.98
65	44/47/65	20.090	0.78	(3840)		---	14.3
66		24.187	0.79	4230		---	10.4
67		23.265	0.78	77.3		---	3.76
68		22.476	0.76	83.2		---	3.42
69	49/69	19.637	0.79	(3530)		---	8.40
70	61/70/74/76	23.852	0.77	(6730)		---	24.4
71	40/41/71	21.096	0.80	(1390)		---	9.82
72		22.191	0.77	163	A	---	3.05
73	43/73	19.336	0.75	(135)		---	8.22
74	61/70/74/76	23.852	0.77	(6730)		---	24.4
75	59/62/75	20.476	0.82	(283)		---	8.53
76	61/70/74/76	23.852	0.77	(6730)		---	24.4
77		28.396	0.78	465	A	---	4.94
78		---	---	ND		---	3.91
79		26.870	0.69	72.7	A	---	3.16
80		25.478	0.85	45.1	A	---	3.09
81		27.826	0.83	11.4	J	---	4.91
82		27.994	1.54	1230		---	12.0
83		26.283	1.47	434		---	10.7
84		24.003	1.56	3040		---	6.28
85	85/116/117	27.558	1.56	1800		---	11.4
86	86/87/97/108/119/125	26.870	1.57	7350		---	26.5
87	86/87/97/108/119/125	26.870	1.57	(7350)		---	26.5
88	88/91	23.818	1.56	1700		---	12.9

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(2.0-3.0)
Lab Sample ID 40219480010
Filename Y201225A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.489	1.59	83.7		---	4.04
90	90/101/113	25.965	1.56	8270		---	14.3
91	88/91	23.818	1.56	(1700)		---	12.9
92		25.495	1.56	2260		---	5.89
93	93/98/100/102	23.315	1.53	418		---	10.4
94		22.527	1.34	44.5		---	3.28
95		22.963	1.59	8250		---	11.2
96		20.375	1.50	67.0		---	5.12
97	86/87/97/108/119/125	26.870	1.57	(7350)		---	26.5
98	93/98/100/102	23.315	1.53	(418)		---	10.4
99		26.434	1.57	5410		---	10.0
100	93/98/100/102	23.315	1.53	(418)		---	10.4
101	90/101/113	25.965	1.56	(8270)		---	14.3
102	93/98/100/102	23.315	1.53	(418)		---	10.4
103		22.342	1.52	134		---	5.02
104		---	---	ND		---	7.27
105		31.722	1.55	3400	A	---	13.2
106		---	---	ND	A	---	6.02
107	107/124	29.978	1.69	316	A	---	6.38
108	86/87/97/108/119/125	26.870	1.57	(7350)		---	26.5
109		30.196	1.59	916	A	---	5.73
110	110/115	27.708	1.59	14900		---	8.85
111		28.463	1.14	---	IJ	9.27	3.46
112		---	---	ND		---	4.47
113	90/101/113	25.965	1.56	(8270)		---	14.3
114		31.118	1.38	139	A	---	10.4
115	110/115	27.708	1.59	(14900)		---	8.85
116	85/116/117	27.558	1.56	(1800)		---	11.4
117	85/116/117	27.558	1.56	(1800)		---	11.4
118		30.632	1.61	11700		---	9.40
119	86/87/97/108/119/125	26.870	1.57	(7350)		---	26.5
120		28.899	1.67	83.5		---	2.52
121		---	---	ND		---	4.71
122		30.934	1.57	83.4	A	---	6.87
123		30.313	1.71	136	A	---	7.25
124	107/124	29.978	1.69	(316)	A	---	6.38
125	86/87/97/108/119/125	26.870	1.57	(7350)		---	26.5
126		34.673	1.64	21.7	A	---	5.97
127		33.198	1.74	11.7	JA	---	6.85
128	128/166	34.757	1.25	2300		---	6.76
129	129/138/163	33.600	1.25	12900		---	27.1
130		32.963	1.27	944		---	4.45
131		30.246	1.24	209		---	7.45
132		30.665	1.26	4300		---	10.7

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(2.0-3.0)
Lab Sample ID 40219480010
Filename Y201225A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
133		31.236	1.29	174	---	3.97
134	134/143	29.659	1.27	775	---	9.37
135	135/151	28.614	1.30	3050	---	15.0
136		26.267	1.33	836	---	7.69
137		33.181	1.22	587	---	4.53
138	129/138/163	33.600	1.25	(12900)	---	27.1
139	139/140	30.062	1.16	252	---	7.78
140	139/140	30.062	1.16	(252)	---	7.78
141		32.594	1.23	1570	---	5.39
142		---	---	ND	---	2.52
143	134/143	29.659	1.27	(775)	---	9.37
144		29.151	1.31	413	---	15.4
145		---	---	ND	---	6.18
146		31.839	1.23	1630	---	6.02
147	147/149	29.491	1.25	7800	---	27.9
148		---	---	ND	---	11.5
149	147/149	29.491	1.25	(7800)	---	27.9
150		26.032	1.25	11.1 J	---	7.27
151	135/151	28.614	1.30	(3050)	---	15.0
152		25.914	1.16	8.53 J	---	7.90
153	153/168	32.426	1.24	8170	---	12.8
154		28.882	1.23	129	---	8.00
155		---	---	ND	---	4.77
156	156/157	37.596	1.25	1790	---	7.74
157	156/157	37.596	1.25	(1790)	---	7.74
158		33.969	1.22	1040	---	3.73
159		---	---	ND	---	5.94
160		---	---	ND	---	5.08
161		---	---	ND	---	3.92
162		36.037	1.22	45.4	---	3.81
163	129/138/163	33.600	1.25	(12900)	---	27.1
164		33.298	1.22	848	---	3.40
165		---	---	ND	---	4.81
166	128/166	34.757	1.25	(2300)	---	6.76
167		36.523	1.33	535	---	4.39
168	153/168	32.426	1.24	(8170)	---	12.8
169		---	---	ND	---	4.92
170		40.212	1.03	1590	---	5.92
171	171/173	36.708	1.05	501	---	7.88
172		38.301	1.05	256	---	2.61
173	171/173	36.708	1.05	(501)	---	7.88
174		35.685	1.04	1260	---	4.20
175		34.623	1.09	61.5	---	3.92
176		32.225	1.01	177	---	6.70

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(2.0-3.0)
Lab Sample ID 40219480010
Filename Y201225A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.104	1.03	772		---	9.16
178		34.036	1.11	247		---	4.48
179		31.386	1.05	504		---	9.61
180	180/193	38.921	1.05	2780		---	7.42
181		36.506	1.04	29.3		---	1.82
182		35.109	1.12	13.5	J	---	5.43
183	183/185	35.483	1.05	870		---	6.91
184		---	---	ND		---	7.57
185	183/185	35.483	1.05	(870)		---	6.91
186		---	---	ND		---	3.86
187		34.908	1.04	1330		---	8.25
188		---	---	ND		---	3.64
189		44.234	0.96	80.3	A	---	2.75
190		40.816	1.06	303		---	6.33
191		39.273	1.02	59.6		---	5.45
192		---	---	ND		---	2.82
193	180/193	38.921	1.05	(2780)		---	7.42
194		47.575	0.95	565		---	5.16
195		43.781	0.89	209		---	6.46
196		41.822	0.82	288		---	4.29
197	197/200	38.066	0.88	92.8		---	15.9
198	198/199	41.034	0.89	694		---	15.3
199	198/199	41.034	0.89	(694)		---	15.3
200	197/200	38.066	0.88	(92.8)		---	15.9
201		37.110	0.92	72.6		---	7.25
202		36.238	0.96	137		---	3.89
203		42.073	0.90	393		---	5.13
204		---	---	ND		---	5.91
205		48.394	1.02	26.0		---	4.78
206		51.886	0.78	335		---	7.74
207		44.837	0.72	38.6		---	5.73
208		43.458	0.81	115		---	7.27
209		55.571	0.76	239		---	5.70

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	USCCC004(2.0-3.0)
Lab Sample ID	40219480010
Filename	Y201225A_10

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	93.8
Total Dichloro Biphenyls	855
Total Trichloro Biphenyls	6740
Total Tetrachloro Biphenyls	33100
Total Pentachloro Biphenyls	72200
Total Hexachloro Biphenyls	50300
Total Heptachloro Biphenyls	10800
Total Octachloro Biphenyls	2480
Total Nonachloro Biphenyls	489
DecachloroBiphenyls	239
Total PCBs	177000

ND = Not Detected
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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	USCCC004(1.0-2.0)		
Lab Sample ID	40219480011		
Filename	Y201225A_11		
Injected By	CVS		
Total Amount Extracted	28.7 g	Matrix	Solid
% Moisture	65.1	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	12/03/2020 09:30
ICAL ID	Y201225A02	Received	12/10/2020 08:45
CCal Filename(s)	Y201225A_01	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/25/2020 09:46

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.100	3.05	2.0	1.12	56
13C-4-MoCB	3	8.233	2.77	2.0	1.20	60
13C-2,2'-DiCB	4	8.460	1.64	2.0	1.15	58
13C-4,4'-DiCB	15	14.329	1.61	2.0	1.34	67
13C-2,2',6-TrCB	19	11.549	1.09	2.0	1.20	60
13C-3,4,4'-TrCB	37	21.232	1.09	2.0	1.48	74
13C-2,2',6,6'-TeCB	54	14.574	0.77	2.0	1.09	55
13C-3,4,4',5-TeCB	81	27.794	0.81	2.0	1.69	85
13C-3,3',4,4'-TeCB	77	28.330	0.81	2.0	1.73	87
13C-2,2',4,6,6'-PeCB	104	20.007	1.53	2.0	1.80	90
13C-2,3,3',4,4'-PeCB	105	31.689	1.64	2.0	2.22	111
13C-2,3,4,4',5-PeCB	114	31.069	1.61	2.0	2.29	115
13C-2,3',4,4',5-PeCB	118	30.583	1.65	2.0	2.30	115
13C-2,3',4,4',5'-PeCB	123	30.264	1.51	2.0	2.24	112
13C-3,3',4,4',5-PeCB	126	34.641	1.62	2.0	2.35	118
13C-2,2',4,4',6,6'-HxCB	155	25.764	1.24	2.0	1.08	54
13C-HxCB(156/157)	156/157	37.514	1.28	4.0	2.99	75
13C-2,3',4,4',5,5'-HxCB	167	36.457	1.30	2.0	1.53	76
13C-3,3',4,4',5,5'-HxCB	169	40.884	1.28	2.0	1.56	78
13C-2,2',3,4',5,6,6'-HpCB	188	31.052	1.09	2.0	1.44	72
13C-2,3,3',4,4',5,5'-HpCB	189	44.128	1.03	2.0	1.48	74
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.155	0.90	2.0	1.30	65
13C-2,3,3',4,4',5,5',6-OcCB	205	48.353	0.90	2.0	1.37	68
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.802	0.77	2.0	1.27	63
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.417	0.76	2.0	1.42	71
13C-DeCB	209	55.445	0.74	2.0	1.22	61
CleanupStandards						
13C-2,4,4'-TrCB	28	17.324	1.06	2.0	1.38	69
13C-2,3,3',5,5'-PeCB	111	28.414	1.53	2.0	2.09	105
13C-2,2',3,3',5,5',6-HpCB	178	33.970	1.13	2.0	1.48	74
Recovery Standards						
13C-2,5-DiCB	9	10.471	1.63	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.118	0.82	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.932	1.45	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.534	1.26	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.491	0.90	2.0	NA	NA

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(1.0-2.0)
Lab Sample ID 40219480011
Filename Y201225A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.112	2.97	14.7	J	---	2.29
2		8.077	3.27	17.9	J	---	3.25
3		8.257	3.12	27.0		---	2.54
4		8.472	1.38	24.3	B	---	6.98
5		---	---	ND		---	1.95
6		10.878	1.63	24.2		---	3.68
7		10.651	1.39	5.36	J	---	3.05
8		11.286	1.56	91.1		---	4.39
9		10.495	1.62	6.16	J	---	3.35
10		---	---	ND		---	3.23
11		13.754	1.72	52.4	B	---	18.8
12	12/13	14.054	1.60	22.3	J	---	4.79
13	12/13	14.054	1.60	(22.3)	J	---	4.79
14		---	---	ND		---	2.84
15		14.341	1.67	85.9		---	7.15
16		14.269	0.96	33.9	B	---	1.97
17		13.838	1.00	60.7		---	1.77
18	18/30	13.418	1.08	95.2		---	25.0
19		11.549	1.31	---	IJ	13.3	3.17
20	20/28	17.341	1.07	291		---	20.9
21	21/33	17.559	1.04	267		---	12.6
22		17.945	1.04	65.1		---	8.58
23		---	---	ND		---	2.03
24		---	---	ND		---	3.03
25		16.754	1.08	34.6		---	2.46
26	26/29	16.536	1.12	42.5		---	3.95
27		14.030	1.14	9.48	J	---	2.21
28	20/28	17.341	1.07	(291)		---	20.9
29	26/29	16.536	1.12	(42.5)		---	3.95
30	18/30	13.418	1.08	(95.2)		---	25.0
31		17.073	1.06	165		---	17.2
32		14.792	1.11	36.0		---	5.39
33	21/33	17.559	1.04	(267)		---	12.6
34		16.083	1.10	10.2	J	---	1.74
35		20.862	1.24	---	IJ	7.61	3.28
36		---	---	ND		---	2.70
37		21.248	1.10	124		---	5.74
38		---	---	ND		---	1.41
39		---	---	ND		---	1.95
40	40/41/71	21.097	0.81	217		---	9.87
41	40/41/71	21.097	0.81	(217)		---	9.87
42		20.594	0.76	146		---	5.25
43	43/73	19.320	0.93	---	IJ	16.2	8.26
44	44/47/65	20.074	0.78	546		---	14.4

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

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Lab Sample ID 40219480011
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IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.391	0.75	53.3		---	6.51
46		17.693	0.81	19.8	J	---	3.47
47	44/47/65	20.074	0.78	(546)		---	14.4
48		19.890	0.75	49.6		---	3.57
49	49/69	19.622	0.77	465		---	8.44
50	50/53	16.754	0.78	46.5		---	8.54
51	45/51	17.391	0.75	(53.3)		---	6.51
52		19.152	0.79	765		---	18.2
53	50/53	16.754	0.78	(46.5)		---	8.54
54		---	---	ND		---	2.67
55		---	---	ND		---	3.73
56		24.825	0.77	223		---	5.66
57		22.863	0.77	5.09	J	---	4.67
58		23.098	0.77	10.1	JA	---	1.81
59	59/62/75	20.410	0.87	38.7	J	---	8.57
60		25.060	0.75	44.5		---	5.69
61	61/70/74/76	23.819	0.79	823		---	24.5
62	59/62/75	20.410	0.87	(38.7)	J	---	8.57
63		23.517	0.80	25.5		---	2.92
64		21.299	0.79	211		---	7.01
65	44/47/65	20.074	0.78	(546)		---	14.4
66		24.171	0.77	584		---	10.5
67		23.266	0.86	11.1	J	---	3.78
68		22.461	0.95	---	IJ	11.0	3.44
69	49/69	19.622	0.77	(465)		---	8.44
70	61/70/74/76	23.819	0.79	(823)		---	24.5
71	40/41/71	21.097	0.81	(217)		---	9.87
72		22.192	0.83	19.3	J	---	2.60
73	43/73	19.320	0.93	---	IJ	(16.2)	8.26
74	61/70/74/76	23.819	0.79	(823)		---	24.5
75	59/62/75	20.410	0.87	(38.7)	J	---	8.57
76	61/70/74/76	23.819	0.79	(823)		---	24.5
77		28.347	0.75	59.9		---	4.40
78		---	---	ND		---	3.93
79		26.854	0.68	12.0	J	---	3.06
80		25.479	0.70	5.32	J	---	3.11
81		---	---	ND		---	4.94
82		27.962	1.41	161		---	12.1
83		26.267	1.54	56.0		---	10.8
84		23.987	1.57	401		---	6.31
85	85/116/117	27.542	1.52	236		---	11.5
86	86/87/97/108/119/125	26.871	1.59	908		---	26.7
87	86/87/97/108/119/125	26.871	1.59	(908)		---	26.7
88	88/91	23.786	1.58	218		---	13.0

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Filename Y201225A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.473	1.48	13.5	J	---	4.06
90	90/101/113	25.949	1.54	938		---	14.4
91	88/91	23.786	1.58	(218)		---	13.0
92		25.479	1.62	273		---	5.91
93	93/98/100/102	23.299	1.56	53.1	J	---	10.5
94		22.511	1.25	---	IJ	5.90	3.30
95		22.947	1.59	1010		---	11.3
96		20.343	1.75	8.72	J	---	5.15
97	86/87/97/108/119/125	26.871	1.59	(908)		---	26.7
98	93/98/100/102	23.299	1.56	(53.1)	J	---	10.5
99		26.402	1.56	644		---	10.1
100	93/98/100/102	23.299	1.56	(53.1)	J	---	10.5
101	90/101/113	25.949	1.54	(938)		---	14.4
102	93/98/100/102	23.299	1.56	(53.1)	J	---	10.5
103		22.327	1.54	17.9	J	---	5.05
104		---	---	ND		---	7.30
105		31.706	1.62	432		---	3.89
106		---	---	ND		---	3.25
107	107/124	29.945	1.56	35.9	J	---	5.47
108	86/87/97/108/119/125	26.871	1.59	(908)		---	26.7
109		30.180	1.56	109		---	2.83
110	110/115	27.693	1.57	1870		---	8.89
111		---	---	ND		---	3.48
112		---	---	ND		---	4.50
113	90/101/113	25.949	1.54	(938)		---	14.4
114		31.102	1.76	19.4	J	---	4.80
115	110/115	27.693	1.57	(1870)		---	8.89
116	85/116/117	27.542	1.52	(236)		---	11.5
117	85/116/117	27.542	1.52	(236)		---	11.5
118		30.599	1.62	1330		---	9.45
119	86/87/97/108/119/125	26.871	1.59	(908)		---	26.7
120		28.884	1.32	9.98	J	---	2.54
121		---	---	ND		---	4.74
122		30.918	1.68	11.1	J	---	2.78
123		30.281	1.66	20.8		---	5.93
124	107/124	29.945	1.56	(35.9)	J	---	5.47
125	86/87/97/108/119/125	26.871	1.59	(908)		---	26.7
126		34.674	1.65	5.75	J	---	2.98
127		---	---	ND		---	3.29
128	128/166	34.741	1.24	295		---	6.79
129	129/138/163	33.567	1.26	1560		---	27.3
130		32.947	1.20	117		---	4.48
131		30.214	1.26	25.8		---	7.48
132		30.649	1.26	548		---	10.8

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(1.0-2.0)
Lab Sample ID 40219480011
Filename Y201225A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		31.220	1.28	23.1		---	3.99
134	134/143	29.643	1.13	90.8		---	9.42
135	135/151	28.599	1.33	390		---	15.1
136		26.267	1.33	102		---	7.73
137		33.148	1.20	74.5		---	4.56
138	129/138/163	33.567	1.26	(1560)		---	27.3
139	139/140	30.046	1.24	27.3	J	---	7.82
140	139/140	30.046	1.24	(27.3)	J	---	7.82
141		32.578	1.21	184		---	5.42
142		---	---	ND		---	2.54
143	134/143	29.643	1.13	(90.8)		---	9.42
144		29.118	1.24	47.9		---	15.5
145		---	---	ND		---	6.21
146		31.823	1.24	196		---	6.05
147	147/149	29.476	1.26	916		---	28.1
148		---	---	ND		---	11.6
149	147/149	29.476	1.26	(916)		---	28.1
150		---	---	ND		---	7.30
151	135/151	28.599	1.33	(390)		---	15.1
152		---	---	ND		---	7.94
153	153/168	32.410	1.28	1010		---	12.9
154		28.867	1.49	---	IJ	13.7	8.04
155		---	---	ND		---	4.80
156	156/157	37.530	1.28	210		---	7.78
157	156/157	37.530	1.28	(210)		---	7.78
158		33.936	1.28	125		---	3.75
159		---	---	ND		---	5.97
160		---	---	ND		---	5.11
161		---	---	ND		---	3.94
162		36.004	1.33	5.75	J	---	3.83
163	129/138/163	33.567	1.26	(1560)		---	27.3
164		33.265	1.29	100.0		---	3.42
165		---	---	ND		---	4.84
166	128/166	34.741	1.24	(295)		---	6.79
167		36.474	1.29	63.2		---	4.42
168	153/168	32.410	1.28	(1010)		---	12.9
169		---	---	ND		---	4.95
170		40.163	1.05	199		---	5.95
171	171/173	36.675	1.01	64.8		---	7.92
172		38.251	1.03	31.7		---	2.63
173	171/173	36.675	1.01	(64.8)		---	7.92
174		35.652	1.07	162		---	4.22
175		34.624	0.97	8.40	J	---	3.94
176		32.209	0.96	22.7		---	6.73

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID USCCC004(1.0-2.0)
Lab Sample ID 40219480011
Filename Y201225A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.071	1.01	106		---	9.20
178		34.020	1.09	33.7		---	4.51
179		31.371	1.10	62.9		---	9.66
180	180/193	38.905	1.02	359		---	7.45
181		---	---	ND		---	1.83
182		---	---	ND		---	5.46
183	183/185	35.467	1.03	112		---	6.94
184		---	---	ND		---	7.61
185	183/185	35.467	1.03	(112)		---	6.94
186		---	---	ND		---	3.88
187		34.859	1.06	176		---	8.29
188		---	---	ND		---	3.66
189		44.193	1.04	10.3	J	---	2.72
190		40.784	1.00	38.7		---	6.36
191		39.274	1.02	8.02	J	---	5.48
192		---	---	ND		---	2.84
193	180/193	38.905	1.02	(359)		---	7.45
194		47.534	0.97	74.7		---	5.19
195		43.783	0.84	29.3		---	6.49
196		41.790	0.99	35.2		---	4.32
197	197/200	---	---	ND		---	16.0
198	198/199	40.985	0.91	85.1		---	15.4
199	198/199	40.985	0.91	(85.1)		---	15.4
200	197/200	---	---	ND		---	16.0
201		37.094	0.99	9.48	J	---	7.28
202		36.189	0.87	17.1	J	---	3.91
203		42.025	0.87	47.2		---	5.16
204		---	---	ND		---	5.94
205		---	---	ND		---	4.81
206		51.824	0.68	41.7		---	7.78
207		---	---	ND		---	5.76
208		43.438	0.67	13.7	J	---	7.30
209		55.531	0.81	---	I	23.2	5.73

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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	USCCC004(1.0-2.0)
Lab Sample ID	40219480011
Filename	Y201225A_11

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	59.7
Total Dichloro Biphenyls	312
Total Trichloro Biphenyls	1230
Total Tetrachloro Biphenyls	4380
Total Pentachloro Biphenyls	8790
Total Hexachloro Biphenyls	6120
Total Heptachloro Biphenyls	1400
Total Octachloro Biphenyls	298
Total Nonachloro Biphenyls	55.4
DecachloroBiphenyls	ND
Total PCBs	22600

ND = Not Detected
Results reported on a dry weight basis

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Minneapolis, MN 55414

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DSRBG006(0.0-0.5)		
Lab Sample ID	40219480012		
Filename	Y201223A_18		
Injected By	CVS		
Total Amount Extracted	34.6 g	Matrix	Solid
% Moisture	71.0	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	12/04/2020 12:30
ICAL ID	Y201223A10	Received	12/10/2020 08:45
CCal Filename(s)	Y201223A_09	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/24/2020 03:47

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery	
Labeled Analytes							
13C-2-MoCB	1	6.064	3.14	2.0	0.591	30	
13C-4-MoCB	3	8.209	3.31	2.0	0.591	30	
13C-2,2'-DiCB	4	8.424	1.77	2.0	0.543	27	
13C-4,4'-DiCB	15	14.316	1.59	2.0	0.611	31	
13C-2,2',6-TrCB	19	11.513	1.17	2.0	0.559	28	
13C-3,4,4'-TrCB	37	21.229	1.14	2.0	0.632	32	
13C-2,2',6,6'-TeCB	54	14.556	0.81	2.0	0.484	24	R
13C-3,4,4',5-TeCB	81	27.773	0.79	2.0	0.687	34	
13C-3,3',4,4'-TeCB	77	28.309	0.88	2.0	0.674	34	
13C-2,2',4,6,6'-PeCB	104	20.005	1.60	2.0	0.571	29	
13C-2,3,3',4,4'-PeCB	105	31.651	1.52	2.0	0.639	32	
13C-2,3,4,4',5-PeCB	114	31.065	1.61	2.0	0.649	32	
13C-2,3',4,4',5-PeCB	118	30.578	1.49	2.0	0.641	32	
13C-2,3',4,4',5'-PeCB	123	30.260	1.60	2.0	0.623	31	
13C-3,3',4,4',5-PeCB	126	34.636	1.49	2.0	0.661	33	
13C-2,2',4,4',6,6'-HxCB	155	25.560	1.21	2.0	0.588	29	
13C-HxCB(156/157)	156/157	37.508	1.27	4.0	1.24	31	
13C-2,3',4,4',5,5'-HxCB	167	36.451	1.37	2.0	0.665	33	
13C-3,3',4,4',5,5'-HxCB	169	40.877	1.38	2.0	0.607	30	
13C-2,2',3,4',5,6,6'-HpCB	188	31.065	1.02	2.0	0.604	30	
13C-2,3,3',4,4',5,5'-HpCB	189	44.120	1.09	2.0	0.589	29	
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.150	0.91	2.0	0.585	29	
13C-2,3,3',4,4',5,5',6-OcCB	205	48.301	0.96	2.0	0.557	28	
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.706	0.76	2.0	0.553	28	
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.409	0.83	2.0	0.570	29	
13C-DeCB	209	55.478	0.78	2.0	0.496	25	
CleanupStandards							
13C-2,4,4'-TrCB	28	17.306	1.12	2.0	1.35	68	
13C-2,3,3',5,5'-PeCB	111	28.410	1.61	2.0	1.41	71	
13C-2,2',3,3',5,5',6-HpCB	178	33.965	1.12	2.0	1.39	70	
Recovery Standards							
13C-2,5-DiCB	9	10.447	1.53	2.0	NA	NA	
13C-2,2',5,5'-TeCB	52	19.117	0.82	2.0	NA	NA	
13C-2,2',4,5,5'-PeCB	101	25.778	1.56	2.0	NA	NA	
13C-2,2',3,4,4',5'-HxCB	138	33.512	1.27	2.0	NA	NA	
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.482	0.95	2.0	NA	NA	

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REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG006(0.0-0.5)
Lab Sample ID 40219480012
Filename Y201223A_18

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.064	3.29	17.6	J	---	2.28
2		8.041	3.22	21.7		---	3.24
3		8.221	3.27	33.1		---	2.53
4		8.436	1.35	52.1	B	---	6.97
5		---	---	ND		---	1.94
6		10.842	1.63	36.3		---	3.67
7		10.615	1.47	10.1	J	---	3.04
8		11.262	1.48	95.1		---	4.38
9		10.471	1.47	8.21	J	---	3.34
10		---	---	ND		---	3.22
11		13.717	1.71	92.2	B	---	18.8
12	12/13	14.017	1.78	23.2	J	---	4.78
13	12/13	14.017	1.78	(23.2)	J	---	4.78
14		---	---	ND		---	2.83
15		14.328	1.57	122		---	7.14
16		14.245	0.95	36.8	B	---	1.96
17		13.813	1.08	72.4		---	1.77
18	18/30	13.406	1.08	104		---	24.9
19		11.537	0.96	17.6	J	---	3.16
20	20/28	17.323	1.04	413		---	20.8
21	21/33	17.541	1.05	227		---	12.6
22		17.926	1.04	91.3		---	8.57
23		---	---	ND		---	2.02
24		---	---	ND		---	3.02
25		16.736	1.04	81.7		---	2.45
26	26/29	16.518	0.99	118		---	3.94
27		14.029	0.96	16.8	J	---	2.20
28	20/28	17.323	1.04	(413)		---	20.8
29	26/29	16.518	0.99	(118)		---	3.94
30	18/30	13.406	1.08	(104)		---	24.9
31		17.038	1.08	268		---	17.2
32		14.791	1.18	54.7		---	5.38
33	21/33	17.541	1.05	(227)		---	12.6
34		16.048	1.56	---	IJ	7.73	1.74
35		---	---	ND		---	3.27
36		---	---	ND		---	2.69
37		21.246	1.18	164		---	5.72
38		---	---	ND		---	1.41
39		---	---	ND		---	1.94
40	40/41/71	21.045	0.76	267		---	9.85
41	40/41/71	21.045	0.76	(267)		---	9.85
42		20.592	0.72	167		---	5.24
43	43/73	---	---	ND		---	8.25
44	44/47/65	20.072	0.79	679		---	14.4

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG006(0.0-0.5)
Lab Sample ID 40219480012
Filename Y201223A_18

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.356	0.79	76.2		---	6.50
46		17.675	0.78	28.6		---	3.46
47	44/47/65	20.072	0.79	(679)		---	14.4
48		19.871	0.78	55.4		---	3.56
49	49/69	19.603	0.77	548		---	8.43
50	50/53	16.736	0.69	78.7		---	8.53
51	45/51	17.356	0.79	(76.2)		---	6.50
52		19.133	0.76	1040		---	18.2
53	50/53	16.736	0.69	(78.7)		---	8.53
54		14.573	0.65	3.75	J	---	2.66
55		---	---	ND		---	3.72
56		24.772	0.81	302		---	5.65
57		22.827	0.83	6.42	J	---	4.66
58		23.062	0.73	10.9	JA	---	3.40
59	59/62/75	20.391	0.67	50.0	J	---	8.56
60		24.973	0.75	76.7		---	5.68
61	61/70/74/76	23.799	0.79	1140		---	24.4
62	59/62/75	20.391	0.67	(50.0)	J	---	8.56
63		23.498	0.81	33.4	A	---	3.36
64		21.279	0.82	257		---	7.00
65	44/47/65	20.072	0.79	(679)		---	14.4
66		24.135	0.75	699		---	10.5
67		23.229	0.66	16.6	J	---	3.77
68		22.458	0.98	---	IJ	18.8	3.43
69	49/69	19.603	0.77	(548)		---	8.43
70	61/70/74/76	23.799	0.79	(1140)		---	24.4
71	40/41/71	21.045	0.76	(267)		---	9.85
72		22.156	0.87	23.9	A	---	3.14
73	43/73	---	---	ND		---	8.25
74	61/70/74/76	23.799	0.79	(1140)		---	24.4
75	59/62/75	20.391	0.67	(50.0)	J	---	8.56
76	61/70/74/76	23.799	0.79	(1140)		---	24.4
77		28.326	0.75	85.0		---	4.39
78		---	---	ND	A	---	4.02
79		26.817	0.76	15.4	JA	---	3.45
80		---	---	ND	A	---	3.21
81		---	---	ND		---	4.93
82		27.941	1.64	218		---	12.1
83		26.230	1.50	139		---	10.8
84		23.950	1.57	504		---	6.30
85	85/116/117	27.505	1.59	345		---	11.5
86	86/87/97/108/119/125	26.901	1.56	1220		---	26.6
87	86/87/97/108/119/125	26.901	1.56	(1220)		---	26.6
88	88/91	23.766	1.55	269		---	13.0

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG006(0.0-0.5)
Lab Sample ID 40219480012
Filename Y201223A_18

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.437	1.59	16.3	J	---	4.05
90	90/101/113	25.811	1.52	1790		---	14.4
91	88/91	23.766	1.55	(269)		---	13.0
92		25.258	1.57	396		---	5.90
93	93/98/100/102	23.280	1.65	75.0	J	---	10.5
94		---	---	ND		---	3.29
95		22.911	1.55	1260		---	11.3
96		20.340	1.34	11.9	J	---	5.14
97	86/87/97/108/119/125	26.901	1.56	(1220)		---	26.6
98	93/98/100/102	23.280	1.65	(75.0)	J	---	10.5
99		26.365	1.59	920		---	10.1
100	93/98/100/102	23.280	1.65	(75.0)	J	---	10.5
101	90/101/113	25.811	1.52	(1790)		---	14.4
102	93/98/100/102	23.280	1.65	(75.0)	J	---	10.5
103		22.307	1.72	19.7	J	---	5.04
104		---	---	ND		---	7.29
105		31.685	1.48	674		---	3.88
106		---	---	ND		---	3.24
107	107/124	29.941	1.48	56.5		---	5.46
108	86/87/97/108/119/125	26.901	1.56	(1220)		---	26.6
109		30.159	1.53	166	A	---	3.16
110	110/115	27.672	1.56	2560		---	8.88
111		---	---	ND		---	3.47
112		---	---	ND		---	4.49
113	90/101/113	25.811	1.52	(1790)		---	14.4
114		31.081	1.84	---	I	25.2	4.79
115	110/115	27.672	1.56	(2560)		---	8.88
116	85/116/117	27.505	1.59	(345)		---	11.5
117	85/116/117	27.505	1.59	(345)		---	11.5
118		30.578	1.52	1890		---	9.44
119	86/87/97/108/119/125	26.901	1.56	(1220)		---	26.6
120		28.846	1.50	13.8	J	---	2.53
121		---	---	ND		---	4.73
122		30.897	1.37	21.3	A	---	3.56
123		30.260	1.73	37.1		---	5.92
124	107/124	29.941	1.48	(56.5)		---	5.46
125	86/87/97/108/119/125	26.901	1.56	(1220)		---	26.6
126		34.636	1.42	10.1	JA	---	9.69
127		---	---	ND	A	---	3.33
128	128/166	34.719	1.22	433		---	6.78
129	129/138/163	33.563	1.27	2190		---	27.2
130		32.925	1.40	162		---	4.47
131		30.192	1.13	37.6		---	7.47
132		30.628	1.25	737		---	10.8

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG006(0.0-0.5)
Lab Sample ID 40219480012
Filename Y201223A_18

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		31.199	1.62	---	I	27.9	3.98
134	134/143	29.622	1.24	117		---	9.41
135	135/151	28.561	1.38	501		---	15.1
136		26.197	1.36	209		---	7.72
137		33.143	1.10	134		---	4.55
138	129/138/163	33.563	1.27	(2190)		---	27.2
139	139/140	30.042	1.12	40.6		---	7.81
140	139/140	30.042	1.12	(40.6)		---	7.81
141		32.540	1.22	294		---	5.41
142		---	---	ND		---	2.53
143	134/143	29.622	1.24	(117)		---	9.41
144		29.098	1.42	68.9		---	15.5
145		---	---	ND		---	6.20
146		31.802	1.21	282		---	6.04
147	147/149	29.455	1.24	1300		---	28.0
148		---	---	ND		---	11.6
149	147/149	29.455	1.24	(1300)		---	28.0
150		---	---	ND		---	7.29
151	135/151	28.561	1.38	(501)		---	15.1
152		---	---	ND		---	7.93
153	153/168	32.389	1.22	1450		---	12.9
154		28.846	1.19	23.5		---	8.03
155		---	---	ND		---	4.79
156	156/157	37.524	1.28	314		---	7.77
157	156/157	37.524	1.28	(314)		---	7.77
158		33.931	1.27	174		---	3.74
159		---	---	ND		---	5.96
160		---	---	ND		---	5.10
161		---	---	ND		---	3.93
162		35.999	1.40	8.62	JA	---	4.02
163	129/138/163	33.563	1.27	(2190)		---	27.2
164		33.261	1.33	134		---	3.41
165		---	---	ND		---	4.83
166	128/166	34.719	1.22	(433)		---	6.78
167		36.468	1.35	98.5		---	4.41
168	153/168	32.389	1.22	(1450)		---	12.9
169		---	---	ND	A	---	5.92
170		40.157	1.07	326		---	5.94
171	171/173	36.669	1.08	104		---	7.91
172		38.245	1.17	54.5		---	2.62
173	171/173	36.669	1.08	(104)		---	7.91
174		35.647	1.03	263		---	4.21
175		---	---	ND		---	3.93
176		32.188	1.09	39.1		---	6.72

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG006(0.0-0.5)
Lab Sample ID 40219480012
Filename Y201223A_18

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.066	1.08	170		---	9.19
178		33.982	1.02	48.1		---	4.50
179		31.366	1.05	102		---	9.64
180	180/193	38.882	1.07	594		---	7.44
181		---	---	ND		---	1.83
182		---	---	ND		---	5.45
183	183/185	35.462	1.21	---	I	170	6.93
184		---	---	ND		---	7.60
185	183/185	35.462	1.21	---	I	(170)	6.93
186		---	---	ND		---	3.87
187		34.870	1.02	301		---	8.28
188		---	---	ND		---	3.65
189		44.164	1.39	---	IJA	18.8	7.29
190		40.794	1.11	60.8		---	6.35
191		39.251	1.26	---	IJ	11.6	5.47
192		---	---	ND		---	2.83
193	180/193	38.882	1.07	(594)		---	7.44
194		47.547	0.84	130		---	5.18
195		43.776	0.95	47.4		---	6.48
196		41.766	1.02	66.9		---	4.31
197	197/200	37.994	0.91	19.3	J	---	16.0
198	198/199	40.995	0.81	167		---	15.4
199	198/199	40.995	0.81	(167)		---	15.4
200	197/200	37.994	0.91	(19.3)	J	---	16.0
201		37.072	1.08	---	IJ	16.9	7.27
202		36.200	0.88	41.3		---	3.90
203		42.034	1.02	97.8		---	5.15
204		---	---	ND		---	5.93
205		---	---	ND		---	4.80
206		51.857	0.74	95.9		---	7.77
207		44.789	0.60	---	IJ	8.55	5.74
208		43.452	0.96	---	I	37.5	7.29
209		55.478	0.78	72.5		---	5.71

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DSRBG006(0.0-0.5)
Lab Sample ID	40219480012
Filename	Y201223A_18

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	72.4
Total Dichloro Biphenyls	440
Total Trichloro Biphenyls	1670
Total Tetrachloro Biphenyls	5660
Total Pentachloro Biphenyls	12600
Total Hexachloro Biphenyls	8720
Total Heptachloro Biphenyls	2060
Total Octachloro Biphenyls	569
Total Nonachloro Biphenyls	95.9
DecachloroBiphenyls	72.5
Total PCBs	32000

ND = Not Detected
Results reported on a dry weight basis

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DSLBG007(0.0-0.5)		
Lab Sample ID	40219480013-R		
Filename	P210119B_05		
Injected By	CVS		
Total Amount Extracted	40.2 g	Matrix	Solid
% Moisture	75.0	Dilution	NA
Dry Weight Extracted	10.1 g	Collected	12/04/2020 15:00
ICAL ID	P210119B02	Received	12/10/2020 08:45
CCal Filename(s)	P210119B_01	Extracted	01/12/2021 11:00
Method Blank ID	BLANK-85542	Analyzed	01/19/2021 18:48

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	9.311	3.05	2.0	1.15	57
13C-4-MoCB	3	12.059	2.86	2.0	1.40	70
13C-2,2'-DiCB	4	12.341	1.53	2.0	1.78	89
13C-4,4'-DiCB	15	19.331	1.58	2.0	1.48	74
13C-2,2',6-TrCB	19	16.104	1.05	2.0	1.54	77
13C-3,4,4'-TrCB	37	27.054	1.02	2.0	1.36	68
13C-2,2',6,6'-TeCB	54	19.645	0.78	2.0	1.18	59
13C-3,4,4',5-TeCB	81	34.162	0.80	2.0	1.47	74
13C-3,3',4,4'-TeCB	77	34.735	0.80	2.0	1.49	74
13C-2,2',4,6,6'-PeCB	104	25.739	1.62	2.0	1.38	69
13C-2,3,3',4,4'-PeCB	105	38.340	1.56	2.0	1.38	69
13C-2,3,4,4',5-PeCB	114	37.686	1.61	2.0	1.34	67
13C-2,3',4,4',5-PeCB	118	37.133	1.56	2.0	1.33	67
13C-2,3',4,4',5'-PeCB	123	36.797	1.58	2.0	1.30	65
13C-3,3',4,4',5-PeCB	126	41.477	1.61	2.0	1.48	74
13C-2,2',4,4',6,6'-HxCB	155	31.903	1.27	2.0	1.32	66
13C-HxCB(156/157)	156/157	44.534	1.26	4.0	2.30	57
13C-2,3',4,4',5,5'-HxCB	167	43.377	1.29	2.0	1.16	58
13C-3,3',4,4',5,5'-HxCB	169	47.821	1.25	2.0	1.20	60
13C-2,2',3,4',5,6,6'-HpCB	188	37.686	1.03	2.0	1.82	91
13C-2,3,3',4,4',5,5'-HpCB	189	50.378	1.09	2.0	1.46	73
13C-2,2',3,3',5,5',6,6'-OcCB	202	43.108	0.91	2.0	1.72	86
13C-2,3,3',4,4',5,5',6-OcCB	205	52.965	0.89	2.0	1.42	71
13C-2,2',3,3',4,4',5,5',6-NoCB	206	54.711	0.79	2.0	1.71	86
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	49.882	0.79	2.0	1.56	78
13C-DeCB	209	56.327	0.70	2.0	1.90	95
CleanupStandards						
13C-2,4,4'-TrCB	28	22.723	1.04	2.0	1.37	68
13C-2,3,3',5,5'-PeCB	111	34.781	1.60	2.0	1.42	71
13C-2,2',3,3',5,5',6-HpCB	178	40.755	1.03	2.0	1.64	82
Recovery Standards						
13C-2,5-DiCB	9	14.777	1.56	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	24.703	0.79	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	32.058	1.56	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	40.303	1.28	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	52.490	0.96	2.0	NA	NA

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG007(0.0-0.5)
Lab Sample ID 40219480013-R
Filename P210119B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		9.322	3.03	12.1	J	---	3.05
2		11.844	3.11	19.6	J	---	3.52
3		12.070	3.14	24.6		---	5.46
4		12.353	1.38	23.1		---	7.06
5		---	---	ND		---	3.34
6		15.274	1.44	26.9		---	3.83
7		14.987	1.51	8.44	J	---	4.37
8		15.772	1.40	83.4		---	7.26
9		14.799	1.37	6.33	J	---	3.87
10		---	---	ND		---	2.66
11		18.656	1.52	151		---	116
12	12/13	19.010	1.28	---	IJ	22.1	7.15
13	12/13	19.010	1.28	---	IJ	(22.1)	7.15
14		---	---	ND		---	2.73
15		19.353	1.43	78.5		---	6.54
16		19.264	1.00	35.5		---	8.43
17		18.778	1.05	55.1		---	6.91
18	18/30	18.292	1.08	64.6		---	12.3
19		16.115	1.02	11.1	J	---	3.95
20	20/28	22.738	1.04	284		---	34.1
21	21/33	23.001	1.02	216		---	33.1
22		23.419	1.04	66.3		---	21.0
23		---	---	ND		---	5.32
24		---	---	ND		---	3.17
25		22.073	1.00	48.6		---	3.66
26	26/29	21.810	1.08	59.9		---	8.64
27		19.010	1.01	10.1	J	---	2.79
28	20/28	22.738	1.04	(284)		---	34.1
29	26/29	21.810	1.08	(59.9)		---	8.64
30	18/30	18.292	1.08	(64.6)		---	12.3
31		22.413	1.03	168		---	37.9
32		19.876	1.02	36.3		---	5.95
33	21/33	23.001	1.02	(216)		---	33.1
34		21.300	1.15	7.94	J	---	4.43
35		26.652	1.05	5.44	J	---	4.03
36		---	---	ND		---	4.04
37		27.069	1.06	101		---	12.9
38		---	---	ND		---	5.30
39		---	---	ND		---	4.89
40	40/41/71	26.884	0.79	185		---	16.7
41	40/41/71	26.884	0.79	(185)		---	16.7
42		26.358	0.76	117		---	8.43
43	43/73	24.981	0.75	9.97	J	---	9.64
44	44/47/65	25.785	0.78	469		---	39.3

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG007(0.0-0.5)
Lab Sample ID 40219480013-R
Filename P210119B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	22.816	0.78	53.5		---	13.6
46		23.156	0.78	19.9		---	4.75
47	44/47/65	25.785	0.78	(469)		---	39.3
48		25.569	0.78	42.1		---	5.78
49	49/69	25.260	0.79	366		---	14.5
50	50/53	22.088	0.82	46.9		---	11.8
51	45/51	22.816	0.78	(53.5)		---	13.6
52		24.734	0.77	727		---	29.6
53	50/53	22.088	0.82	(46.9)		---	11.8
54		---	---	ND		---	2.71
55		---	---	ND		---	4.60
56		30.944	0.77	205		---	14.0
57		---	---	ND		---	4.18
58		29.056	0.77	6.94	J	---	4.41
59	59/62/75	26.141	0.76	32.4	J	---	13.6
60		31.191	0.85	47.0		---	9.93
61	61/70/74/76	29.861	0.78	767		---	39.8
62	59/62/75	26.141	0.76	(32.4)	J	---	13.6
63		29.520	0.79	22.2		---	4.44
64		27.131	0.78	179		---	14.8
65	44/47/65	25.785	0.78	(469)		---	39.3
66		30.232	0.75	479		---	4.95
67		29.242	0.78	9.46	J	---	3.55
68		28.360	0.80	12.3	J	---	4.95
69	49/69	25.260	0.79	(366)		---	14.5
70	61/70/74/76	29.861	0.78	(767)		---	39.8
71	40/41/71	26.884	0.79	(185)		---	16.7
72		28.035	0.78	16.6	J	---	4.50
73	43/73	24.981	0.75	(9.97)	J	---	9.64
74	61/70/74/76	29.861	0.78	(767)		---	39.8
75	59/62/75	26.141	0.76	(32.4)	J	---	13.6
76	61/70/74/76	29.861	0.78	(767)		---	39.8
77		34.766	0.79	47.3		---	4.85
78		---	---	ND		---	4.20
79		33.157	0.74	13.2	J	---	3.14
80		31.547	0.77	7.62	J	---	3.76
81		---	---	ND		---	5.12
82		34.379	1.52	168		---	5.52
83		32.522	1.54	99.6		---	4.09
84		30.077	1.57	351		---	7.55
85	85/116/117	33.899	1.53	236		---	9.54
86	86/87/97/108/119/125	33.234	1.52	946		---	19.3
87	86/87/97/108/119/125	33.234	1.52	(946)		---	19.3
88	88/91	29.845	1.59	178		---	7.25

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG007(0.0-0.5)
Lab Sample ID 40219480013-R
Filename P210119B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		30.588	1.44	11.0	J	---	5.48
90	90/101/113	32.089	1.56	1420		---	16.6
91	88/91	29.845	1.59	(178)		---	7.25
92		31.547	1.54	289		---	3.79
93	93/98/100/102	29.319	1.61	48.1	J	---	16.7
94		28.468	1.48	5.24	J	---	4.91
95		28.917	1.61	908		---	19.9
96		26.126	1.48	7.23	J	---	4.28
97	86/87/97/108/119/125	33.234	1.52	(946)		---	19.3
98	93/98/100/102	29.319	1.61	(48.1)	J	---	16.7
99		32.646	1.54	614		---	8.77
100	93/98/100/102	29.319	1.61	(48.1)	J	---	16.7
101	90/101/113	32.089	1.56	(1420)		---	16.6
102	93/98/100/102	29.319	1.61	(48.1)	J	---	16.7
103		28.236	1.53	13.5	J	---	4.73
104		---	---	ND		---	5.74
105		38.357	1.53	450		---	10.1
106		---	---	ND		---	2.49
107	107/124	36.462	1.60	39.3	J	---	6.58
108	86/87/97/108/119/125	33.234	1.52	(946)		---	19.3
109		36.697	1.54	112		---	3.28
110	110/115	34.054	1.60	1840		---	26.9
111		---	---	ND		---	4.62
112		---	---	ND		---	4.73
113	90/101/113	32.089	1.56	(1420)		---	16.6
114		37.720	1.43	23.3		---	4.62
115	110/115	34.054	1.60	(1840)		---	26.9
116	85/116/117	33.899	1.53	(236)		---	9.54
117	85/116/117	33.899	1.53	(236)		---	9.54
118		37.150	1.56	1320		---	18.3
119	86/87/97/108/119/125	33.234	1.52	(946)		---	19.3
120		35.277	1.61	7.72	J	---	4.15
121		---	---	ND		---	4.21
122		37.502	1.53	21.4		---	3.63
123		36.814	1.47	19.9		---	5.98
124	107/124	36.462	1.60	(39.3)	J	---	6.58
125	86/87/97/108/119/125	33.234	1.52	(946)		---	19.3
126		---	---	ND		---	6.36
127		---	---	ND		---	3.58
128	128/166	41.611	1.25	276		---	9.14
129	129/138/163	40.336	1.25	1500		---	23.6
130		39.682	1.24	111		---	5.40
131		36.780	1.09	23.9		---	4.36
132		37.233	1.27	393		---	7.72

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

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NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG007(0.0-0.5)
Lab Sample ID 40219480013-R
Filename P210119B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		37.787	1.34	19.5	J	---	4.64
134	134/143	36.160	1.21	80.0		---	10.0
135	135/151	34.998	1.24	386		---	6.36
136		32.538	1.24	174		---	3.67
137		39.900	1.23	83.1		---	5.59
138	129/138/163	40.336	1.25	(1500)		---	23.6
139	139/140	36.596	1.16	28.6	J	---	9.93
140	139/140	36.596	1.16	(28.6)	J	---	9.93
141		39.263	1.24	187		---	6.20
142		---	---	ND		---	5.13
143	134/143	36.160	1.21	(80.0)		---	10.0
144		35.601	1.23	53.6		---	3.05
145		---	---	ND		---	4.62
146		38.441	1.23	183		---	3.24
147	147/149	35.959	1.25	882		---	15.4
148		---	---	ND		---	4.83
149	147/149	35.959	1.25	(882)		---	15.4
150		---	---	ND		---	3.58
151	135/151	34.998	1.24	(386)		---	6.36
152		---	---	ND		---	4.94
153	153/168	39.078	1.25	929		---	15.1
154		35.292	1.33	15.9	J	---	3.24
155		---	---	ND		---	4.81
156	156/157	44.550	1.21	191		---	9.34
157	156/157	44.550	1.21	(191)		---	9.34
158		40.738	1.21	118		---	2.82
159		42.572	1.06	5.66	J	---	4.37
160		---	---	ND		---	4.48
161		---	---	ND		---	3.98
162		42.907	1.16	5.49	J	---	3.49
163	129/138/163	40.336	1.25	(1500)		---	23.6
164		40.017	1.22	90.2		---	4.08
165		---	---	ND		---	5.02
166	128/166	41.611	1.25	(276)		---	9.14
167		43.394	1.23	61.0		---	4.48
168	153/168	39.078	1.25	(929)		---	15.1
169		---	---	ND		---	4.67
170		47.234	0.98	159		---	4.27
171	171/173	43.662	1.00	53.6		---	5.70
172		45.305	1.09	26.7		---	3.67
173	171/173	43.662	1.00	(53.6)		---	5.70
174		42.572	1.04	137		---	4.05
175		41.409	1.00	7.20	J	---	3.88
176		38.944	1.02	20.2		---	3.68

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ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG007(0.0-0.5)
Lab Sample ID 40219480013-R
Filename P210119B_05

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		43.008	0.98	89.6		---	3.03
178		40.789	1.07	33.2		---	5.34
179		38.038	1.02	64.4		---	3.16
180	180/193	45.976	1.03	282		---	7.95
181		---	---	ND		---	4.78
182		---	---	ND		---	2.23
183	183/185	42.337	1.02	91.2		---	6.16
184		---	---	ND		---	3.77
185	183/185	42.337	1.02	(91.2)		---	6.16
186		---	---	ND		---	4.21
187		41.711	1.01	173		---	5.46
188		---	---	ND		---	4.63
189		50.399	1.02	8.60	J	---	5.87
190		47.771	0.98	29.6		---	4.35
191		46.328	0.97	5.95	J	---	4.33
192		---	---	ND		---	3.74
193	180/193	45.976	1.03	(282)		---	7.95
194		52.512	0.87	52.3		---	3.73
195		50.140	0.96	21.1		---	3.90
196		48.626	0.89	32.9		---	3.74
197	197/200	45.104	0.89	10.1	J	---	5.96
198	198/199	47.938	0.91	78.2		---	7.95
199	198/199	47.938	0.91	(78.2)		---	7.95
200	197/200	45.104	0.89	(10.1)	J	---	5.96
201		44.098	0.95	8.57	J	---	3.57
202		43.142	0.94	16.0	J	---	4.51
203		48.811	0.87	45.7		---	2.27
204		---	---	ND		---	4.28
205		---	---	ND		---	5.17
206		54.732	0.79	42.2		---	6.06
207		50.830	0.74	5.18	J	---	4.00
208		49.903	0.68	11.7	J	---	4.60
209		56.327	0.66	23.7		---	12.5

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DSLBG007(0.0-0.5)
Lab Sample ID	40219480013-R
Filename	P210119B_05

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	56.3
Total Dichloro Biphenyls	377
Total Trichloro Biphenyls	1170
Total Tetrachloro Biphenyls	3880
Total Pentachloro Biphenyls	9130
Total Hexachloro Biphenyls	5790
Total Heptachloro Biphenyls	1180
Total Octachloro Biphenyls	265
Total Nonachloro Biphenyls	59.0
DecachloroBiphenyls	23.7
Total PCBs	21900

ND = Not Detected
Results reported on a dry weight basis

Pace Analytical Services, LLC
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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DSRBG008(0.0-0.5)		
Lab Sample ID	40219480014		
Filename	Y201225B_07		
Injected By	CVS		
Total Amount Extracted	32.9 g	Matrix	Solid
% Moisture	68.1	Dilution	NA
Dry Weight Extracted	10.5 g	Collected	12/04/2020 16:20
ICAL ID	Y201225B02	Received	12/10/2020 08:45
CCal Filename(s)	Y201225B_01	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/25/2020 19:30

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.100	3.08	2.0	0.855	43
13C-4-MoCB	3	8.233	3.12	2.0	0.874	44
13C-2,2'-DiCB	4	8.460	1.71	2.0	0.818	41
13C-4,4'-DiCB	15	14.328	1.59	2.0	0.952	48
13C-2,2',6-TrCB	19	11.537	1.14	2.0	0.807	40
13C-3,4,4'-TrCB	37	21.230	1.10	2.0	1.02	51
13C-2,2',6,6'-TeCB	54	14.573	0.81	2.0	0.784	39
13C-3,4,4',5-TeCB	81	27.791	0.83	2.0	1.09	55
13C-3,3',4,4'-TeCB	77	28.361	0.78	2.0	1.08	54
13C-2,2',4,6,6'-PeCB	104	20.006	1.44	2.0	1.16	58
13C-2,3,3',4,4'-PeCB	105	31.704	1.63	2.0	1.37	68
13C-2,3,4,4',5-PeCB	114	31.100	1.56	2.0	1.46	73
13C-2,3',4,4',5-PeCB	118	30.597	1.50	2.0	1.34	67
13C-2,3',4,4',5'-PeCB	123	30.278	1.59	2.0	1.36	68
13C-3,3',4,4',5-PeCB	126	34.672	1.54	2.0	1.34	67
13C-2,2',4,4',6,6'-HxCB	155	25.746	1.19	2.0	0.705	35
13C-HxCB(156/157)	156/157	37.528	1.27	4.0	1.91	48
13C-2,3',4,4',5,5'-HxCB	167	36.488	1.22	2.0	0.979	49
13C-3,3',4,4',5,5'-HxCB	169	40.915	1.24	2.0	0.989	49
13C-2,2',3,4',5,6,6'-HpCB	188	31.083	1.09	2.0	0.892	45
13C-2,3,3',4,4',5,5'-HpCB	189	44.168	1.01	2.0	0.970	48
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.169	0.98	2.0	0.808	40
13C-2,3,3',4,4',5,5',6-OcCB	205	48.392	0.93	2.0	0.890	45
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.841	0.74	2.0	0.859	43
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.435	0.79	2.0	0.855	43
13C-DeCB	209	55.526	0.74	2.0	0.760	38
CleanupStandards						
13C-2,4,4'-TrCB	28	17.340	1.03	2.0	1.33	66
13C-2,3,3',5,5'-PeCB	111	28.445	1.58	2.0	1.85	93
13C-2,2',3,3',5,5',6-HpCB	178	33.984	1.08	2.0	1.35	67
Recovery Standards						
13C-2,5-DiCB	9	10.447	1.55	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.117	0.81	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.913	1.58	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.548	1.29	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.530	0.88	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG008(0.0-0.5)
Lab Sample ID 40219480014
Filename Y201225B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.112	3.23	20.4		---	2.18
2		8.077	3.16	25.7		---	3.10
3		8.257	2.77	38.0		---	2.42
4		8.472	1.43	85.2		---	6.66
5		---	---	ND		---	1.86
6		10.854	1.64	60.5		---	3.51
7		10.626	1.46	13.8	J	---	2.91
8		11.285	1.53	139		---	4.18
9		10.471	1.58	14.1	J	---	3.19
10		8.640	1.56	3.97	J	---	3.08
11		13.753	1.58	71.9	B	---	17.9
12	12/13	14.017	1.34	42.6		---	4.57
13	12/13	14.017	1.34	(42.6)		---	4.57
14		---	---	ND		---	2.71
15		14.340	1.55	156		---	6.82
16		14.256	1.00	53.2		---	1.88
17		13.837	1.01	142		---	1.69
18	18/30	13.418	1.06	169		---	23.8
19		11.549	1.18	43.3		---	3.02
20	20/28	17.356	1.07	572		---	19.9
21	21/33	17.574	1.06	294		---	12.0
22		17.943	1.08	122		---	8.19
23		---	---	ND		---	1.93
24		---	---	ND		---	2.89
25		16.770	1.10	151		---	2.34
26	26/29	16.518	1.08	190		---	3.76
27		14.041	0.90	32.7		---	2.11
28	20/28	17.356	1.07	(572)		---	19.9
29	26/29	16.518	1.08	(190)		---	3.76
30	18/30	13.418	1.06	(169)		---	23.8
31		17.071	1.07	360		---	16.4
32		14.808	1.09	91.6		---	5.14
33	21/33	17.574	1.06	(294)		---	12.0
34		16.099	1.24	---	IJ	13.7	1.66
35		20.861	1.23	---	IJ	10.2	3.13
36		---	---	ND		---	2.57
37		21.264	1.13	197		---	5.47
38		---	---	ND		---	1.34
39		19.872	1.45	---	IJ	5.06	1.86
40	40/41/71	21.096	0.80	362		---	9.42
41	40/41/71	21.096	0.80	(362)		---	9.42
42		20.610	0.73	231		---	5.00
43	43/73	19.302	0.80	32.1	J	---	7.88
44	44/47/65	20.090	0.79	971		---	13.7

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG008(0.0-0.5)
Lab Sample ID 40219480014
Filename Y201225B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.390	0.76	123		---	6.21
46		17.692	0.72	41.0		---	3.31
47	44/47/65	20.090	0.79	(971)		---	13.7
48		19.889	0.75	75.3		---	3.40
49	49/69	19.620	0.77	763		---	8.05
50	50/53	16.753	0.76	127		---	8.15
51	45/51	17.390	0.76	(123)		---	6.21
52		19.151	0.80	1390		---	17.3
53	50/53	16.753	0.76	(127)		---	8.15
54		14.590	0.74	6.33	J	---	2.54
55		---	---	ND		---	3.56
56		24.840	0.79	350		---	5.39
57		22.845	0.78	7.52	J	---	4.45
58		23.097	0.93	---	IJ	9.74	1.29
59	59/62/75	20.442	0.85	66.5		---	8.18
60		25.075	0.84	90.1		---	5.42
61	61/70/74/76	23.851	0.79	1390		---	23.4
62	59/62/75	20.442	0.85	(66.5)		---	8.18
63		23.532	0.90	---	I	40.5	2.78
64		21.314	0.77	362		---	6.69
65	44/47/65	20.090	0.79	(971)		---	13.7
66		24.186	0.77	780		---	10.0
67		23.264	0.83	21.6		---	3.60
68		22.476	0.68	21.1		---	3.28
69	49/69	19.620	0.77	(763)		---	8.05
70	61/70/74/76	23.851	0.79	(1390)		---	23.4
71	40/41/71	21.096	0.80	(362)		---	9.42
72		22.191	0.86	29.0		---	2.48
73	43/73	19.302	0.80	(32.1)	J	---	7.88
74	61/70/74/76	23.851	0.79	(1390)		---	23.4
75	59/62/75	20.442	0.85	(66.5)		---	8.18
76	61/70/74/76	23.851	0.79	(1390)		---	23.4
77		28.378	0.78	95.2		---	4.19
78		---	---	ND		---	3.75
79		26.853	0.71	20.2		---	2.92
80		25.444	0.69	12.6	J	---	2.96
81		---	---	ND		---	4.71
82		27.976	1.61	309		---	11.5
83		26.282	1.49	120		---	10.3
84		23.985	1.62	672		---	6.02
85	85/116/117	27.540	1.51	469		---	11.0
86	86/87/97/108/119/125	26.936	1.55	1630		---	25.4
87	86/87/97/108/119/125	26.936	1.55	(1630)		---	25.4
88	88/91	23.801	1.48	351		---	12.4

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG008(0.0-0.5)
Lab Sample ID 40219480014
Filename Y201225B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.472	1.53	21.4		---	3.87
90	90/101/113	25.930	1.57	1640		---	13.7
91	88/91	23.801	1.48	(351)		---	12.4
92		25.478	1.59	484		---	5.64
93	93/98/100/102	23.315	1.59	91.8		---	10.0
94		22.543	1.49	14.6	J	---	3.15
95		22.946	1.56	1770		---	10.8
96		20.358	1.70	15.4	J	---	4.91
97	86/87/97/108/119/125	26.936	1.55	(1630)		---	25.4
98	93/98/100/102	23.315	1.59	(91.8)		---	10.0
99		26.417	1.55	970		---	9.63
100	93/98/100/102	23.315	1.59	(91.8)		---	10.0
101	90/101/113	25.930	1.57	(1640)		---	13.7
102	93/98/100/102	23.315	1.59	(91.8)		---	10.0
103		22.325	1.64	26.4		---	4.81
104		---	---	ND		---	6.97
105		31.721	1.55	827		---	3.71
106		---	---	ND		---	3.10
107	107/124	29.976	1.58	70.6		---	5.21
108	86/87/97/108/119/125	26.936	1.55	(1630)		---	25.4
109		30.194	1.58	182		---	2.70
110	110/115	27.708	1.57	3380		---	8.48
111		---	---	ND		---	3.32
112		---	---	ND		---	4.29
113	90/101/113	25.930	1.57	(1640)		---	13.7
114		31.117	1.70	32.1		---	4.57
115	110/115	27.708	1.57	(3380)		---	8.48
116	85/116/117	27.540	1.51	(469)		---	11.0
117	85/116/117	27.540	1.51	(469)		---	11.0
118		30.614	1.58	2460		---	9.02
119	86/87/97/108/119/125	26.936	1.55	(1630)		---	25.4
120		28.898	1.76	16.0	J	---	2.42
121		---	---	ND		---	4.52
122		30.932	1.73	18.0	J	---	2.65
123		30.312	1.56	33.9		---	5.66
124	107/124	29.976	1.58	(70.6)		---	5.21
125	86/87/97/108/119/125	26.936	1.55	(1630)		---	25.4
126		34.672	1.17	---	IJA	7.46	2.96
127		33.179	1.66	4.82	J	---	3.14
128	128/166	34.756	1.19	541		---	6.48
129	129/138/163	33.582	1.23	3010		---	26.0
130		32.961	1.23	218		---	4.27
131		30.228	1.26	42.7		---	7.14
132		30.664	1.23	993		---	10.3

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG008(0.0-0.5)
Lab Sample ID 40219480014
Filename Y201225B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		31.217	1.19	42.9		---	3.80
134	134/143	29.641	1.23	154		---	8.99
135	135/151	28.613	1.32	729		---	14.4
136		26.266	1.33	196		---	7.38
137		33.179	1.24	163		---	4.35
138	129/138/163	33.582	1.23	(3010)		---	26.0
139	139/140	30.060	1.19	56.6		---	7.46
140	139/140	30.060	1.19	(56.6)		---	7.46
141		32.576	1.28	385		---	5.17
142		---	---	ND		---	2.42
143	134/143	29.641	1.23	(154)		---	8.99
144		29.150	1.23	104		---	14.8
145		---	---	ND		---	5.93
146		31.838	1.24	386		---	5.78
147	147/149	29.490	1.22	1760		---	26.8
148		---	---	ND		---	11.1
149	147/149	29.490	1.22	(1760)		---	26.8
150		---	---	ND		---	6.97
151	135/151	28.613	1.32	(729)		---	14.4
152		---	---	ND		---	7.58
153	153/168	32.408	1.24	1890		---	12.3
154		28.881	1.26	30.7		---	7.67
155		---	---	ND		---	4.57
156	156/157	37.528	1.23	383		---	7.42
157	156/157	37.528	1.23	(383)		---	7.42
158		33.967	1.24	251		---	3.57
159		---	---	ND		---	5.70
160		---	---	ND		---	4.87
161		---	---	ND		---	3.76
162		36.018	1.22	9.90	J	---	3.65
163	129/138/163	33.582	1.23	(3010)		---	26.0
164		33.297	1.22	184		---	3.26
165		---	---	ND		---	4.61
166	128/166	34.756	1.19	(541)		---	6.48
167		36.505	1.18	121		---	4.21
168	153/168	32.408	1.24	(1890)		---	12.3
169		---	---	ND		---	4.72
170		40.210	1.05	379		---	5.68
171	171/173	36.706	1.06	121		---	7.56
172		38.282	1.14	62.7		---	2.51
173	171/173	36.706	1.06	(121)		---	7.56
174		35.666	1.07	316		---	4.02
175		34.638	1.52	---	IJ	12.3	3.76
176		32.223	0.99	44.5		---	6.42

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Results reported on a dry weight basis

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Minneapolis, MN 55414

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG008(0.0-0.5)
Lab Sample ID 40219480014
Filename Y201225B_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.069	1.08	211		---	8.78
178		34.035	1.01	63.8		---	4.30
179		31.385	1.04	132		---	9.22
180	180/193	38.903	1.03	679		---	7.11
181		---	---	ND		---	1.74
182		---	---	ND		---	5.20
183	183/185	35.482	1.01	205		---	6.62
184		---	---	ND		---	7.26
185	183/185	35.482	1.01	(205)		---	6.62
186		---	---	ND		---	3.70
187		34.890	1.04	350		---	7.91
188		---	---	ND		---	3.49
189		44.211	1.22	---	IJA	16.1	2.92
190		40.797	1.08	70.9		---	6.07
191		39.271	0.96	14.1	J	---	5.22
192		---	---	ND		---	2.71
193	180/193	38.903	1.03	(679)		---	7.11
194		47.595	1.00	144		---	4.95
195		43.758	1.02	54.2		---	6.20
196		41.804	0.83	74.7		---	4.12
197	197/200	38.031	0.97	25.2	J	---	15.2
198	198/199	41.032	0.90	185		---	14.7
199	198/199	41.032	0.90	(185)		---	14.7
200	197/200	38.031	0.97	(25.2)	J	---	15.2
201		37.091	0.90	19.0	J	---	6.95
202		36.220	0.78	41.5		---	3.73
203		42.072	0.92	103		---	4.92
204		---	---	ND		---	5.67
205		---	---	ND		---	4.58
206		51.905	0.84	119		---	7.42
207		44.814	0.88	15.3	J	---	5.49
208		43.457	0.73	41.6		---	6.97
209		55.634	0.64	113		---	5.46

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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DSRBG008(0.0-0.5)
Lab Sample ID	40219480014
Filename	Y201225B_07

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	84.1
Total Dichloro Biphenyls	587
Total Trichloro Biphenyls	2420
Total Tetrachloro Biphenyls	7360
Total Pentachloro Biphenyls	15600
Total Hexachloro Biphenyls	11700
Total Heptachloro Biphenyls	2650
Total Octachloro Biphenyls	647
Total Nonachloro Biphenyls	176
DecachloroBiphenyls	113
Total PCBs	41300

ND = Not Detected
Results reported on a dry weight basis

Pace Analytical Services, LLC
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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DSLBG009(0.0-0.5)		
Lab Sample ID	40219480021		
Filename	Y201225A_07		
Injected By	CVS		
Total Amount Extracted	30.5 g	Matrix	Solid
% Moisture	69.5	Dilution	NA
Dry Weight Extracted	9.32 g	Collected	12/05/2020 14:50
ICAL ID	Y201225A02	Received	12/10/2020 08:45
CCal Filename(s)	Y201225A_01	Extracted	12/14/2020 13:10
Method Blank ID	BLANK-84883	Analyzed	12/25/2020 05:52

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.100	3.00	2.0	1.05	52
13C-4-MoCB	3	8.245	3.09	2.0	1.09	54
13C-2,2'-DiCB	4	8.460	1.60	2.0	1.04	52
13C-4,4'-DiCB	15	14.329	1.57	2.0	1.19	60
13C-2,2',6-TrCB	19	11.537	1.12	2.0	1.07	54
13C-3,4,4'-TrCB	37	21.230	1.06	2.0	1.29	64
13C-2,2',6,6'-TeCB	54	14.573	0.78	2.0	0.956	48
13C-3,4,4',5-TeCB	81	27.791	0.77	2.0	1.34	67
13C-3,3',4,4'-TeCB	77	28.328	0.81	2.0	1.38	69
13C-2,2',4,6,6'-PeCB	104	20.006	1.54	2.0	1.22	61
13C-2,3,3',4,4'-PeCB	105	31.687	1.47	2.0	1.33	67
13C-2,3,4,4',5-PeCB	114	31.083	1.60	2.0	1.42	71
13C-2,3',4,4',5-PeCB	118	30.580	1.59	2.0	1.39	70
13C-2,3',4,4',5'-PeCB	123	30.278	1.62	2.0	1.37	68
13C-3,3',4,4',5-PeCB	126	34.671	1.62	2.0	1.36	68
13C-2,2',4,4',6,6'-HxCB	155	25.595	1.24	2.0	1.22	61
13C-HxCB(156/157)	156/157	37.527	1.28	4.0	2.54	63
13C-2,3',4,4',5,5'-HxCB	167	36.471	1.25	2.0	1.36	68
13C-3,3',4,4',5,5'-HxCB	169	40.880	1.27	2.0	1.29	65
13C-2,2',3,4',5,6,6'-HpCB	188	31.066	1.12	2.0	1.29	65
13C-2,3,3',4,4',5,5'-HpCB	189	44.167	1.13	2.0	1.25	62
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.186	0.88	2.0	1.23	61
13C-2,3,3',4,4',5,5',6-OcCB	205	48.391	0.89	2.0	1.15	58
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.796	0.79	2.0	1.13	57
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.434	0.75	2.0	1.20	60
13C-DeCB	209	55.481	0.68	2.0	1.12	56
CleanupStandards						
13C-2,4,4'-TrCB	28	17.323	1.05	2.0	1.27	63
13C-2,3,3',5,5'-PeCB	111	28.428	1.49	2.0	1.53	77
13C-2,2',3,3',5,5',6-HpCB	178	33.984	1.11	2.0	1.48	74
Recovery Standards						
13C-2,5-DiCB	9	10.459	1.56	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.117	0.82	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.796	1.50	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.548	1.29	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.550	0.97	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG009(0.0-0.5)
Lab Sample ID 40219480021
Filename Y201225A_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.124	2.97	15.2	J	---	2.46
2		8.089	3.66	---	IJ	15.0	3.49
3		8.257	3.23	35.5		---	2.73
4		8.472	1.37	30.9	B	---	7.50
5		---	---	ND		---	2.09
6		10.854	1.48	28.9		---	3.95
7		10.639	1.60	6.75	J	---	3.27
8		11.285	1.53	88.2		---	4.71
9		10.483	1.68	5.31	J	---	3.59
10		---	---	ND		---	3.47
11		13.742	1.60	61.4	B	---	20.2
12	12/13	14.041	1.62	34.7	J	---	5.14
13	12/13	14.041	1.62	(34.7)	J	---	5.14
14		---	---	ND		---	3.05
15		14.341	1.51	118		---	7.68
16		14.269	1.02	32.7	B	---	2.11
17		13.837	1.10	63.8		---	1.90
18	18/30	13.418	1.03	99.8		---	26.8
19		11.549	1.14	16.5	J	---	3.40
20	20/28	17.357	1.07	369		---	22.4
21	21/33	17.558	1.04	275		---	13.5
22		17.944	1.12	79.0		---	9.22
23		---	---	ND		---	2.18
24		---	---	ND		---	3.25
25		16.753	1.16	60.6		---	2.64
26	26/29	16.518	1.06	78.2		---	4.24
27		14.041	1.02	12.2	J	---	2.37
28	20/28	17.357	1.07	(369)		---	22.4
29	26/29	16.518	1.06	(78.2)		---	4.24
30	18/30	13.418	1.03	(99.8)		---	26.8
31		17.055	1.08	224		---	18.5
32		14.791	1.08	41.6		---	5.78
33	21/33	17.558	1.04	(275)		---	13.5
34		16.082	1.21	---	IJ	11.1	1.87
35		20.895	1.22	---	IJ	8.82	3.52
36		---	---	ND		---	2.90
37		21.264	1.07	171		---	6.16
38		---	---	ND		---	1.51
39		---	---	ND		---	2.09
40	40/41/71	21.079	0.76	279		---	10.6
41	40/41/71	21.079	0.76	(279)		---	10.6
42		20.593	0.72	172		---	5.63
43	43/73	19.319	0.70	20.4	J	---	8.87
44	44/47/65	20.073	0.79	694		---	15.5

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG009(0.0-0.5)
Lab Sample ID 40219480021
Filename Y201225A_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	17.390	0.71	67.7		---	7.00
46		17.692	0.80	23.5		---	3.72
47	44/47/65	20.073	0.79	(694)		---	15.5
48		19.889	0.76	64.5		---	3.83
49	49/69	19.620	0.78	567		---	9.07
50	50/53	16.753	0.77	63.2		---	9.17
51	45/51	17.390	0.71	(67.7)		---	7.00
52		19.134	0.78	1020		---	19.5
53	50/53	16.753	0.77	(63.2)		---	9.17
54		---	---	ND		---	2.87
55		---	---	ND		---	4.00
56		24.806	0.78	318		---	6.07
57		22.845	0.76	5.21	J	---	5.01
58		23.063	0.70	12.1	JA	---	2.57
59	59/62/75	20.425	0.87	48.4	J	---	9.21
60		25.024	0.80	72.7		---	6.11
61	61/70/74/76	23.834	0.81	1180		---	26.3
62	59/62/75	20.425	0.87	(48.4)	J	---	9.21
63		23.499	0.85	36.2		---	3.13
64		21.297	0.81	281		---	7.53
65	44/47/65	20.073	0.79	(694)		---	15.5
66		24.153	0.82	805		---	11.3
67		23.247	0.70	17.1	J	---	4.06
68		22.459	0.79	17.9	J	---	3.69
69	49/69	19.620	0.78	(567)		---	9.07
70	61/70/74/76	23.834	0.81	(1180)		---	26.3
71	40/41/71	21.079	0.76	(279)		---	10.6
72		22.191	0.77	25.4		---	2.79
73	43/73	19.319	0.70	(20.4)	J	---	8.87
74	61/70/74/76	23.834	0.81	(1180)		---	26.3
75	59/62/75	20.425	0.87	(48.4)	J	---	9.21
76	61/70/74/76	23.834	0.81	(1180)		---	26.3
77		28.344	0.72	85.4		---	4.72
78		---	---	ND		---	4.22
79		26.836	0.74	13.6	J	---	3.28
80		---	---	ND		---	3.34
81		---	---	ND		---	5.30
82		27.959	1.54	248		---	13.0
83		26.232	1.42	152		---	11.6
84		23.968	1.51	577		---	6.78
85	85/116/117	27.523	1.58	388		---	12.3
86	86/87/97/108/119/125	26.903	1.55	1460		---	28.7
87	86/87/97/108/119/125	26.903	1.55	(1460)		---	28.7
88	88/91	23.784	1.58	311		---	13.9

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG009(0.0-0.5)
Lab Sample ID 40219480021
Filename Y201225A_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		24.455	1.64	18.2	J	---	4.36
90	90/101/113	25.829	1.57	1880		---	15.5
91	88/91	23.784	1.58	(311)		---	13.9
92		25.293	1.55	466		---	6.35
93	93/98/100/102	23.314	1.57	80.6	J	---	11.3
94		22.543	1.43	8.12	J	---	3.54
95		22.945	1.54	1460		---	12.1
96		20.358	1.66	12.4	J	---	5.53
97	86/87/97/108/119/125	26.903	1.55	(1460)		---	28.7
98	93/98/100/102	23.314	1.57	(80.6)	J	---	11.3
99		26.383	1.57	982		---	10.8
100	93/98/100/102	23.314	1.57	(80.6)	J	---	11.3
101	90/101/113	25.829	1.57	(1880)		---	15.5
102	93/98/100/102	23.314	1.57	(80.6)	J	---	11.3
103		22.325	1.47	25.9		---	5.42
104		---	---	ND		---	7.84
105		31.703	1.60	715		---	4.17
106		---	---	ND		---	3.49
107	107/124	29.959	1.64	57.4		---	5.87
108	86/87/97/108/119/125	26.903	1.55	(1460)		---	28.7
109		30.177	1.63	165		---	3.04
110	110/115	27.691	1.55	2900		---	9.55
111		---	---	ND		---	3.73
112		---	---	ND		---	4.83
113	90/101/113	25.829	1.57	(1880)		---	15.5
114		31.100	1.57	29.8		---	5.15
115	110/115	27.691	1.55	(2900)		---	9.55
116	85/116/117	27.523	1.58	(388)		---	12.3
117	85/116/117	27.523	1.58	(388)		---	12.3
118		30.597	1.64	2090		---	10.2
119	86/87/97/108/119/125	26.903	1.55	(1460)		---	28.7
120		28.898	1.74	16.1	J	---	2.73
121		---	---	ND		---	5.09
122		30.932	1.56	15.5	J	---	2.98
123		30.278	1.78	34.3		---	6.37
124	107/124	29.959	1.64	(57.4)		---	5.87
125	86/87/97/108/119/125	26.903	1.55	(1460)		---	28.7
126		34.671	1.02	---	IJ	7.73	3.20
127		---	---	ND		---	3.53
128	128/166	34.738	1.23	447		---	7.30
129	129/138/163	33.564	1.25	2370		---	29.3
130		32.961	1.24	186		---	4.81
131		30.211	1.36	36.0		---	8.04
132		30.647	1.23	848		---	11.6

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG009(0.0-0.5)
Lab Sample ID 40219480021
Filename Y201225A_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
133		31.234	1.23	33.6	---	4.28
134	134/143	29.624	1.36	131	---	10.1
135	135/151	28.579	1.34	616	---	16.2
136		26.215	1.33	252	---	8.31
137		33.162	1.21	117	---	4.89
138	129/138/163	33.564	1.25	(2370)	---	29.3
139	139/140	30.060	1.34	46.0	---	8.40
140	139/140	30.060	1.34	(46.0)	---	8.40
141		32.558	1.25	314	---	5.82
142		---	---	ND	---	2.73
143	134/143	29.624	1.36	(131)	---	10.1
144		29.133	1.38	77.9	---	16.6
145		---	---	ND	---	6.67
146		31.821	1.21	314	---	6.50
147	147/149	29.473	1.24	1430	---	30.2
148		---	---	ND	---	12.4
149	147/149	29.473	1.24	(1430)	---	30.2
150		---	---	ND	---	7.84
151	135/151	28.579	1.34	(616)	---	16.2
152		---	---	ND	---	8.53
153	153/168	32.408	1.24	1590	---	13.8
154		28.847	1.25	26.5	---	8.64
155		---	---	ND	---	5.15
156	156/157	37.544	1.25	354	---	8.36
157	156/157	37.544	1.25	(354)	---	8.36
158		33.950	1.22	197	---	4.02
159		---	---	ND	---	6.42
160		---	---	ND	---	5.48
161		---	---	ND	---	4.23
162		36.001	1.15	8.04 J	---	4.11
163	129/138/163	33.564	1.25	(2370)	---	29.3
164		33.279	1.28	162	---	3.67
165		---	---	ND	---	5.19
166	128/166	34.738	1.23	(447)	---	7.30
167		36.487	1.24	109	---	4.74
168	153/168	32.408	1.24	(1590)	---	13.8
169		---	---	ND	---	5.31
170		40.176	1.09	353	---	6.40
171	171/173	36.688	1.04	116	---	8.51
172		38.265	1.05	57.0	---	2.82
173	171/173	36.688	1.04	(116)	---	8.51
174		35.666	1.01	283	---	4.53
175		34.638	1.04	14.3 J	---	4.23
176		32.206	1.10	41.6	---	7.23

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG009(0.0-0.5)
Lab Sample ID 40219480021
Filename Y201225A_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		36.085	1.09	189		---	9.88
178		34.017	1.09	62.2		---	4.84
179		31.385	1.04	118		---	10.4
180	180/193	38.902	1.04	638		---	8.00
181		---	---	ND		---	1.96
182		---	---	ND		---	5.86
183	183/185	35.465	1.07	205		---	7.46
184		---	---	ND		---	8.18
185	183/185	35.465	1.07	(205)		---	7.46
186		---	---	ND		---	4.16
187		34.872	1.06	316		---	8.91
188		---	---	ND		---	3.93
189		44.167	1.04	16.9	JA	---	4.92
190		40.796	1.00	66.0		---	6.84
191		39.271	0.88	13.5	J	---	5.88
192		---	---	ND		---	3.05
193	180/193	38.902	1.04	(638)		---	8.00
194		47.550	0.85	127		---	5.57
195		43.757	0.87	49.7		---	6.97
196		41.802	0.87	69.6		---	4.64
197	197/200	38.013	0.79	21.6	J	---	17.2
198	198/199	40.998	0.86	161		---	16.5
199	198/199	40.998	0.86	(161)		---	16.5
200	197/200	38.013	0.79	(21.6)	J	---	17.2
201		37.074	0.84	17.4	J	---	7.82
202		36.202	0.88	33.9		---	4.20
203		42.054	0.88	89.3		---	5.54
204		---	---	ND		---	6.38
205		---	---	ND		---	5.16
206		51.839	0.73	87.0		---	8.36
207		44.792	0.76	8.92	J	---	6.18
208		43.434	0.74	27.4		---	7.84
209		55.503	0.75	44.3		---	6.15

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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DSLBG009(0.0-0.5)
Lab Sample ID	40219480021
Filename	Y201225A_07

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	50.6
Total Dichloro Biphenyls	374
Total Trichloro Biphenyls	1520
Total Tetrachloro Biphenyls	5880
Total Pentachloro Biphenyls	14100
Total Hexachloro Biphenyls	9660
Total Heptachloro Biphenyls	2490
Total Octachloro Biphenyls	570
Total Nonachloro Biphenyls	123
DecachloroBiphenyls	44.3
Total PCBs	34800

ND = Not Detected
Results reported on a dry weight basis

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DSRBG010(0.0-0.5)		
Lab Sample ID	40219480022-R		
Filename	P210120A_12		
Injected By	CVS		
Total Amount Extracted	47.5 g	Matrix	Solid
% Moisture	78.9	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	12/05/2020 12:50
ICAL ID	P210120A02	Received	12/10/2020 08:45
CCal Filename(s)	P210120A_01	Extracted	01/12/2021 11:00
Method Blank ID	BLANK-85542	Analyzed	01/20/2021 15:00

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	9.345	3.09	2.0	0.672	34
13C-4-MoCB	3	12.116	2.78	2.0	0.836	42
13C-2,2'-DiCB	4	12.399	1.58	2.0	0.955	48
13C-4,4'-DiCB	15	19.420	1.48	2.0	0.938	47
13C-2,2',6-TrCB	19	16.170	1.15	2.0	0.975	49
13C-3,4,4'-TrCB	37	27.164	1.01	2.0	1.05	53
13C-2,2',6,6'-TeCB	54	19.738	0.83	2.0	0.766	38
13C-3,4,4',5-TeCB	81	34.255	0.79	2.0	1.08	54
13C-3,3',4,4'-TeCB	77	34.843	0.78	2.0	1.12	56
13C-2,2',4,6,6'-PeCB	104	25.833	1.55	2.0	0.930	47
13C-2,3,3',4,4'-PeCB	105	38.440	1.59	2.0	0.989	49
13C-2,3,4,4',5-PeCB	114	37.803	1.55	2.0	1.000	50
13C-2,3',4,4',5-PeCB	118	37.233	1.59	2.0	0.992	50
13C-2,3',4,4',5'-PeCB	123	36.897	1.53	2.0	0.990	50
13C-3,3',4,4',5-PeCB	126	41.593	1.57	2.0	1.08	54
13C-2,2',4,4',6,6'-HxCB	155	31.981	1.26	2.0	0.890	45
13C-HxCB(156/157)	156/157	44.667	1.25	4.0	1.82	46
13C-2,3',4,4',5,5'-HxCB	167	43.493	1.30	2.0	0.948	47
13C-3,3',4,4',5,5'-HxCB	169	47.953	1.25	2.0	0.992	50
13C-2,2',3,4',5,6,6'-HpCB	188	37.786	1.07	2.0	1.04	52
13C-2,3,3',4,4',5,5'-HpCB	189	50.483	1.06	2.0	0.976	49
13C-2,2',3,3',5,5',6,6'-OcCB	202	43.224	0.90	2.0	0.990	49
13C-2,3,3',4,4',5,5',6-OcCB	205	53.069	0.91	2.0	0.974	49
13C-2,2',3,3',4,4',5,5',6-NoCB	206	54.815	0.81	2.0	0.976	49
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	49.987	0.82	2.0	0.966	48
13C-DeCB	209	56.432	0.72	2.0	1.06	53
CleanupStandards						
13C-2,4,4'-TrCB	28	22.816	1.03	2.0	1.37	69
13C-2,3,3',5,5'-PeCB	111	34.889	1.58	2.0	1.41	71
13C-2,2',3,3',5,5',6-HpCB	178	40.872	1.06	2.0	1.50	75
Recovery Standards						
13C-2,5-DiCB	9	14.822	1.50	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	24.796	0.81	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	32.152	1.55	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	40.419	1.23	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	52.595	0.90	2.0	NA	NA

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG010(0.0-0.5)
Lab Sample ID 40219480022-R
Filename P210120A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		9.356	3.04	31.0		---	3.06
2		11.901	3.21	51.1		---	3.53
3		12.127	3.34	69.4		---	5.49
4		12.421	1.44	51.0		---	7.09
5		---	---	ND		---	3.35
6		15.330	1.60	90.9		---	3.85
7		15.043	1.52	23.9		---	4.39
8		15.839	1.48	297		---	7.29
9		14.844	1.49	17.4	J	---	3.89
10		---	---	ND		---	2.67
11		18.723	1.46	293		---	117
12	12/13	19.099	1.51	97.0		---	7.18
13	12/13	19.099	1.51	(97.0)		---	7.18
14		---	---	ND		---	2.74
15		19.409	1.45	214		---	6.57
16		19.354	1.02	93.5		---	8.47
17		18.856	1.00	149		---	6.94
18	18/30	18.370	1.03	226		---	12.4
19		16.192	1.03	29.7		---	3.97
20	20/28	22.847	1.05	1110		---	34.2
21	21/33	23.095	1.06	893		---	33.2
22		23.513	1.06	257		---	21.1
23		---	---	ND		---	5.34
24		---	---	ND		---	3.18
25		22.167	1.06	184		---	3.67
26	26/29	21.888	1.05	206		---	8.68
27		19.088	0.98	20.9		---	2.80
28	20/28	22.847	1.05	(1110)		---	34.2
29	26/29	21.888	1.05	(206)		---	8.68
30	18/30	18.370	1.03	(226)		---	12.4
31		22.507	1.03	655		---	38.0
32		19.970	1.05	128		---	5.98
33	21/33	23.095	1.06	(893)		---	33.2
34		21.393	1.07	36.8		---	4.45
35		26.730	1.13	16.3	J	---	4.05
36		---	---	ND		---	4.06
37		27.179	1.07	373		---	13.0
38		---	---	ND		---	5.32
39		25.632	0.96	8.23	J	---	4.91
40	40/41/71	26.993	0.77	693		---	16.8
41	40/41/71	26.993	0.77	(693)		---	16.8
42		26.467	0.77	448		---	8.47
43	43/73	25.090	0.80	38.4	J	---	9.68
44	44/47/65	25.879	0.78	1730		---	39.5

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG010(0.0-0.5)
Lab Sample ID 40219480022-R
Filename P210120A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	22.909	0.80	168		---	13.7
46		23.250	0.76	66.3		---	4.77
47	44/47/65	25.879	0.78	(1730)		---	39.5
48		25.678	0.82	160		---	5.81
49	49/69	25.369	0.79	1440		---	14.6
50	50/53	22.182	0.78	149		---	11.9
51	45/51	22.909	0.80	(168)		---	13.7
52		24.827	0.77	2550		---	29.7
53	50/53	22.182	0.78	(149)		---	11.9
54		19.784	0.77	3.35	J	---	2.72
55		---	---	ND		---	4.62
56		31.053	0.80	869		---	14.1
57		28.887	0.75	10.7	J	---	4.20
58		29.135	0.71	32.7		---	4.43
59	59/62/75	26.251	0.76	128		---	13.7
60		31.301	0.76	176		---	9.98
61	61/70/74/76	29.970	0.78	3130		---	40.0
62	59/62/75	26.251	0.76	(128)		---	13.7
63		29.630	0.85	90.9		---	4.46
64		27.226	0.79	674		---	14.9
65	44/47/65	25.879	0.78	(1730)		---	39.5
66		30.326	0.79	2040		---	4.97
67		29.336	0.84	40.3		---	3.56
68		28.470	0.81	47.6		---	4.97
69	49/69	25.369	0.79	(1440)		---	14.6
70	61/70/74/76	29.970	0.78	(3130)		---	40.0
71	40/41/71	26.993	0.77	(693)		---	16.8
72		28.145	0.82	70.9		---	4.52
73	43/73	25.090	0.80	(38.4)	J	---	9.68
74	61/70/74/76	29.970	0.78	(3130)		---	40.0
75	59/62/75	26.251	0.76	(128)		---	13.7
76	61/70/74/76	29.970	0.78	(3130)		---	40.0
77		34.874	0.80	190		---	4.87
78		---	---	ND		---	4.22
79		33.234	0.76	46.3		---	3.15
80		---	---	ND		---	3.77
81		34.302	0.85	6.64	J	---	5.14
82		34.472	1.60	550		---	5.55
83		32.616	1.58	332		---	4.11
84		30.171	1.54	1270		---	7.58
85	85/116/117	33.993	1.56	763		---	9.58
86	86/87/97/108/119/125	33.250	1.54	3010		---	19.4
87	86/87/97/108/119/125	33.250	1.54	(3010)		---	19.4
88	88/91	29.955	1.60	639		---	7.28

Conc = Concentration
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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG010(0.0-0.5)
Lab Sample ID 40219480022-R
Filename P210120A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		30.697	1.41	40.0		---	5.51
90	90/101/113	32.167	1.58	4640		---	16.7
91	88/91	29.955	1.60	(639)		---	7.28
92		31.641	1.53	982		---	3.80
93	93/98/100/102	29.413	1.47	155		---	16.8
94		28.562	1.45	18.0	J	---	4.93
95		29.027	1.51	3180		---	20.0
96		26.220	1.49	24.5		---	4.30
97	86/87/97/108/119/125	33.250	1.54	(3010)		---	19.4
98	93/98/100/102	29.413	1.47	(155)		---	16.8
99		32.739	1.60	2200		---	8.81
100	93/98/100/102	29.413	1.47	(155)		---	16.8
101	90/101/113	32.167	1.58	(4640)		---	16.7
102	93/98/100/102	29.413	1.47	(155)		---	16.8
103		28.330	1.59	52.9		---	4.75
104		---	---	ND		---	5.77
105		38.474	1.57	1530		---	10.2
106		---	---	ND		---	2.50
107	107/124	36.562	1.44	135		---	6.61
108	86/87/97/108/119/125	33.250	1.54	(3010)		---	19.4
109		36.797	1.54	420		---	3.29
110	110/115	34.147	1.55	6070		---	27.0
111		---	---	ND		---	4.64
112		---	---	ND		---	4.75
113	90/101/113	32.167	1.58	(4640)		---	16.7
114		37.820	1.54	66.4		---	4.64
115	110/115	34.147	1.55	(6070)		---	27.0
116	85/116/117	33.993	1.56	(763)		---	9.58
117	85/116/117	33.993	1.56	(763)		---	9.58
118		37.266	1.54	4590		---	18.4
119	86/87/97/108/119/125	33.250	1.54	(3010)		---	19.4
120		35.400	1.52	33.0		---	4.17
121		---	---	ND		---	4.23
122		37.602	1.56	49.1		---	3.64
123		36.931	1.47	53.4		---	6.01
124	107/124	36.562	1.44	(135)		---	6.61
125	86/87/97/108/119/125	33.250	1.54	(3010)		---	19.4
126		41.610	1.48	15.1	J	---	6.39
127		---	---	ND		---	3.59
128	128/166	41.710	1.23	1070		---	9.18
129	129/138/163	40.436	1.26	5940		---	23.7
130		39.782	1.24	420		---	5.43
131		36.897	1.21	88.5		---	4.38
132		37.333	1.20	1640		---	7.75

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG010(0.0-0.5)
Lab Sample ID 40219480022-R
Filename P210120A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
133		37.904	1.28	79.7	---	4.66
134	134/143	36.260	1.23	339	---	10.1
135	135/151	35.122	1.24	1220	---	6.39
136		32.631	1.24	553	---	3.68
137		40.016	1.41	272	---	5.62
138	129/138/163	40.436	1.26	(5940)	---	23.7
139	139/140	36.696	1.24	106	---	9.98
140	139/140	36.696	1.24	(106)	---	9.98
141		39.363	1.26	698	---	6.23
142		---	---	ND	---	5.15
143	134/143	36.260	1.23	(339)	---	10.1
144		35.694	1.20	166	---	3.06
145		---	---	ND	---	4.64
146		38.541	1.23	682	---	3.25
147	147/149	36.076	1.24	3410	---	15.5
148		34.518	1.25	6.07 J	---	4.85
149	147/149	36.076	1.24	(3410)	---	15.5
150		32.306	1.14	5.94 J	---	3.59
151	135/151	35.122	1.24	(1220)	---	6.39
152		---	---	ND	---	4.96
153	153/168	39.178	1.25	3800	---	15.2
154		35.400	1.25	53.9	---	3.25
155		---	---	ND	---	4.83
156	156/157	44.667	1.22	713	---	9.38
157	156/157	44.667	1.22	(713)	---	9.38
158		40.838	1.22	442	---	2.83
159		42.671	1.28	27.5	---	4.39
160		---	---	ND	---	4.50
161		---	---	ND	---	4.00
162		43.040	1.29	23.6	---	3.50
163	129/138/163	40.436	1.26	(5940)	---	23.7
164		40.117	1.13	372	---	4.10
165		---	---	ND	---	5.04
166	128/166	41.710	1.23	(1070)	---	9.18
167		43.527	1.23	218	---	4.50
168	153/168	39.178	1.25	(3800)	---	15.2
169		---	---	ND	---	4.69
170		47.349	1.03	756	---	4.29
171	171/173	43.778	1.05	253	---	5.73
172		45.421	1.05	122	---	3.68
173	171/173	43.778	1.05	(253)	---	5.73
174		42.671	1.03	682	---	4.07
175		41.559	0.93	27.2	---	3.90
176		39.027	1.03	85.9	---	3.69

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG010(0.0-0.5)
Lab Sample ID 40219480022-R
Filename P210120A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
177		43.124	1.02	424	---	3.04
178		40.889	1.03	128	---	5.36
179		38.122	1.06	249	---	3.17
180	180/193	46.075	1.03	1320	---	7.98
181		43.543	1.01	12.5 J	---	4.80
182		42.046	1.13	6.92 J	---	2.24
183	183/185	42.453	1.04	441	---	6.19
184		---	---	ND	---	3.78
185	183/185	42.453	1.04	(441)	---	6.19
186		---	---	ND	---	4.23
187		41.828	1.02	657	---	5.49
188		---	---	ND	---	4.65
189		50.505	1.09	35.1	---	5.90
190		47.903	1.06	136	---	4.37
191		46.444	1.14	27.5	---	4.35
192		---	---	ND	---	3.75
193	180/193	46.075	1.03	(1320)	---	7.98
194		52.617	0.88	259	---	3.74
195		50.246	0.87	108	---	3.92
196		48.724	0.89	134	---	3.75
197	197/200	45.220	0.86	45.4	---	5.99
198	198/199	48.054	0.87	324	---	7.98
199	198/199	48.054	0.87	(324)	---	7.98
200	197/200	45.220	0.86	(45.4)	---	5.99
201		44.197	0.92	37.7	---	3.58
202		43.241	0.94	67.3	---	4.53
203		48.926	0.87	181	---	2.28
204		---	---	ND	---	4.30
205		53.113	0.88	16.0 J	---	5.19
206		54.837	0.83	162	---	6.09
207		50.979	0.84	19.6 J	---	4.02
208		50.009	0.80	49.7	---	4.62
209		56.453	0.75	76.8	---	12.6

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DSRBG010(0.0-0.5)
Lab Sample ID	40219480022-R
Filename	P210120A_12

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	151
Total Dichloro Biphenyls	1080
Total Trichloro Biphenyls	4390
Total Tetrachloro Biphenyls	15000
Total Pentachloro Biphenyls	30800
Total Hexachloro Biphenyls	22300
Total Heptachloro Biphenyls	5360
Total Octachloro Biphenyls	1170
Total Nonachloro Biphenyls	231
DecachloroBiphenyls	76.8
Total PCBs	80600

ND = Not Detected
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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DSRBG011(0.0-0.5)		
Lab Sample ID	40219480023-R		
Filename	P210119B_09		
Injected By	CVS		
Total Amount Extracted	35.8 g	Matrix	Solid
% Moisture	72.1	Dilution	NA
Dry Weight Extracted	10.00 g	Collected	12/05/2020 10:50
ICAL ID	P210119B02	Received	12/10/2020 08:45
CCal Filename(s)	P210119B_01	Extracted	01/12/2021 11:00
Method Blank ID	BLANK-85542	Analyzed	01/19/2021 22:48

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	9.266	2.73	2.0	1.11	56
13C-4-MoCB	3	12.025	3.09	2.0	1.36	68
13C-2,2'-DiCB	4	12.319	1.52	2.0	1.75	88
13C-4,4'-DiCB	15	19.310	1.52	2.0	1.74	87
13C-2,2',6-TrCB	19	16.082	1.03	2.0	1.80	90
13C-3,4,4'-TrCB	37	27.058	1.06	2.0	1.57	78
13C-2,2',6,6'-TeCB	54	19.631	0.80	2.0	1.26	63
13C-3,4,4',5-TeCB	81	34.166	0.77	2.0	1.56	78
13C-3,3',4,4'-TeCB	77	34.739	0.80	2.0	1.61	80
13C-2,2',4,6,6'-PeCB	104	25.743	1.60	2.0	1.53	77
13C-2,3,3',4,4'-PeCB	105	38.344	1.50	2.0	1.48	74
13C-2,3,4,4',5-PeCB	114	37.707	1.56	2.0	1.53	76
13C-2,3',4,4',5-PeCB	118	37.137	1.58	2.0	1.48	74
13C-2,3',4,4',5'-PeCB	123	36.801	1.55	2.0	1.46	73
13C-3,3',4,4',5-PeCB	126	41.481	1.53	2.0	1.68	84
13C-2,2',4,4',6,6'-HxCB	155	31.923	1.23	2.0	1.56	78
13C-HxCB(156/157)	156/157	44.555	1.25	4.0	2.99	75
13C-2,3',4,4',5,5'-HxCB	167	43.381	1.31	2.0	1.49	74
13C-3,3',4,4',5,5'-HxCB	169	47.826	1.25	2.0	1.56	78
13C-2,2',3,4',5,6,6'-HpCB	188	37.690	1.08	2.0	1.68	84
13C-2,3,3',4,4',5,5'-HpCB	189	50.365	1.10	2.0	1.59	80
13C-2,2',3,3',5,5',6,6'-OcCB	202	43.130	0.91	2.0	1.65	83
13C-2,3,3',4,4',5,5',6-OcCB	205	52.974	0.90	2.0	1.57	79
13C-2,2',3,3',4,4',5,5',6-NoCB	206	54.720	0.79	2.0	1.66	83
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	49.891	0.75	2.0	1.59	79
13C-DeCB	209	56.315	0.68	2.0	1.81	90
CleanupStandards						
13C-2,4,4'-TrCB	28	22.710	1.01	2.0	1.40	70
13C-2,3,3',5,5'-PeCB	111	34.785	1.59	2.0	1.51	76
13C-2,2',3,3',5,5',6-HpCB	178	40.776	1.03	2.0	1.69	84
Recovery Standards						
13C-2,5-DiCB	9	14.756	1.55	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	24.706	0.78	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	32.093	1.58	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	40.306	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	52.478	0.89	2.0	NA	NA

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG011(0.0-0.5)
Lab Sample ID 40219480023-R
Filename P210119B_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		9.277	3.01	18.1	J	---	3.07
2		11.822	2.79	26.2		---	3.54
3		12.037	2.84	40.3		---	5.50
4		12.342	1.50	28.5		---	7.11
5		---	---	ND		---	3.36
6		15.242	1.57	43.3		---	3.86
7		14.966	1.67	11.5	J	---	4.40
8		15.751	1.45	141		---	7.31
9		14.778	1.47	8.70	J	---	3.90
10		---	---	ND		---	2.68
11		18.636	1.49	184		---	117
12	12/13	19.023	1.63	44.8		---	7.20
13	12/13	19.023	1.63	(44.8)		---	7.20
14		---	---	ND		---	2.75
15		19.343	1.53	171		---	6.58
16		19.266	1.00	67.5		---	8.49
17		18.757	1.05	102		---	6.96
18	18/30	18.271	1.05	123		---	12.4
19		16.094	1.18	18.8	J	---	3.98
20	20/28	22.741	1.05	642		---	34.3
21	21/33	22.988	1.03	445		---	33.3
22		23.422	1.02	141		---	21.1
23		---	---	ND		---	5.35
24		---	---	ND		---	3.19
25		22.060	1.08	102		---	3.68
26	26/29	21.797	1.01	121		---	8.70
27		19.001	1.05	17.2	J	---	2.81
28	20/28	22.741	1.05	(642)		---	34.3
29	26/29	21.797	1.01	(121)		---	8.70
30	18/30	18.271	1.05	(123)		---	12.4
31		22.400	1.04	384		---	38.1
32		19.878	1.00	65.7		---	5.99
33	21/33	22.988	1.03	(445)		---	33.3
34		21.286	0.99	18.1	J	---	4.46
35		26.655	1.09	11.6	J	---	4.06
36		---	---	ND		---	4.07
37		27.073	1.06	241		---	13.0
38		---	---	ND		---	5.33
39		---	---	ND		---	4.92
40	40/41/71	26.887	0.79	454		---	16.8
41	40/41/71	26.887	0.79	(454)		---	16.8
42		26.361	0.78	311		---	8.49
43	43/73	24.984	0.73	26.8	J	---	9.70
44	44/47/65	25.789	0.77	1210		---	39.6

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG011(0.0-0.5)
Lab Sample ID 40219480023-R
Filename P210119B_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	22.818	0.77	121		---	13.7
46		23.159	0.81	45.4		---	4.78
47	44/47/65	25.789	0.77	(1210)		---	39.6
48		25.572	0.79	111		---	5.82
49	49/69	25.263	0.77	1040		---	14.6
50	50/53	22.091	0.78	109		---	11.9
51	45/51	22.818	0.77	(121)		---	13.7
52		24.737	0.78	1930		---	29.8
53	50/53	22.091	0.78	(109)		---	11.9
54		---	---	ND		---	2.73
55		30.422	0.85	8.52	J	---	4.63
56		30.963	0.77	560		---	14.1
57		28.797	0.83	5.73	J	---	4.21
58		29.060	0.69	17.1	J	---	4.44
59	59/62/75	26.145	0.77	86.2		---	13.7
60		31.211	0.80	115		---	10.0
61	61/70/74/76	29.865	0.77	1840		---	40.1
62	59/62/75	26.145	0.77	(86.2)		---	13.7
63		29.524	0.72	53.6		---	4.47
64		27.135	0.79	450		---	14.9
65	44/47/65	25.789	0.77	(1210)		---	39.6
66		30.236	0.78	1290		---	4.98
67		29.246	0.80	23.7		---	3.57
68		28.379	0.72	28.9		---	4.98
69	49/69	25.263	0.77	(1040)		---	14.6
70	61/70/74/76	29.865	0.77	(1840)		---	40.1
71	40/41/71	26.887	0.79	(454)		---	16.8
72		28.039	0.80	43.6		---	4.53
73	43/73	24.984	0.73	(26.8)	J	---	9.70
74	61/70/74/76	29.865	0.77	(1840)		---	40.1
75	59/62/75	26.145	0.77	(86.2)		---	13.7
76	61/70/74/76	29.865	0.77	(1840)		---	40.1
77		34.754	0.76	142		---	4.88
78		---	---	ND		---	4.23
79		33.145	0.72	35.6		---	3.16
80		31.551	0.85	21.5		---	3.78
81		34.166	0.74	5.82	J	---	5.15
82		34.383	1.57	414		---	5.56
83		32.526	1.47	249		---	4.12
84		30.081	1.58	863		---	7.60
85	85/116/117	33.903	1.59	628		---	9.60
86	86/87/97/108/119/125	33.160	1.55	2480		---	19.4
87	86/87/97/108/119/125	33.160	1.55	(2480)		---	19.4
88	88/91	29.865	1.56	438		---	7.30

Conc = Concentration
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ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG011(0.0-0.5)
Lab Sample ID 40219480023-R
Filename P210119B_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		30.608	1.57	28.3		---	5.52
90	90/101/113	32.108	1.54	3810		---	16.7
91	88/91	29.865	1.56	(438)		---	7.30
92		31.551	1.59	794		---	3.81
93	93/98/100/102	29.323	1.47	101		---	16.8
94		28.472	1.66	12.2	J	---	4.94
95		28.921	1.56	1950		---	20.0
96		26.145	1.61	18.0	J	---	4.31
97	86/87/97/108/119/125	33.160	1.55	(2480)		---	19.4
98	93/98/100/102	29.323	1.47	(101)		---	16.8
99		32.650	1.53	1740		---	8.83
100	93/98/100/102	29.323	1.47	(101)		---	16.8
101	90/101/113	32.108	1.54	(3810)		---	16.7
102	93/98/100/102	29.323	1.47	(101)		---	16.8
103		28.240	1.60	37.1		---	4.76
104		---	---	ND		---	5.78
105		38.361	1.52	1170		---	10.2
106		---	---	ND	A	---	3.13
107	107/124	36.449	1.46	98.3		---	6.62
108	86/87/97/108/119/125	33.160	1.55	(2480)		---	19.4
109		36.701	1.50	317		---	3.30
110	110/115	34.058	1.59	5020		---	27.1
111		---	---	ND		---	4.65
112		---	---	ND		---	4.76
113	90/101/113	32.108	1.54	(3810)		---	16.7
114		37.724	1.57	63.1		---	4.65
115	110/115	34.058	1.59	(5020)		---	27.1
116	85/116/117	33.903	1.59	(628)		---	9.60
117	85/116/117	33.903	1.59	(628)		---	9.60
118		37.153	1.51	3620		---	18.4
119	86/87/97/108/119/125	33.160	1.55	(2480)		---	19.4
120		35.296	1.58	26.9		---	4.18
121		---	---	ND		---	4.24
122		37.506	1.54	51.5		---	3.65
123		36.818	1.49	55.7		---	6.02
124	107/124	36.449	1.46	(98.3)		---	6.62
125	86/87/97/108/119/125	33.160	1.55	(2480)		---	19.4
126		41.497	1.42	9.87	J	---	6.40
127		39.904	1.63	6.04	J	---	3.60
128	128/166	41.615	1.24	805		---	9.20
129	129/138/163	40.340	1.23	4390		---	23.8
130		39.669	1.24	323		---	5.44
131		36.801	1.29	70.4		---	4.39
132		37.237	1.25	979		---	7.77

Conc = Concentration
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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG011(0.0-0.5)
Lab Sample ID 40219480023-R
Filename P210119B_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		37.808	1.27	59.9		---	4.67
134	134/143	36.181	1.30	216		---	10.1
135	135/151	35.002	1.25	964		---	6.40
136		32.542	1.24	424		---	3.69
137		39.904	1.24	227		---	5.63
138	129/138/163	40.340	1.23	(4390)		---	23.8
139	139/140	36.600	1.28	81.6		---	10.0
140	139/140	36.600	1.28	(81.6)		---	10.0
141		39.267	1.24	544		---	6.24
142		---	---	ND		---	5.16
143	134/143	36.181	1.30	(216)		---	10.1
144		35.605	1.24	131		---	3.07
145		---	---	ND		---	4.65
146		38.445	1.25	548		---	3.26
147	147/149	35.963	1.24	2570		---	15.5
148		34.414	1.28	4.88	J	---	4.86
149	147/149	35.963	1.24	(2570)		---	15.5
150		32.232	1.06	4.50	J	---	3.60
151	135/151	35.002	1.25	(964)		---	6.40
152		---	---	ND		---	4.97
153	153/168	39.082	1.24	2830		---	15.2
154		35.296	1.27	43.7		---	3.26
155		---	---	ND		---	4.84
156	156/157	44.555	1.23	548		---	9.40
157	156/157	44.555	1.23	(548)		---	9.40
158		40.743	1.17	340		---	2.84
159		42.593	1.23	17.2	J	---	4.40
160		---	---	ND		---	4.51
161		---	---	ND		---	4.01
162		42.911	1.14	16.9	J	---	3.51
163	129/138/163	40.340	1.23	(4390)		---	23.8
164		40.021	1.23	273		---	4.11
165		---	---	ND		---	5.05
166	128/166	41.615	1.24	(805)		---	9.20
167		43.415	1.20	176		---	4.51
168	153/168	39.082	1.24	(2830)		---	15.2
169		---	---	ND		---	4.70
170		47.238	1.01	571		---	4.30
171	171/173	43.683	1.04	190		---	5.74
172		45.310	1.01	98.8		---	3.69
173	171/173	43.683	1.04	(190)		---	5.74
174		42.576	1.03	501		---	4.08
175		41.430	1.04	22.6		---	3.91
176		38.931	1.06	65.8		---	3.70

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Results reported on a dry weight basis

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG011(0.0-0.5)
Lab Sample ID 40219480023-R
Filename P210119B_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		43.012	1.04	319		---	3.05
178		40.793	1.02	97.9		---	5.37
179		38.042	1.03	193		---	3.18
180	180/193	45.981	1.04	1030		---	8.00
181		43.448	1.06	9.52	J	---	4.81
182		41.933	0.94	6.42	J	---	2.24
183	183/185	42.358	1.03	335		---	6.20
184		---	---	ND		---	3.79
185	183/185	42.358	1.03	(335)		---	6.20
186		---	---	ND		---	4.24
187		41.715	1.08	515		---	5.50
188		---	---	ND		---	4.66
189		50.409	1.01	26.8		---	5.91
190		47.775	1.05	104		---	4.38
191		46.333	0.93	22.4		---	4.36
192		---	---	ND		---	3.76
193	180/193	45.981	1.04	(1030)		---	8.00
194		52.521	0.92	198		---	3.75
195		50.150	0.84	81.0		---	3.93
196		48.614	0.88	104		---	3.76
197	197/200	45.092	0.87	35.4	J	---	6.00
198	198/199	47.960	0.89	244		---	8.00
199	198/199	47.960	0.89	(244)		---	8.00
200	197/200	45.092	0.87	(35.4)	J	---	6.00
201		44.102	0.96	28.3		---	3.59
202		43.146	0.91	51.2		---	4.54
203		48.832	0.89	141		---	2.28
204		---	---	ND		---	4.31
205		52.995	0.82	11.7	J	---	5.20
206		54.741	0.80	133		---	6.10
207		50.861	0.83	15.6	J	---	4.03
208		49.913	0.81	38.9		---	4.63
209		56.358	0.68	63.5		---	12.6

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DSRBG011(0.0-0.5)
Lab Sample ID	40219480023-R
Filename	P210119B_09

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	84.6
Total Dichloro Biphenyls	634
Total Trichloro Biphenyls	2500
Total Tetrachloro Biphenyls	10100
Total Pentachloro Biphenyls	24000
Total Hexachloro Biphenyls	16600
Total Heptachloro Biphenyls	4110
Total Octachloro Biphenyls	895
Total Nonachloro Biphenyls	188
DecachloroBiphenyls	63.5
Total PCBs	59100

ND = Not Detected
Results reported on a dry weight basis

Pace Analytical Services, LLC
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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID	BLANK-84883		
Filename	Y201223A_16		
Injected By	CVS	Matrix	Solid
Total Amount Extracted	10.1 g	Extracted	12/14/2020 13:10
ICAL ID	Y201223A10	Analyzed	12/24/2020 01:50
CCal Filename(s)	Y201223A_09	Dilution	NA

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	6.088	3.08	2.0	1.25	62
13C-4-MoCB	3	8.209	2.92	2.0	1.34	67
13C-2,2'-DiCB	4	8.436	1.60	2.0	1.30	65
13C-4,4'-DiCB	15	14.316	1.58	2.0	1.40	70
13C-2,2',6-TrCB	19	11.549	1.00	2.0	1.27	63
13C-3,4,4'-TrCB	37	21.212	1.06	2.0	1.44	72
13C-2,2',6,6'-TeCB	54	14.556	0.82	2.0	1.17	58
13C-3,4,4',5-TeCB	81	27.756	0.80	2.0	1.57	78
13C-3,3',4,4'-TeCB	77	28.309	0.86	2.0	1.54	77
13C-2,2',4,6,6'-PeCB	104	19.989	1.61	2.0	1.32	66
13C-2,3,3',4,4'-PeCB	105	31.634	1.58	2.0	1.45	72
13C-2,3,4,4',5-PeCB	114	31.031	1.59	2.0	1.49	74
13C-2,3',4,4',5-PeCB	118	30.545	1.69	2.0	1.45	72
13C-2,3',4,4',5'-PeCB	123	30.226	1.55	2.0	1.45	72
13C-3,3',4,4',5-PeCB	126	34.619	1.51	2.0	1.43	71
13C-2,2',4,4',6,6'-HxCB	155	25.543	1.22	2.0	1.49	74
13C-HxCB (156/157)	156/157	37.508	1.26	4.0	2.83	71
13C-2,3',4,4',5,5'-HxCB	167	36.418	1.32	2.0	1.44	72
13C-3,3',4,4',5,5'-HxCB	169	40.861	1.31	2.0	1.46	73
13C-2,2',3,4',5,6,6'-HpCB	188	31.014	1.12	2.0	1.52	76
13C-2,3,3',4,4',5,5'-HpCB	189	44.120	1.10	2.0	1.46	73
13C-2,2',3,3',5,5',6,6'-OcCB	202	36.150	0.92	2.0	1.40	70
13C-2,3,3',4,4',5,5',6-OcCB	205	48.301	0.89	2.0	1.44	72
13C-2,2',3,3',4,4',5,5',6-NoCB	206	51.706	0.81	2.0	1.36	68
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	43.388	0.76	2.0	1.51	75
13C-DeCB	209	55.413	0.74	2.0	1.38	69
Cleanup Standards						
13C-2,4,4'-TrCB	28	17.306	1.04	2.0	1.34	67
13C-2,3,3',5,5'-PeCB	111	28.393	1.54	2.0	1.36	68
13C-2,2',3,3',5,5',6-HpCB	178	33.965	1.03	2.0	1.50	75
Recovery Standards						
13C-2,5-DiCB	9	10.519	1.55	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	19.100	0.81	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	25.761	1.59	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	33.512	1.29	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	47.439	0.92	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses
Results reported on a total weight basis

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REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

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Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-84883
Filename Y201223A_16

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		6.100	3.75	---	IJ	3.38	2.26
2		---	---	ND		---	3.21
3		8.245	4.15	---	IJ	2.95	2.51
4		8.460	1.56	7.00	J	---	6.90
5		---	---	ND		---	1.92
6		---	---	ND		---	3.63
7		---	---	ND		---	3.01
8		11.297	1.26	---	IJ	6.71	4.33
9		---	---	ND		---	3.31
10		---	---	ND		---	3.19
11		13.741	1.58	55.7		---	18.6
12	12/13	---	---	ND		---	4.73
13	12/13	---	---	ND		---	4.73
14		---	---	ND		---	2.80
15		---	---	ND		---	7.07
16		14.269	0.93	4.52	J	---	1.94
17		13.825	1.18	4.56	J	---	1.75
18	18/30	---	---	ND		---	24.7
19		---	---	ND		---	3.13
20	20/28	---	---	ND		---	20.6
21	21/33	---	---	ND		---	12.4
22		---	---	ND		---	8.48
23		---	---	ND		---	2.00
24		---	---	ND		---	2.99
25		---	---	ND		---	2.43
26	26/29	---	---	ND		---	3.90
27		---	---	ND		---	2.18
28	20/28	---	---	ND		---	20.6
29	26/29	---	---	ND		---	3.90
30	18/30	---	---	ND		---	24.7
31		---	---	ND		---	17.0
32		---	---	ND		---	5.32
33	21/33	---	---	ND		---	12.4
34		---	---	ND		---	1.72
35		---	---	ND		---	3.24
36		---	---	ND		---	2.67
37		21.246	0.95	9.39	J	---	5.67
38		---	---	ND		---	1.39
39		---	---	ND		---	1.92
40	40/41/71	---	---	ND		---	9.75
41	40/41/71	---	---	ND		---	9.75
42		---	---	ND		---	5.18
43	43/73	---	---	ND		---	8.16
44	44/47/65	20.156	0.79	15.1	J	---	14.2
45	45/51	---	---	ND		---	6.44

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Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-84883
Filename Y201223A_16

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
46		---	---	ND		---	3.43
47	44/47/65	20.156	0.79	(15.1)	J	---	14.2
48		---	---	ND		---	3.52
49	49/69	---	---	ND		---	8.34
50	50/53	---	---	ND		---	8.44
51	45/51	---	---	ND		---	6.44
52		---	---	ND		---	18.0
53	50/53	---	---	ND		---	8.44
54		---	---	ND		---	2.64
55		---	---	ND		---	3.68
56		24.705	0.95	---	IJ	5.62	5.59
57		---	---	ND		---	4.61
58		---	---	ND		---	1.33
59	59/62/75	---	---	ND		---	8.47
60		---	---	ND		---	5.62
61	61/70/74/76	---	---	ND		---	24.2
62	59/62/75	---	---	ND		---	8.47
63		---	---	ND		---	2.88
64		---	---	ND		---	6.93
65	44/47/65	20.156	0.79	(15.1)	J	---	14.2
66		24.085	0.81	11.2	J	---	10.4
67		---	---	ND		---	3.73
68		---	---	ND		---	3.40
69	49/69	---	---	ND		---	8.34
70	61/70/74/76	---	---	ND		---	24.2
71	40/41/71	---	---	ND		---	9.75
72		---	---	ND		---	2.57
73	43/73	---	---	ND		---	8.16
74	61/70/74/76	---	---	ND		---	24.2
75	59/62/75	---	---	ND		---	8.47
76	61/70/74/76	---	---	ND		---	24.2
77		28.309	0.82	4.46	J	---	4.34
78		---	---	ND		---	3.88
79		---	---	ND		---	3.02
80		---	---	ND		---	3.07
81		---	---	ND		---	4.88
82		---	---	ND		---	11.9
83		---	---	ND		---	10.7
84		---	---	ND		---	6.24
85	85/116/117	---	---	ND		---	11.4
86	86/87/97/108/119/125	---	---	ND		---	26.4
87	86/87/97/108/119/125	---	---	ND		---	26.4
88	88/91	---	---	ND		---	12.8
89		---	---	ND		---	4.01
90	90/101/113	---	---	ND		---	14.2

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-84883
Filename Y201223A_16

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
91	88/91	---	---	ND		---	12.8
92		---	---	ND		---	5.84
93	93/98/100/102	---	---	ND		---	10.4
94		---	---	ND		---	3.26
95		---	---	ND		---	11.2
96		---	---	ND		---	5.08
97	86/87/97/108/119/125	---	---	ND		---	26.4
98	93/98/100/102	---	---	ND		---	10.4
99		---	---	ND		---	9.97
100	93/98/100/102	---	---	ND		---	10.4
101	90/101/113	---	---	ND		---	14.2
102	93/98/100/102	---	---	ND		---	10.4
103		---	---	ND		---	4.99
104		---	---	ND		---	7.22
105		31.668	1.60	6.46	J	---	3.84
106		---	---	ND		---	3.21
107	107/124	---	---	ND		---	5.40
108	86/87/97/108/119/125	---	---	ND		---	26.4
109		---	---	ND		---	2.79
110	110/115	27.656	1.69	9.69	J	---	8.79
111		---	---	ND		---	3.44
112		---	---	ND		---	4.44
113	90/101/113	---	---	ND		---	14.2
114		---	---	ND		---	4.74
115	110/115	27.656	1.69	(9.69)	J	---	8.79
116	85/116/117	---	---	ND		---	11.4
117	85/116/117	---	---	ND		---	11.4
118		---	---	ND		---	9.34
119	86/87/97/108/119/125	---	---	ND		---	26.4
120		---	---	ND		---	2.51
121		---	---	ND		---	4.68
122		---	---	ND		---	2.74
123		---	---	ND		---	5.86
124	107/124	---	---	ND		---	5.40
125	86/87/97/108/119/125	---	---	ND		---	26.4
126		---	---	ND		---	2.94
127		---	---	ND		---	3.25
128	128/166	---	---	ND		---	6.71
129	129/138/163	---	---	ND		---	26.9
130		---	---	ND		---	4.42
131		---	---	ND		---	7.39
132		---	---	ND		---	10.7
133		---	---	ND		---	3.94
134	134/143	---	---	ND		---	9.31
135	135/151	---	---	ND		---	14.9

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
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R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-84883
Filename Y201223A_16

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
136		---	---	ND	---	7.64
137		---	---	ND	---	4.50
138	129/138/163	---	---	ND	---	26.9
139	139/140	---	---	ND	---	7.73
140	139/140	---	---	ND	---	7.73
141		---	---	ND	---	5.35
142		---	---	ND	---	2.51
143	134/143	---	---	ND	---	9.31
144		---	---	ND	---	15.3
145		---	---	ND	---	6.14
146		---	---	ND	---	5.98
147	147/149	---	---	ND	---	27.7
148		---	---	ND	---	11.5
149	147/149	---	---	ND	---	27.7
150		---	---	ND	---	7.22
151	135/151	---	---	ND	---	14.9
152		---	---	ND	---	7.85
153	153/168	---	---	ND	---	12.7
154		---	---	ND	---	7.95
155		---	---	ND	---	4.74
156	156/157	---	---	ND	---	7.69
157	156/157	---	---	ND	---	7.69
158		---	---	ND	---	3.70
159		---	---	ND	---	5.90
160		---	---	ND	---	5.04
161		---	---	ND	---	3.89
162		---	---	ND	---	3.78
163	129/138/163	---	---	ND	---	26.9
164		---	---	ND	---	3.38
165		---	---	ND	---	4.78
166	128/166	---	---	ND	---	6.71
167		---	---	ND	---	4.36
168	153/168	---	---	ND	---	12.7
169		---	---	ND	---	4.89
170		---	---	ND	---	5.88
171	171/173	---	---	ND	---	7.83
172		---	---	ND	---	2.60
173	171/173	---	---	ND	---	7.83
174		---	---	ND	---	4.17
175		---	---	ND	---	3.89
176		---	---	ND	---	6.65
177		---	---	ND	---	9.09
178		---	---	ND	---	4.45
179		---	---	ND	---	9.55
180	180/193	---	---	ND	---	7.36

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-84883
Filename Y201223A_16

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
181		---	---	ND	---	1.81
182		---	---	ND	---	5.39
183	183/185	---	---	ND	---	6.86
184		---	---	ND	---	7.52
185	183/185	---	---	ND	---	6.86
186		---	---	ND	---	3.83
187		---	---	ND	---	8.19
188		---	---	ND	---	3.61
189		---	---	ND	---	2.69
190		---	---	ND	---	6.29
191		---	---	ND	---	5.41
192		---	---	ND	---	2.80
193	180/193	---	---	ND	---	7.36
194		---	---	ND	---	5.12
195		---	---	ND	---	6.42
196		---	---	ND	---	4.26
197	197/200	---	---	ND	---	15.8
198	198/199	---	---	ND	---	15.2
199	198/199	---	---	ND	---	15.2
200	197/200	---	---	ND	---	15.8
201		---	---	ND	---	7.20
202		---	---	ND	---	3.86
203		---	---	ND	---	5.09
204		---	---	ND	---	5.87
205		---	---	ND	---	4.75
206		---	---	ND	---	7.69
207		---	---	ND	---	5.69
208		---	---	ND	---	7.22
209		---	---	ND	---	5.66

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
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ND = Not Detected
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Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Blank Analysis Results

Client Sample ID	CBLKUD
Lab Sample ID	BLANK-84883
Filename	Y201223A_16

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	ND
Total Dichloro Biphenyls	62.7
Total Trichloro Biphenyls	18.5
Total Tetrachloro Biphenyls	30.7
Total Pentachloro Biphenyls	16.1
Total Hexachloro Biphenyls	ND
Total Heptachloro Biphenyls	ND
Total Octachloro Biphenyls	ND
Total Nonachloro Biphenyls	ND
DecachloroBiphenyls	ND
Total PCBs	128

ND = Not Detected
Results reported on a total weight basis

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID	BLANK-85542		
Filename	P210119B_04		
Injected By	CVS	Matrix	Solid
Total Amount Extracted	10.0 g	Extracted	01/12/2021 11:00
ICAL ID	P210119B02	Analyzed	01/19/2021 17:48
CCal Filename(s)	P210119B_01	Dilution	NA

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	9.266	3.20	2.0	1.14	57
13C-4-MoCB	3	12.047	3.11	2.0	1.32	66
13C-2,2'-DiCB	4	12.330	1.56	2.0	1.96	98
13C-4,4'-DiCB	15	19.353	1.52	2.0	1.64	82
13C-2,2',6-TrCB	19	16.170	1.20	2.0	1.84	92
13C-3,4,4'-TrCB	37	27.038	1.03	2.0	1.39	69
13C-2,2',6,6'-TeCB	54	19.660	0.77	2.0	1.18	59
13C-3,4,4',5-TeCB	81	34.132	0.77	2.0	1.37	68
13C-3,3',4,4'-TeCB	77	34.735	0.76	2.0	1.43	71
13C-2,2',4,6,6'-PeCB	104	25.708	1.59	2.0	1.44	72
13C-2,3,3',4,4'-PeCB	105	38.290	1.54	2.0	1.28	64
13C-2,3,4,4',5-PeCB	114	37.636	1.56	2.0	1.27	64
13C-2,3',4,4',5-PeCB	118	37.099	1.58	2.0	1.26	63
13C-2,3',4,4',5'-PeCB	123	36.747	1.59	2.0	1.24	62
13C-3,3',4,4',5-PeCB	126	41.460	1.65	2.0	1.36	68
13C-2,2',4,4',6,6'-HxCB	155	31.733	1.26	2.0	1.41	71
13C-HxCB (156/157)	156/157	44.517	1.26	4.0	2.73	68
13C-2,3',4,4',5,5'-HxCB	167	43.360	1.21	2.0	1.33	66
13C-3,3',4,4',5,5'-HxCB	169	47.804	1.25	2.0	1.43	71
13C-2,2',3,4',5,6,6'-HpCB	188	37.636	1.01	2.0	1.49	74
13C-2,3,3',4,4',5,5'-HpCB	189	50.335	1.04	2.0	1.44	72
13C-2,2',3,3',5,5',6,6'-OcCB	202	43.092	0.89	2.0	1.46	73
13C-2,3,3',4,4',5,5',6-OcCB	205	52.943	0.91	2.0	1.43	72
13C-2,2',3,3',4,4',5,5',6-NoCB	206	54.689	0.85	2.0	1.48	74
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	49.861	0.76	2.0	1.44	72
13C-DeCB	209	56.285	0.70	2.0	1.71	86
Cleanup Standards						
13C-2,4,4'-TrCB	28	22.707	0.99	2.0	1.11	55
13C-2,3,3',5,5'-PeCB	111	34.766	1.59	2.0	1.21	60
13C-2,2',3,3',5,5',6-HpCB	178	40.738	1.04	2.0	1.41	71
Recovery Standards						
13C-2,5-DiCB	9	14.965	1.54	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	24.687	0.82	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	31.950	1.52	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	40.269	1.28	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	52.447	0.90	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses
Results reported on a total weight basis

* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-85542
Filename P210119B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
1		---	---	ND	---	3.06
2		---	---	ND	---	3.53
3		---	---	ND	---	5.48
4		---	---	ND	---	7.08
5		---	---	ND	---	3.35
6		---	---	ND	---	3.84
7		---	---	ND	---	4.38
8		---	---	ND	---	7.28
9		---	---	ND	---	3.88
10		---	---	ND	---	2.67
11		---	---	ND	---	117
12	12/13	---	---	ND	---	7.17
13	12/13	---	---	ND	---	7.17
14		---	---	ND	---	2.74
15		---	---	ND	---	6.55
16		---	---	ND	---	8.46
17		---	---	ND	---	6.93
18	18/30	---	---	ND	---	12.4
19		---	---	ND	---	3.96
20	20/28	---	---	ND	---	34.2
21	21/33	---	---	ND	---	33.2
22		---	---	ND	---	21.0
23		---	---	ND	---	5.33
24		---	---	ND	---	3.18
25		---	---	ND	---	3.67
26	26/29	---	---	ND	---	8.67
27		---	---	ND	---	2.80
28	20/28	---	---	ND	---	34.2
29	26/29	---	---	ND	---	8.67
30	18/30	---	---	ND	---	12.4
31		---	---	ND	---	37.9
32		---	---	ND	---	5.97
33	21/33	---	---	ND	---	33.2
34		---	---	ND	---	4.44
35		---	---	ND	---	4.04
36		---	---	ND	---	4.05
37		---	---	ND	---	12.9
38		---	---	ND	---	5.31
39		---	---	ND	---	4.90
40	40/41/71	---	---	ND	---	16.7
41	40/41/71	---	---	ND	---	16.7
42		---	---	ND	---	8.46
43	43/73	---	---	ND	---	9.66
44	44/47/65	---	---	ND	---	39.4
45	45/51	---	---	ND	---	13.6

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
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ND = Not Detected
NA = Not Applicable
NC = Not Calculated
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X = Outside QC Limits
RT = Retention Time
I = Interference

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-85542
Filename P210119B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
46		---	---	ND	---	4.76
47	44/47/65	---	---	ND	---	39.4
48		---	---	ND	---	5.80
49	49/69	---	---	ND	---	14.5
50	50/53	---	---	ND	---	11.9
51	45/51	---	---	ND	---	13.6
52		---	---	ND	---	29.7
53	50/53	---	---	ND	---	11.9
54		---	---	ND	---	2.72
55		---	---	ND	---	4.61
56		---	---	ND	---	14.0
57		---	---	ND	---	4.19
58		---	---	ND	---	4.42
59	59/62/75	---	---	ND	---	13.6
60		---	---	ND	---	9.96
61	61/70/74/76	---	---	ND	---	39.9
62	59/62/75	---	---	ND	---	13.6
63		---	---	ND	---	4.45
64		---	---	ND	---	14.8
65	44/47/65	---	---	ND	---	39.4
66		30.170	0.83	9.42 J	---	4.96
67		---	---	ND	---	3.56
68		---	---	ND	---	4.96
69	49/69	---	---	ND	---	14.5
70	61/70/74/76	---	---	ND	---	39.9
71	40/41/71	---	---	ND	---	16.7
72		---	---	ND	---	4.51
73	43/73	---	---	ND	---	9.66
74	61/70/74/76	---	---	ND	---	39.9
75	59/62/75	---	---	ND	---	13.6
76	61/70/74/76	---	---	ND	---	39.9
77		---	---	ND	---	4.86
78		---	---	ND	---	4.21
79		---	---	ND	---	3.15
80		---	---	ND	---	3.76
81		---	---	ND	---	5.13
82		---	---	ND	---	5.54
83		---	---	ND	---	4.10
84		---	---	ND	---	7.57
85	85/116/117	---	---	ND	---	9.56
86	86/87/97/108/119/125	---	---	ND	---	19.3
87	86/87/97/108/119/125	---	---	ND	---	19.3
88	88/91	---	---	ND	---	7.27
89		---	---	ND	---	5.50
90	90/101/113	---	---	ND	---	16.6

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
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RT = Retention Time
I = Interference

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-85542
Filename P210119B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
91	88/91	---	---	ND	---	7.27
92		---	---	ND	---	3.79
93	93/98/100/102	---	---	ND	---	16.7
94		---	---	ND	---	4.92
95		---	---	ND	---	19.9
96		---	---	ND	---	4.29
97	86/87/97/108/119/125	---	---	ND	---	19.3
98	93/98/100/102	---	---	ND	---	16.7
99		---	---	ND	---	8.79
100	93/98/100/102	---	---	ND	---	16.7
101	90/101/113	---	---	ND	---	16.6
102	93/98/100/102	---	---	ND	---	16.7
103		---	---	ND	---	4.74
104		---	---	ND	---	5.76
105		---	---	ND	---	10.2
106		---	---	ND	---	2.50
107	107/124	---	---	ND	---	6.59
108	86/87/97/108/119/125	---	---	ND	---	19.3
109		---	---	ND	---	3.29
110	110/115	---	---	ND	---	27.0
111		---	---	ND	---	4.63
112		---	---	ND	---	4.74
113	90/101/113	---	---	ND	---	16.6
114		---	---	ND	---	4.63
115	110/115	---	---	ND	---	27.0
116	85/116/117	---	---	ND	---	9.56
117	85/116/117	---	---	ND	---	9.56
118		---	---	ND	---	18.3
119	86/87/97/108/119/125	---	---	ND	---	19.3
120		---	---	ND	---	4.16
121		---	---	ND	---	4.22
122		---	---	ND	---	3.64
123		---	---	ND	---	6.00
124	107/124	---	---	ND	---	6.59
125	86/87/97/108/119/125	---	---	ND	---	19.3
126		---	---	ND	---	6.37
127		---	---	ND	---	3.59
128	128/166	---	---	ND	---	9.16
129	129/138/163	---	---	ND	---	23.7
130		---	---	ND	---	5.42
131		---	---	ND	---	4.37
132		---	---	ND	---	7.74
133		---	---	ND	---	4.65
134	134/143	---	---	ND	---	10.1
135	135/151	---	---	ND	---	6.37

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

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Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-85542
Filename P210119B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
136		---	---	ND	---	3.68
137		---	---	ND	---	5.61
138	129/138/163	---	---	ND	---	23.7
139	139/140	---	---	ND	---	9.96
140	139/140	---	---	ND	---	9.96
141		---	---	ND	---	6.22
142		---	---	ND	---	5.14
143	134/143	---	---	ND	---	10.1
144		---	---	ND	---	3.06
145		---	---	ND	---	4.63
146		---	---	ND	---	3.25
147	147/149	---	---	ND	---	15.4
148		---	---	ND	---	4.84
149	147/149	---	---	ND	---	15.4
150		---	---	ND	---	3.59
151	135/151	---	---	ND	---	6.37
152		---	---	ND	---	4.95
153	153/168	---	---	ND	---	15.1
154		---	---	ND	---	3.25
155		---	---	ND	---	4.82
156	156/157	---	---	ND	---	9.36
157	156/157	---	---	ND	---	9.36
158		---	---	ND	---	2.83
159		---	---	ND	---	4.38
160		---	---	ND	---	4.49
161		---	---	ND	---	3.99
162		---	---	ND	---	3.50
163	129/138/163	---	---	ND	---	23.7
164		---	---	ND	---	4.09
165		---	---	ND	---	5.03
166	128/166	---	---	ND	---	9.16
167		---	---	ND	---	4.49
168	153/168	---	---	ND	---	15.1
169		---	---	ND	---	4.68
170		---	---	ND	---	4.28
171	171/173	---	---	ND	---	5.72
172		---	---	ND	---	3.68
173	171/173	---	---	ND	---	5.72
174		---	---	ND	---	4.06
175		---	---	ND	---	3.89
176		---	---	ND	---	3.69
177		---	---	ND	---	3.04
178		---	---	ND	---	5.35
179		---	---	ND	---	3.17
180	180/193	---	---	ND	---	7.97

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-85542
Filename P210119B_04

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
181		---	---	ND	---	4.79
182		---	---	ND	---	2.23
183	183/185	---	---	ND	---	6.18
184		---	---	ND	---	3.77
185	183/185	---	---	ND	---	6.18
186		---	---	ND	---	4.22
187		---	---	ND	---	5.48
188		---	---	ND	---	4.64
189		---	---	ND	---	5.89
190		---	---	ND	---	4.36
191		---	---	ND	---	4.34
192		---	---	ND	---	3.75
193	180/193	---	---	ND	---	7.97
194		---	---	ND	---	3.74
195		---	---	ND	---	3.91
196		---	---	ND	---	3.75
197	197/200	---	---	ND	---	5.98
198	198/199	---	---	ND	---	7.97
199	198/199	---	---	ND	---	7.97
200	197/200	---	---	ND	---	5.98
201		---	---	ND	---	3.58
202		---	---	ND	---	4.52
203		---	---	ND	---	2.27
204		---	---	ND	---	4.29
205		---	---	ND	---	5.18
206		---	---	ND	---	6.08
207		---	---	ND	---	4.01
208		---	---	ND	---	4.61
209		---	---	ND	---	12.5

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
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RT = Retention Time
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Results reported on a total weight basis

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Method 1668A Polychlorobiphenyl
Blank Analysis Results

Client Sample ID	CBLKCM
Lab Sample ID	BLANK-85542
Filename	P210119B_04

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	ND
Total Dichloro Biphenyls	ND
Total Trichloro Biphenyls	ND
Total Tetrachloro Biphenyls	9.42
Total Pentachloro Biphenyls	ND
Total Hexachloro Biphenyls	ND
Total Heptachloro Biphenyls	ND
Total Octachloro Biphenyls	ND
Total Nonachloro Biphenyls	ND
DecachloroBiphenyls	ND
Total PCBs	9.42

ND = Not Detected
Results reported on a total weight basis

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Method 1668A Polychlorobiphenyls
Laboratory Control Spike Analysis Results

Lab Sample ID	LCS-84884		
Filename	Y201224A_04	Matrix	Solid
Total Amount Extracted	10.0 g	Dilution	NA
ICAL ID	Y201224A02	Extracted	12/14/2020 13:10
CCal Filename(s)	Y201224A_03	Analyzed	12/24/2020 12:21
Method Blank ID	BLANK-84883	Injected By	CVS

	Native Analytes			Labeled Analytes		
PCB Isomer	**Spiked (ng)**	**Found (ng)**	**% Recovery**	**Spiked (ng)**	**Found (ng)**	**% Recovery**
1	1.0	1.02	102	2.0	1.06	53
3	1.0	1.03	103	2.0	1.14	57
4	1.0	1.09	109	2.0	1.19	60
15	1.0	1.07	107	2.0	1.32	66
19	1.0	1.00	100	2.0	1.22	61
37	1.0	1.17	117	2.0	1.33	66
54	1.0	1.01	101	2.0	1.16	58
81	1.0	1.03	103	2.0	1.50	75
77	1.0	1.09	109	2.0	1.48	74
104	1.0	0.990	99	2.0	1.23	62
105	1.0	1.14	114	2.0	1.44	72
114	1.0	1.03	103	2.0	1.45	73
118	1.0	1.11	111	2.0	1.43	72
123	1.0	1.08	108	2.0	1.45	72
126	1.0	1.11	111	2.0	1.50	75
155	1.0	1.04	104	2.0	1.25	63
156/157	2.0	2.27	113	4.0	2.67	67
167	1.0	1.07	107	2.0	1.39	70
169	1.0	1.07	107	2.0	1.40	70
188	1.0	1.01	101	2.0	1.36	68
189	1.0	1.07	107	2.0	1.44	72
202	1.0	1.01	101	2.0	1.27	64
205	1.0	0.984	98	2.0	1.41	70
206	1.0	0.980	98	2.0	1.35	68
208	1.0	1.02	102	2.0	1.37	68
209	1.0	0.953	95	2.0	1.32	66

R = Recovery outside of method 1668A control limits
Nn = Result obtained from alternate analysis
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
ng = Nanograms
I = Interference

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyls
Laboratory Control Spike Analysis Results

Lab Sample ID	LCS-85543		
Filename	P210119B_11	Matrix	Solid
Total Amount Extracted	10.0 g	Dilution	NA
ICAL ID	P210119B02	Extracted	01/12/2021 11:00
CCal Filename(s)	P210119B_01	Analyzed	01/20/2021 00:48
Method Blank ID	BLANK-85542	Injected By	CVS

	Native Analytes			Labeled Analytes		
PCB Isomer	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	0.930	93	2.0	1.31	66
3	1.0	0.913	91	2.0	1.52	76
4	1.0	0.960	96	2.0	2.08	104
15	1.0	0.937	94	2.0	1.80	90
19	1.0	0.937	94	2.0	1.98	99
37	1.0	0.959	96	2.0	1.50	75
54	1.0	0.964	96	2.0	1.29	64
81	1.0	0.935	94	2.0	1.56	78
77	1.0	0.923	92	2.0	1.54	77
104	1.0	0.988	99	2.0	1.56	78
105	1.0	1.03	103	2.0	1.42	71
114	1.0	0.977	98	2.0	1.41	71
118	1.0	1.08	108	2.0	1.43	72
123	1.0	1.01	101	2.0	1.44	72
126	1.0	0.988	99	2.0	1.52	76
155	1.0	1.05	105	2.0	1.55	78
156/157	2.0	2.01	100	4.0	2.89	72
167	1.0	0.999	100	2.0	1.45	72
169	1.0	0.989	99	2.0	1.53	76
188	1.0	1.03	103	2.0	1.67	83
189	1.0	1.02	102	2.0	1.51	75
202	1.0	1.05	105	2.0	1.61	81
205	1.0	1.01	101	2.0	1.55	78
206	1.0	1.01	101	2.0	1.63	82
208	1.0	1.07	107	2.0	1.54	77
209	1.0	0.945	95	2.0	1.83	92

R = Recovery outside of method 1668A control limits
Nn = Result obtained from alternate analysis
ND = Not Detected
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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyls
Laboratory Control Spike Analysis Results

Lab Sample ID	LCSD-85544		
Filename	P210119B_12	Matrix	Solid
Total Amount Extracted	10.0 g	Dilution	NA
ICAL ID	P210119B02	Extracted	01/12/2021 11:00
CCal Filename(s)	P210119B_01	Analyzed	01/20/2021 01:48
Method Blank ID	BLANK-85542	Injected By	CVS

	Native Analytes			Labeled Analytes		
PCB Isomer	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	0.917	92	2.0	1.16	58
3	1.0	0.882	88	2.0	1.40	70
4	1.0	0.964	96	2.0	1.81	90
15	1.0	1.01	101	2.0	1.59	79
19	1.0	0.922	92	2.0	1.88	94
37	1.0	0.977	98	2.0	1.34	67
54	1.0	0.907	91	2.0	1.25	63
81	1.0	0.928	93	2.0	1.40	70
77	1.0	0.895	90	2.0	1.46	73
104	1.0	0.985	98	2.0	1.51	76
105	1.0	1.02	102	2.0	1.34	67
114	1.0	0.941	94	2.0	1.31	66
118	1.0	1.03	103	2.0	1.31	65
123	1.0	0.981	98	2.0	1.29	65
126	1.0	1.000	100	2.0	1.41	71
155	1.0	1.01	101	2.0	1.46	73
156/157	2.0	2.10	105	4.0	2.61	65
167	1.0	0.951	95	2.0	1.33	67
169	1.0	0.971	97	2.0	1.38	69
188	1.0	1.01	101	2.0	1.56	78
189	1.0	1.03	103	2.0	1.40	70
202	1.0	1.06	106	2.0	1.51	75
205	1.0	1.05	105	2.0	1.44	72
206	1.0	0.971	97	2.0	1.57	79
208	1.0	1.02	102	2.0	1.50	75
209	1.0	0.961	96	2.0	1.74	87

R = Recovery outside of method 1668A control limits
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REPORT OF LABORATORY ANALYSIS

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Method 1668A

Spike Recovery Relative Percent Difference (RPD) Results

Client	PACE Wisconsin		
Spike 1 ID	LCS-85543	Spike 2 ID	LCSD-85544
Spike 1 Filename	P210119B_11	Spike 2 Filename	P210119B_12

Compound	IUPAC	Spike 1 %REC	Spike 2 %REC	%RPD
2-MoCB	1	93	92	1.1
4-MoCB	3	91	88	3.4
2,2'-DiCB	4	96	96	0.0
4,4'-DiCB	15	94	101	7.2
2,2',6-TrCB	19	94	92	2.2
3,4,4'-TrCB	37	96	98	2.1
2,2',6,6'-TeCB	54	96	91	5.3
3,3',4,4'-TeCB	77	92	90	2.2
3,4,4',5-TeCB	81	94	93	1.1
2,2',4,6,6'-PeCB	104	99	98	1.0
2,3,3',4,4'-PeCB	105	103	102	1.0
2,3,4,4',5-PeCB	114	98	94	4.2
2,3',4,4',5-PeCB	118	108	103	4.7
2,3',4,4',5'-PeCB	123	101	98	3.0
3,3',4,4',5-PeCB	126	99	100	1.0
2,2',4,4',6,6'-HxCB	155	105	101	3.9
(156/157)	156/157	100	105	4.9
2,3',4,4',5,5'-HxCB	167	100	95	5.1
3,3',4,4',5,5'-HxCB	169	99	97	2.0
2,2',3,4',5,6,6'-HpCB	188	103	101	2.0
2,3,3',4,4',5,5'-HpCB	189	102	103	1.0
2,2',3,3',5,5',6,6'-OcCB	202	105	106	0.9
2,3,3',4,4',5,5',6-OcCB	205	101	105	3.9
2,2',3,3',4,4',5,5',6-NoCB	206	101	97	4.0
2,2',3,3',4,5,5',6,6'-NoCB	208	107	102	4.8
Decachlorobiphenyl	209	95	96	1.0

%REC = Percent Recovered
RPD = The difference between the two values divided by the mean value

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Method 1668A Polychlorobiphenyls
Matrix Spike Analysis Results

Client - PACE Wisconsin

Lab Sample ID	40219480004-MS		
Filename	Y201224A_10	Matrix	Solid
Total Amount Extracted	39.0 g	Dilution	NA
ICAL ID	Y201224A02	Extracted	12/14/2020 13:10
CCal Filename(s)	Y201224A_03	Analyzed	12/24/2020 18:11
Method Blank ID	BLANK-84883	Injected By	CVS

	Native Analytes			Labeled Analytes		
PCB Isomer	**Spiked (ng)**	**Found (ng)**	**% Recovery**	**Spiked (ng)**	**Found (ng)**	**% Recovery**
1	1.0	1.05	105	2.0	1.08	54
3	1.0	1.18	118	2.0	1.18	59
4	1.0	1.14	114	2.0	1.13	57
15	1.0	1.98	198	2.0	1.30	65
19	1.0	1.13	113	2.0	1.17	59
37	1.0	2.48	248	2.0	1.45	73
54	1.0	0.941	94	2.0	1.13	57
81	1.0	1.03	103	2.0	1.64	82
77	1.0	1.87	187	2.0	1.62	81
104	1.0	1.00	100	2.0	1.64	82
105	1.0	10.1	1012	2.0	2.09	105
114	1.0	1.30	130	2.0	2.15	108
118	1.0	29.3	2929	2.0	2.04	102
123	1.0	1.39	139	2.0	2.07	103
126	1.0	1.33	133	2.0	2.11	106
155	1.0	0.964	96	2.0	1.03	52
156/157	2.0	6.46	323	4.0	2.78	69
167	1.0	2.43	243	2.0	1.38	69
169	1.0	0.950	95	2.0	1.44	72
188	1.0	0.965	97	2.0	1.38	69
189	1.0	1.14	114	2.0	1.49	75
202	1.0	1.35	135	2.0	1.33	66
205	1.0	0.981	98	2.0	1.39	70
206	1.0	1.60	160	2.0	1.36	68
208	1.0	1.17	117	2.0	1.39	70
209	1.0	1.24	124	2.0	1.33	67

R = Recovery outside of method
1668A control limits
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
ng = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyls
Matrix Spike Analysis Results

Client - PACE Wisconsin

Lab Sample ID	40219480004-MSD		
Filename	Y201224A_11	Matrix	Solid
Total Amount Extracted	39.1 g	Dilution	NA
ICAL ID	Y201224A02	Extracted	12/14/2020 13:10
CCal Filename(s)	Y201224A_03	Analyzed	12/24/2020 19:09
Method Blank ID	BLANK-84883	Injected By	CVS

	Native Analytes			Labeled Analytes		
PCB Isomer	**Spiked (ng)**	**Found (ng)**	**% Recovery**	**Spiked (ng)**	**Found (ng)**	**% Recovery**
1	1.0	1.13	113	2.0	0.919	46
3	1.0	1.36	136	2.0	0.995	50
4	1.0	1.27	127	2.0	1.01	51
15	1.0	2.08	208	2.0	1.28	64
19	1.0	1.16	116	2.0	1.10	55
37	1.0	2.57	257	2.0	1.46	73
54	1.0	1.000	100	2.0	1.13	57
81	1.0	1.04	104	2.0	1.58	79
77	1.0	1.94	194	2.0	1.55	78
104	1.0	0.979	98	2.0	1.74	87
105	1.0	7.91	791	2.0	2.00	100
114	1.0	1.22	122	2.0	2.10	105
118	1.0	22.5	2249	2.0	2.01	101
123	1.0	1.22	122	2.0	1.99	100
126	1.0	1.30	130	2.0	2.10	105
155	1.0	1.01	101	2.0	1.05	52
156/157	2.0	5.26	263	4.0	2.78	70
167	1.0	2.06	206	2.0	1.46	73
169	1.0	1.03	103	2.0	1.45	72
188	1.0	1.00	100	2.0	1.30	65
189	1.0	1.17	117	2.0	1.38	69
202	1.0	1.35	135	2.0	1.22	61
205	1.0	1.03	103	2.0	1.33	67
206	1.0	1.61	161	2.0	1.29	65
208	1.0	1.18	118	2.0	1.34	67
209	1.0	1.22	122	2.0	1.22	61

R = Recovery outside of method
1668A control limits
ND = Not Detected
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NC = Not Calculated
* = See Discussion
ng = Nanograms

REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyls
Matrix Spike Analysis Results

Client - PACE Wisconsin

Lab Sample ID	40219480011-MS		
Filename	Y201225A_12	Matrix	Solid
Total Amount Extracted	28.7 g	Dilution	NA
ICAL ID	Y201225A02	Extracted	12/14/2020 13:10
CCal Filename(s)	Y201225A_01	Analyzed	12/25/2020 10:44
Method Blank ID	BLANK-84883	Injected By	CVS

	Native Analytes			Labeled Analytes		
PCB Isomer	**Spiked (ng)**	**Found (ng)**	**% Recovery**	**Spiked (ng)**	**Found (ng)**	**% Recovery**
1	1.0	1.12	112	2.0	1.07	54
3	1.0	1.12	112	2.0	1.25	63
4	1.0	1.22	122	2.0	1.18	59
15	1.0	2.21	221	2.0	1.47	74
19	1.0	1.11	111	2.0	1.27	63
37	1.0	3.06	306	2.0	1.57	79
54	1.0	0.950	95	2.0	1.17	59
81	1.0	0.933	93	2.0	1.77	88
77	1.0	2.22	222	2.0	1.70	85
104	1.0	0.916	92	2.0	1.83	92
105	1.0	10.5	1046	2.0	2.23	112
114	1.0	1.33	133	2.0	2.26	113
118	1.0	33.3	3329	2.0	2.13	107
123	1.0	1.36	136	2.0	2.17	108
126	1.0	1.33	133	2.0	2.27	113
155	1.0	0.989	99	2.0	1.01	51
156/157	2.0	6.80	340	4.0	2.86	72
167	1.0	2.44	244	2.0	1.44	72
169	1.0	0.952	95	2.0	1.50	75
188	1.0	0.986	99	2.0	1.42	71
189	1.0	1.20	120	2.0	1.54	77
202	1.0	1.40	140	2.0	1.33	66
205	1.0	1.06	106	2.0	1.37	68
206	1.0	2.12	212	2.0	1.28	64
208	1.0	1.32	132	2.0	1.32	66
209	1.0	1.38	138	2.0	1.28	64

R = Recovery outside of method
1668A control limits
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
ng = Nanograms

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyls
Matrix Spike Analysis Results

Client - PACE Wisconsin

Lab Sample ID	40219480011-MSD		
Filename	Y201225A_13	Matrix	Solid
Total Amount Extracted	29.0 g	Dilution	NA
ICAL ID	Y201225A02	Extracted	12/14/2020 13:10
CCal Filename(s)	Y201225A_01	Analyzed	12/25/2020 11:43
Method Blank ID	BLANK-84883	Injected By	CVS

	Native Analytes			Labeled Analytes		
PCB Isomer	**Spiked (ng)**	**Found (ng)**	**% Recovery**	**Spiked (ng)**	**Found (ng)**	**% Recovery**
1	1.0	1.06	106	2.0	0.786	39
3	1.0	1.19	119	2.0	0.821	41
4	1.0	1.23	123	2.0	0.819	41
15	1.0	1.85	185	2.0	1.02	51
19	1.0	1.06	106	2.0	0.917	46
37	1.0	2.47	247	2.0	1.10	55
54	1.0	0.943	94	2.0	0.812	41
81	1.0	0.978	98	2.0	1.24	62
77	1.0	1.75	175	2.0	1.27	63
104	1.0	0.954	95	2.0	1.22	61
105	1.0	7.29	729	2.0	1.62	81
114	1.0	1.21	121	2.0	1.65	82
118	1.0	21.7	2167	2.0	1.64	82
123	1.0	1.15	115	2.0	1.63	81
126	1.0	1.22	122	2.0	1.68	84
155	1.0	0.999	100	2.0	0.831	42
156/157	2.0	5.21	260	4.0	2.33	58
167	1.0	1.97	197	2.0	1.17	58
169	1.0	1.01	101	2.0	1.22	61
188	1.0	0.971	97	2.0	1.06	53
189	1.0	1.10	110	2.0	1.13	57
202	1.0	1.24	124	2.0	0.994	50
205	1.0	0.937	94	2.0	1.09	55
206	1.0	1.56	156	2.0	1.03	51
208	1.0	1.20	120	2.0	1.02	51
209	1.0	1.58	158	2.0	0.951	48

R = Recovery outside of method
1668A control limits
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
ng = Nanograms

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method PCB1668-209 Spike Sample Results

Client - PACE Wisconsin

Client Sample ID	USCCG003(0.0-0.5)			Dry Weights	
Lab Sample ID	40219480004	Sample Filename	Y201224A_13	Sample Amount	10.0 g
MS ID	40219480004-MS	MS Filename	Y201224A_10	MS Amount	10.0 g
MSD ID	40219480004-MSD	MSD Filename	Y201224A_11	MSD Amount	10.0 g

Analyte	Sample Qm (ng)	MS/MSD Qs (ng)	MS Qm (ng)	MSD Qm (ng)	RPD	Background Subtracted MS % Rec.	MSD % Rec.	RPD
2-MoCB	0.26	1.00	1.05	1.13	6.6	79	87	8.6
4-MoCB	0.61	1.00	1.18	1.36	14.7	57	76	28.0
2,2'-DiCB	0.46	1.00	1.14	1.27	10.7	68	81	17.3
4,4'-DiCB	3.20	1.00	1.98	2.08	5.0	0	0	0.0
2,2',6-TrCB	0.37	1.00	1.13	1.16	3.3	75	79	4.9
3,4,4'-TrCB	5.99	1.00	2.48	2.57	3.4	0	0	0.0
2,2',6,6'-TeCB	0.04	1.00	0.94	1.00	6.1	90	96	6.3
3,3',4,4'-TeCB	3.66	1.00	1.87	1.94	3.6	0	0	0.0
3,4,4',5-TeCB	0.06	1.00	1.03	1.04	1.0	97	98	1.1
2,2',4,6,6'-PeCB	0.00	1.00	1.00	0.98	2.3	100	98	2.3
2,3,3',4,4'-PeCB	26.33	1.00	10.12	7.91	24.4	0	0	0.0
2,3,4,4',5-PeCB	1.08	1.00	1.30	1.22	6.6	22	14	46.2
2,3',4,4',5-PeCB	93.47	1.00	29.29	22.49	26.2	0	0	0.0
2,3',4,4',5'-PeCB	1.22	1.00	1.39	1.22	12.9	17	0	198.8
3,3',4,4',5-PeCB	0.29	1.00	1.33	1.30	2.0	104	101	2.6
2,2',4,4',6,6'-HxCB	0.00	1.00	0.96	1.01	4.6	96	101	4.6
(156/157)	14.46	2.00	6.46	5.26	20.5	0	0	0.0
2,3',4,4',5,5'-HxCB	4.49	1.00	2.43	2.06	16.4	0	0	0.0
3,3',4,4',5,5'-HxCB	0.00	1.00	0.95	1.03	8.3	95	103	8.3
2,2',3,4',5,6,6'-HpCB	0.00	1.00	0.97	1.00	3.9	97	100	3.9
2,3,3',4,4',5,5'-HpCB	0.73	1.00	1.14	1.17	3.2	40	44	8.8
2,2',3,3',5,5',6,6'-OcCB	1.44	1.00	1.35	1.35	0.4	0	0	0.0
2,3,3',4,4',5,5',6-OcCB	0.36	1.00	0.98	1.03	5.3	62	68	8.2
2,2',3,3',4,4',5,5',6-NoCB	3.38	1.00	1.60	1.61	1.0	0	0	0.0
2,2',3,3',4,5,5',6,6'-NoCB	0.91	1.00	1.17	1.18	1.0	26	27	4.2
Decachlorobiphenyl	1.69	1.00	1.24	1.22	1.7	0	0	0.0

Definitions

MS = Matrix Spike Qm = Quantity Measured % Rec. = Percent Recovery
MSD = Matrix Spike Duplicate Qs = Quantity Spiked RPD = Relative Percent Difference NA = Not Applicable

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method PCB1668-209 Spike Sample Results

Client - PACE Wisconsin

Client Sample ID	USCCC004(1.0-2.0)			Dry Weights	
Lab Sample ID	40219480011	Sample Filename	Y201225A_11	Sample Amount	10.0 g
MS ID	40219480011-MS	MS Filename	Y201225A_12	MS Amount	10.0 g
MSD ID	40219480011-MSD	MSD Filename	Y201225A_13	MSD Amount	10.1 g

Analyte	Sample Qm (ng)	MS/MSD Qs (ng)	MS Qm (ng)	MSD Qm (ng)	RPD	Background Subtracted MS % Rec.	MSD % Rec.	RPD
2-MoCB	0.15	1.00	1.12	1.06	5.9	97	91	6.8
4-MoCB	0.27	1.00	1.12	1.19	5.5	85	92	7.2
2,2'-DiCB	0.24	1.00	1.22	1.23	0.4	98	99	0.5
4,4'-DiCB	0.86	1.00	2.21	1.85	17.7	135	99	30.8
2,2',6-TrCB	0.13	1.00	1.11	1.06	4.9	98	92	5.6
3,4,4'-TrCB	1.25	1.00	3.06	2.47	21.4	181	122	39.0
2,2',6,6'-TeCB	0.00	1.00	0.95	0.94	0.8	95	94	0.8
3,3',4,4'-TeCB	0.60	1.00	2.22	1.75	23.8	162	115	34.1
3,4,4',5-TeCB	0.03	1.00	0.93	0.98	4.8	90	95	4.9
2,2',4,6,6'-PeCB	0.00	1.00	0.92	0.95	4.1	92	95	4.1
2,3,3',4,4'-PeCB	4.32	1.00	10.46	7.29	35.8	614	296	69.7
2,3,4,4',5-PeCB	0.19	1.00	1.33	1.21	9.3	114	102	10.9
2,3',4,4',5-PeCB	13.34	1.00	33.29	21.67	42.3	1996	833	82.2
2,3',4,4',5'-PeCB	0.21	1.00	1.36	1.15	16.5	115	94	19.8
3,3',4,4',5-PeCB	0.06	1.00	1.33	1.22	8.6	127	116	9.0
2,2',4,4',6,6'-HxCB	0.00	1.00	0.99	1.00	0.9	99	100	0.9
(156/157)	2.10	2.00	6.80	5.21	26.5	235	155	40.9
2,3',4,4',5,5'-HxCB	0.63	1.00	2.44	1.97	21.6	181	133	30.3
3,3',4,4',5,5'-HxCB	0.00	1.00	0.95	1.01	5.5	95	101	5.5
2,2',3,4',5,6,6'-HpCB	0.00	1.00	0.99	0.97	1.5	99	97	1.5
2,3,3',4,4',5,5'-HpCB	0.10	1.00	1.20	1.10	8.8	110	100	9.7
2,2',3,3',5,5',6,6'-OcCB	0.17	1.00	1.40	1.24	12.3	123	107	14.1
2,3,3',4,4',5,5',6-OcCB	0.00	1.00	1.06	0.94	12.2	106	94	12.2
2,2',3,3',4,4',5,5',6-NoCB	0.42	1.00	2.12	1.56	30.7	170	114	39.7
2,2',3,3',4,5,5',6,6'-NoCB	0.14	1.00	1.32	1.20	9.4	118	106	10.6
Decachlorobiphenyl	0.23	1.00	1.38	1.58	14.1	114	135	16.8

Definitions

MS = Matrix Spike Qm = Quantity Measured % Rec. = Percent Recovery
MSD = Matrix Spike Duplicate Qs = Quantity Spiked RPD = Relative Percent Difference NA = Not Applicable

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

January 19, 2021

Alison Bitel
AECOM
27777 Franklin Road
Suite 2150
Southfield, MI 48034

RE: Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Dear Alison Bitel:

Enclosed are the analytical results for sample(s) received by the laboratory on December 04, 2020. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Green Bay

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Tod Noltemeyer

Tod Noltemeyer
tod.noltemeyer@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Brian Mastin, AECOM
Andrea Peak, AECOM

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40219343001	**DSLBC002 (0-1.3)**	Solid	12/02/20 19:10	12/04/20 09:20
40219343002	**DSLBC002 (1.3-2.4)**	Solid	12/02/20 19:36	12/04/20 09:20
40219343003	**DUP-1**	Solid	12/02/20 00:00	12/04/20 09:20
40219343004	**DSLBG002 (0.0-0.5)**	Solid	12/02/20 09:55	12/04/20 09:20
40219343005	**DSLBG003 (0.0-0.5)**	Solid	12/02/20 15:00	12/04/20 09:20
40219343006	**WCDMACS001**	Solid	12/02/20 11:30	12/04/20 09:20
40219343007	**DUP-2**	Solid	12/02/20 00:00	12/04/20 09:20
40219343008	**DSRBG001 (0.0-0.5)**	Solid	12/02/20 11:40	12/04/20 09:20

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40219343001	**DSLBC002 (0-1.3)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219343002	**DSLBC002 (1.3-2.4)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219343003	**DUP-1**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219343004	**DSLBG002 (0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219343005	**DSLBG003 (0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219343006	**WCDMACS001**	EPA 8082A	BLM	10	PASI-G
		EPA 6010	TXW	9	PASI-G
		EPA 7471	AJT	1	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219343007	**DUP-2**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	ASD	1	PASI-G
40219343008	**DSRBG001 (0.0-0.5)**	EPA 8015D Modified	MRN	2	PASI-G
		EPA 8082A	BLM	10	PASI-G
		EPA 8270 by SIM	JJB	20	PASI-G
		ASTM D2974-87	ASD	1	PASI-G

PASI-G = Pace Analytical Services - Green Bay

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Method: **EPA 8015D Modified**
Description: 8015 GCS THC-Diesel
Client: AECOM, Inc. - MI
Date: January 19, 2021

General Information:
7 samples were analyzed for EPA 8015D Modified by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Batch Comments:

The default spike range of the standard used for QC evaluation is C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.

- QC Batch: 373362

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Method: **EPA 8082A**
Description: 8082A KZOO PCB
Client: AECOM, Inc. - MI
Date: January 19, 2021

General Information:
8 samples were analyzed for EPA 8082A by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3541 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 373369

C2: Relative percent difference between results from each column was greater than 40%. The lower of the two results was reported.

- WCDMACS001 (Lab ID: 40219343006)
  - PCB-1248 (Aroclor 1248)

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Method: **EPA 6010**
Description: 6010 MET ICP
Client: AECOM, Inc. - MI
Date: January 19, 2021

General Information:
1 sample was analyzed for EPA 6010 by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
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PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Method: **EPA 7471**
Description: 7471 Mercury
Client: AECOM, Inc. - MI
Date: January 19, 2021

General Information:
1 sample was analyzed for EPA 7471 by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: AECOM, Inc. - MI
Date: January 19, 2021

General Information:
4 samples were analyzed for EPA 8270 by SIM by Pace Analytical Services Green Bay. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 373313

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40219343008

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2157484)
  - 1-Methylnaphthalene
  - 2-Methylnaphthalene
  - Acenaphthene
  - Acenaphthylene
  - Anthracene
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(g,h,i)perylene

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PROJECT NARRATIVE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: AECOM, Inc. - MI
Date: January 19, 2021

QC Batch: 373313

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40219343008

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Benzo(k)fluoranthene
- Dibenz(a,h)anthracene
- Fluoranthene
- Fluorene
- Indeno(1,2,3-cd)pyrene
- Naphthalene
- Phenanthrene
- Pyrene

- MSD (Lab ID: 2157485)
  - 1-Methylnaphthalene
  - 2-Methylnaphthalene
  - Acenaphthene
  - Acenaphthylene
  - Anthracene
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Benzo(k)fluoranthene
  - Fluoranthene
  - Fluorene
  - Indeno(1,2,3-cd)pyrene
  - Naphthalene
  - Phenanthrene
  - Pyrene

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: DSLBC002 (0-1.3) **Lab ID: 40219343001** Collected: 12/02/20 19:10 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**66.5**	mg/kg	5.1	1.3	1	12/09/20 09:20	12/10/20 07:32		
Surrogates									
o-Terphenyl (S)	51	%	25-101		1	12/09/20 09:20	12/10/20 07:32	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<45.0**	ug/kg	152	45.0	1	12/09/20 15:45	12/10/20 12:29	12674-11-2	
PCB-1221 (Aroclor 1221)	**<45.0**	ug/kg	152	45.0	1	12/09/20 15:45	12/10/20 12:29	11104-28-2	
PCB-1232 (Aroclor 1232)	**<45.0**	ug/kg	152	45.0	1	12/09/20 15:45	12/10/20 12:29	11141-16-5	
PCB-1242 (Aroclor 1242)	**<45.0**	ug/kg	152	45.0	1	12/09/20 15:45	12/10/20 12:29	53469-21-9	
PCB-1248 (Aroclor 1248)	**74.9J**	ug/kg	152	45.0	1	12/09/20 15:45	12/10/20 12:29	12672-29-6	
PCB-1254 (Aroclor 1254)	**272**	ug/kg	152	45.0	1	12/09/20 15:45	12/10/20 12:29	11097-69-1	
PCB-1260 (Aroclor 1260)	**55.9J**	ug/kg	152	45.0	1	12/09/20 15:45	12/10/20 12:29	11096-82-5	
PCB, Total	**403**	ug/kg	152	45.0	1	12/09/20 15:45	12/10/20 12:29	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	91	%	50-150		1	12/09/20 15:45	12/10/20 12:29	877-09-8	
Decachlorobiphenyl (S)	78	%	50-150		1	12/09/20 15:45	12/10/20 12:29	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**67.2**	%	0.10	0.10	1		12/09/20 17:17		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: DSLBC002 (1.3-2.4) **Lab ID: 40219343002** Collected: 12/02/20 19:36 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**11.3**	mg/kg	2.1	0.56	1	12/09/20 09:20	12/10/20 07:40		
Surrogates									
o-Terphenyl (S)	53	%	25-101		1	12/09/20 09:20	12/10/20 07:40	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<18.9**	ug/kg	63.8	18.9	1	12/09/20 15:45	12/10/20 13:13	12674-11-2	
PCB-1221 (Aroclor 1221)	**<18.9**	ug/kg	63.8	18.9	1	12/09/20 15:45	12/10/20 13:13	11104-28-2	
PCB-1232 (Aroclor 1232)	**<18.9**	ug/kg	63.8	18.9	1	12/09/20 15:45	12/10/20 13:13	11141-16-5	
PCB-1242 (Aroclor 1242)	**<18.9**	ug/kg	63.8	18.9	1	12/09/20 15:45	12/10/20 13:13	53469-21-9	
PCB-1248 (Aroclor 1248)	**<18.9**	ug/kg	63.8	18.9	1	12/09/20 15:45	12/10/20 13:13	12672-29-6	
PCB-1254 (Aroclor 1254)	**22.7J**	ug/kg	63.8	18.9	1	12/09/20 15:45	12/10/20 13:13	11097-69-1	
PCB-1260 (Aroclor 1260)	**<18.9**	ug/kg	63.8	18.9	1	12/09/20 15:45	12/10/20 13:13	11096-82-5	
PCB, Total	**22.7J**	ug/kg	63.8	18.9	1	12/09/20 15:45	12/10/20 13:13	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	91	%	50-150		1	12/09/20 15:45	12/10/20 13:13	877-09-8	
Decachlorobiphenyl (S)	86	%	50-150		1	12/09/20 15:45	12/10/20 13:13	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**21.6**	%	0.10	0.10	1		12/09/20 17:17		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: DUP-1 **Lab ID: 40219343003** Collected: 12/02/20 00:00 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**56.8**	mg/kg	5.3	1.4	1	12/09/20 09:20	12/10/20 07:48		
Surrogates									
o-Terphenyl (S)	56	%	25-101		1	12/09/20 09:20	12/10/20 07:48	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<46.3**	ug/kg	157	46.3	1	12/09/20 15:45	12/10/20 13:57	12674-11-2	
PCB-1221 (Aroclor 1221)	**<46.3**	ug/kg	157	46.3	1	12/09/20 15:45	12/10/20 13:57	11104-28-2	
PCB-1232 (Aroclor 1232)	**<46.3**	ug/kg	157	46.3	1	12/09/20 15:45	12/10/20 13:57	11141-16-5	
PCB-1242 (Aroclor 1242)	**<46.3**	ug/kg	157	46.3	1	12/09/20 15:45	12/10/20 13:57	53469-21-9	
PCB-1248 (Aroclor 1248)	**87.2J**	ug/kg	157	46.3	1	12/09/20 15:45	12/10/20 13:57	12672-29-6	
PCB-1254 (Aroclor 1254)	**235**	ug/kg	157	46.3	1	12/09/20 15:45	12/10/20 13:57	11097-69-1	
PCB-1260 (Aroclor 1260)	**<46.3**	ug/kg	157	46.3	1	12/09/20 15:45	12/10/20 13:57	11096-82-5	
PCB, Total	**323**	ug/kg	157	46.3	1	12/09/20 15:45	12/10/20 13:57	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	94	%	50-150		1	12/09/20 15:45	12/10/20 13:57	877-09-8	
Decachlorobiphenyl (S)	81	%	50-150		1	12/09/20 15:45	12/10/20 13:57	2051-24-3	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**68.2**	%	0.10	0.10	1		12/09/20 17:17		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: DSLBG002 (0.0-0.5) **Lab ID: 40219343004** Collected: 12/02/20 09:55 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**20.7**	mg/kg	3.9	1.0	1	12/09/20 09:20	12/10/20 07:56		
Surrogates									
o-Terphenyl (S)	40	%	25-101		1	12/09/20 09:20	12/10/20 07:56	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<34.7**	ug/kg	118	34.7	1	12/09/20 15:45	12/10/20 15:04	12674-11-2	
PCB-1221 (Aroclor 1221)	**<34.7**	ug/kg	118	34.7	1	12/09/20 15:45	12/10/20 15:04	11104-28-2	
PCB-1232 (Aroclor 1232)	**<34.7**	ug/kg	118	34.7	1	12/09/20 15:45	12/10/20 15:04	11141-16-5	
PCB-1242 (Aroclor 1242)	**<34.7**	ug/kg	118	34.7	1	12/09/20 15:45	12/10/20 15:04	53469-21-9	
PCB-1248 (Aroclor 1248)	**38.0J**	ug/kg	118	34.7	1	12/09/20 15:45	12/10/20 15:04	12672-29-6	
PCB-1254 (Aroclor 1254)	**150**	ug/kg	118	34.7	1	12/09/20 15:45	12/10/20 15:04	11097-69-1	
PCB-1260 (Aroclor 1260)	**<34.7**	ug/kg	118	34.7	1	12/09/20 15:45	12/10/20 15:04	11096-82-5	
PCB, Total	**188**	ug/kg	118	34.7	1	12/09/20 15:45	12/10/20 15:04	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	100	%	50-150		1	12/09/20 15:45	12/10/20 15:04	877-09-8	
Decachlorobiphenyl (S)	86	%	50-150		1	12/09/20 15:45	12/10/20 15:04	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<5.7**	ug/kg	39.2	5.7	1	12/08/20 08:36	12/08/20 17:48	90-12-0	
2-Methylnaphthalene	**<5.7**	ug/kg	39.2	5.7	1	12/08/20 08:36	12/08/20 17:48	91-57-6	
Acenaphthene	**<5.1**	ug/kg	39.2	5.1	1	12/08/20 08:36	12/08/20 17:48	83-32-9	
Acenaphthylene	**31.1J**	ug/kg	39.2	4.9	1	12/08/20 08:36	12/08/20 17:48	208-96-8	
Anthracene	**22.0J**	ug/kg	39.2	4.9	1	12/08/20 08:36	12/08/20 17:48	120-12-7	
Benzo(a)anthracene	**139**	ug/kg	39.2	5.1	1	12/08/20 08:36	12/08/20 17:48	56-55-3	
Benzo(a)pyrene	**185**	ug/kg	39.2	4.5	1	12/08/20 08:36	12/08/20 17:48	50-32-8	
Benzo(b)fluoranthene	**193**	ug/kg	39.2	5.4	1	12/08/20 08:36	12/08/20 17:48	205-99-2	
Benzo(g,h,i)perylene	**117**	ug/kg	39.2	6.9	1	12/08/20 08:36	12/08/20 17:48	191-24-2	
Benzo(k)fluoranthene	**91.4**	ug/kg	39.2	5.0	1	12/08/20 08:36	12/08/20 17:48	207-08-9	
Chrysene	**160**	ug/kg	39.2	7.4	1	12/08/20 08:36	12/08/20 17:48	218-01-9	
Dibenz(a,h)anthracene	**31.8J**	ug/kg	39.2	5.4	1	12/08/20 08:36	12/08/20 17:48	53-70-3	
Fluoranthene	**180**	ug/kg	39.2	4.6	1	12/08/20 08:36	12/08/20 17:48	206-44-0	
Fluorene	**5.4J**	ug/kg	39.2	4.7	1	12/08/20 08:36	12/08/20 17:48	86-73-7	
Indeno(1,2,3-cd)pyrene	**98.8**	ug/kg	39.2	8.2	1	12/08/20 08:36	12/08/20 17:48	193-39-5	
Naphthalene	**5.4J**	ug/kg	39.2	3.8	1	12/08/20 08:36	12/08/20 17:48	91-20-3	
Phenanthrene	**44.8**	ug/kg	39.2	4.5	1	12/08/20 08:36	12/08/20 17:48	85-01-8	
Pyrene	**165**	ug/kg	39.2	5.8	1	12/08/20 08:36	12/08/20 17:48	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	38	%	17-100		1	12/08/20 08:36	12/08/20 17:48	321-60-8	
Terphenyl-d14 (S)	50	%	17-98		1	12/08/20 08:36	12/08/20 17:48	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: DSLBG002 (0.0-0.5) **Lab ID: 40219343004** Collected: 12/02/20 09:55 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**57.4**	%	0.10	0.10	1		12/09/20 17:17		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: DSLBG003 (0.0-0.5) **Lab ID: 40219343005** Collected: 12/02/20 15:00 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**35.4**	mg/kg	5.3	1.4	1	12/09/20 09:20	12/10/20 08:04		
Surrogates									
o-Terphenyl (S)	30	%	25-101		1	12/09/20 09:20	12/10/20 08:04	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<46.8**	ug/kg	158	46.8	1	12/09/20 15:45	12/10/20 15:47	12674-11-2	
PCB-1221 (Aroclor 1221)	**<46.8**	ug/kg	158	46.8	1	12/09/20 15:45	12/10/20 15:47	11104-28-2	
PCB-1232 (Aroclor 1232)	**<46.8**	ug/kg	158	46.8	1	12/09/20 15:45	12/10/20 15:47	11141-16-5	
PCB-1242 (Aroclor 1242)	**<46.8**	ug/kg	158	46.8	1	12/09/20 15:45	12/10/20 15:47	53469-21-9	
PCB-1248 (Aroclor 1248)	**49.8J**	ug/kg	158	46.8	1	12/09/20 15:45	12/10/20 15:47	12672-29-6	
PCB-1254 (Aroclor 1254)	**187**	ug/kg	158	46.8	1	12/09/20 15:45	12/10/20 15:47	11097-69-1	
PCB-1260 (Aroclor 1260)	**<46.8**	ug/kg	158	46.8	1	12/09/20 15:45	12/10/20 15:47	11096-82-5	
PCB, Total	**237**	ug/kg	158	46.8	1	12/09/20 15:45	12/10/20 15:47	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	87	%	50-150		1	12/09/20 15:45	12/10/20 15:47	877-09-8	
Decachlorobiphenyl (S)	77	%	50-150		1	12/09/20 15:45	12/10/20 15:47	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<7.7**	ug/kg	52.9	7.7	1	12/08/20 08:36	12/08/20 18:06	90-12-0	
2-Methylnaphthalene	**<7.7**	ug/kg	52.9	7.7	1	12/08/20 08:36	12/08/20 18:06	91-57-6	
Acenaphthene	**<6.9**	ug/kg	52.9	6.9	1	12/08/20 08:36	12/08/20 18:06	83-32-9	
Acenaphthylene	**38.8J**	ug/kg	52.9	6.7	1	12/08/20 08:36	12/08/20 18:06	208-96-8	
Anthracene	**33.0J**	ug/kg	52.9	6.6	1	12/08/20 08:36	12/08/20 18:06	120-12-7	
Benzo(a)anthracene	**162**	ug/kg	52.9	6.8	1	12/08/20 08:36	12/08/20 18:06	56-55-3	
Benzo(a)pyrene	**217**	ug/kg	52.9	6.0	1	12/08/20 08:36	12/08/20 18:06	50-32-8	
Benzo(b)fluoranthene	**242**	ug/kg	52.9	7.3	1	12/08/20 08:36	12/08/20 18:06	205-99-2	
Benzo(g,h,i)perylene	**144**	ug/kg	52.9	9.3	1	12/08/20 08:36	12/08/20 18:06	191-24-2	
Benzo(k)fluoranthene	**97.7**	ug/kg	52.9	6.8	1	12/08/20 08:36	12/08/20 18:06	207-08-9	
Chrysene	**194**	ug/kg	52.9	10	1	12/08/20 08:36	12/08/20 18:06	218-01-9	
Dibenz(a,h)anthracene	**35.8J**	ug/kg	52.9	7.3	1	12/08/20 08:36	12/08/20 18:06	53-70-3	
Fluoranthene	**242**	ug/kg	52.9	6.3	1	12/08/20 08:36	12/08/20 18:06	206-44-0	
Fluorene	**8.3J**	ug/kg	52.9	6.3	1	12/08/20 08:36	12/08/20 18:06	86-73-7	
Indeno(1,2,3-cd)pyrene	**115**	ug/kg	52.9	11.0	1	12/08/20 08:36	12/08/20 18:06	193-39-5	
Naphthalene	**12.2J**	ug/kg	52.9	5.2	1	12/08/20 08:36	12/08/20 18:06	91-20-3	
Phenanthrene	**69.5**	ug/kg	52.9	6.1	1	12/08/20 08:36	12/08/20 18:06	85-01-8	
Pyrene	**247**	ug/kg	52.9	7.8	1	12/08/20 08:36	12/08/20 18:06	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	51	%	17-100		1	12/08/20 08:36	12/08/20 18:06	321-60-8	
Terphenyl-d14 (S)	60	%	17-98		1	12/08/20 08:36	12/08/20 18:06	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: DSLBG003 (0.0-0.5) **Lab ID: 40219343005** Collected: 12/02/20 15:00 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**68.4**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: WCDMACS001 **Lab ID: 40219343006** Collected: 12/02/20 11:30 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<40.0**	ug/kg	135	40.0	1	12/09/20 15:45	12/10/20 16:33	12674-11-2	
PCB-1221 (Aroclor 1221)	**<40.0**	ug/kg	135	40.0	1	12/09/20 15:45	12/10/20 16:33	11104-28-2	
PCB-1232 (Aroclor 1232)	**<40.0**	ug/kg	135	40.0	1	12/09/20 15:45	12/10/20 16:33	11141-16-5	
PCB-1242 (Aroclor 1242)	**<40.0**	ug/kg	135	40.0	1	12/09/20 15:45	12/10/20 16:33	53469-21-9	
PCB-1248 (Aroclor 1248)	**61.6J**	ug/kg	135	40.0	1	12/09/20 15:45	12/10/20 16:33	12672-29-6	C2
PCB-1254 (Aroclor 1254)	**260**	ug/kg	135	40.0	1	12/09/20 15:45	12/10/20 16:33	11097-69-1	
PCB-1260 (Aroclor 1260)	**50.8J**	ug/kg	135	40.0	1	12/09/20 15:45	12/10/20 16:33	11096-82-5	
PCB, Total	**373**	ug/kg	135	40.0	1	12/09/20 15:45	12/10/20 16:33	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	98	%	50-150		1	12/09/20 15:45	12/10/20 16:33	877-09-8	
Decachlorobiphenyl (S)	86	%	50-150		1	12/09/20 15:45	12/10/20 16:33	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
	Pace Analytical Services - Green Bay								
Arsenic	**20.8**	mg/kg	6.4	3.7	1	12/09/20 06:23	12/09/20 20:40	7440-38-2	
Barium	**191**	mg/kg	1.3	0.38	1	12/09/20 06:23	12/09/20 20:40	7440-39-3	
Cadmium	**2.3**	mg/kg	1.3	0.34	1	12/09/20 06:23	12/09/20 20:40	7440-43-9	
Chromium	**115**	mg/kg	2.6	0.71	1	12/09/20 06:23	12/09/20 20:40	7440-47-3	
Copper	**51.5**	mg/kg	2.6	0.71	1	12/09/20 06:23	12/09/20 20:40	7440-50-8	
Lead	**69.3**	mg/kg	5.1	1.5	1	12/09/20 06:23	12/09/20 20:40	7439-92-1	
Selenium	**<3.3**	mg/kg	10.2	3.3	1	12/09/20 06:23	12/09/20 20:40	7782-49-2	
Silver	**<0.78**	mg/kg	2.6	0.78	1	12/09/20 06:23	12/09/20 20:40	7440-22-4	
Zinc	**312**	mg/kg	10.2	3.1	1	12/09/20 06:23	12/09/20 20:40	7440-66-6	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
	Pace Analytical Services - Green Bay								
Mercury	**0.32**	mg/kg	0.094	0.027	1	12/15/20 09:30	12/16/20 08:33	7439-97-6	
Percent Moisture	Analytical Method: ASTM D2974-87								
	Pace Analytical Services - Green Bay								
Percent Moisture	**63.1**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: DUP-2 **Lab ID: 40219343007** Collected: 12/02/20 00:00 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**33.5**	mg/kg	4.1	1.1	1	12/09/20 09:20	12/10/20 08:12		
Surrogates									
o-Terphenyl (S)	36	%	25-101		1	12/09/20 09:20	12/10/20 08:12	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<36.5**	ug/kg	123	36.5	1	12/09/20 15:45	12/10/20 17:16	12674-11-2	
PCB-1221 (Aroclor 1221)	**<36.5**	ug/kg	123	36.5	1	12/09/20 15:45	12/10/20 17:16	11104-28-2	
PCB-1232 (Aroclor 1232)	**<36.5**	ug/kg	123	36.5	1	12/09/20 15:45	12/10/20 17:16	11141-16-5	
PCB-1242 (Aroclor 1242)	**<36.5**	ug/kg	123	36.5	1	12/09/20 15:45	12/10/20 17:16	53469-21-9	
PCB-1248 (Aroclor 1248)	**37.3J**	ug/kg	123	36.5	1	12/09/20 15:45	12/10/20 17:16	12672-29-6	
PCB-1254 (Aroclor 1254)	**142**	ug/kg	123	36.5	1	12/09/20 15:45	12/10/20 17:16	11097-69-1	
PCB-1260 (Aroclor 1260)	**<36.5**	ug/kg	123	36.5	1	12/09/20 15:45	12/10/20 17:16	11096-82-5	
PCB, Total	**179**	ug/kg	123	36.5	1	12/09/20 15:45	12/10/20 17:16	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	86	%	50-150		1	12/09/20 15:45	12/10/20 17:16	877-09-8	
Decachlorobiphenyl (S)	78	%	50-150		1	12/09/20 15:45	12/10/20 17:16	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**<6.0**	ug/kg	41.3	6.0	1	12/09/20 08:21	12/09/20 17:22	90-12-0	
2-Methylnaphthalene	**<6.0**	ug/kg	41.3	6.0	1	12/09/20 08:21	12/09/20 17:22	91-57-6	
Acenaphthene	**<5.4**	ug/kg	41.3	5.4	1	12/09/20 08:21	12/09/20 17:22	83-32-9	
Acenaphthylene	**12.6J**	ug/kg	41.3	5.2	1	12/09/20 08:21	12/09/20 17:22	208-96-8	
Anthracene	**14.5J**	ug/kg	41.3	5.1	1	12/09/20 08:21	12/09/20 17:22	120-12-7	
Benzo(a)anthracene	**75.4**	ug/kg	41.3	5.3	1	12/09/20 08:21	12/09/20 17:22	56-55-3	
Benzo(a)pyrene	**89.7**	ug/kg	41.3	4.7	1	12/09/20 08:21	12/09/20 17:22	50-32-8	
Benzo(b)fluoranthene	**105**	ug/kg	41.3	5.7	1	12/09/20 08:21	12/09/20 17:22	205-99-2	
Benzo(g,h,i)perylene	**60.8**	ug/kg	41.3	7.2	1	12/09/20 08:21	12/09/20 17:22	191-24-2	
Benzo(k)fluoranthene	**45.9**	ug/kg	41.3	5.3	1	12/09/20 08:21	12/09/20 17:22	207-08-9	
Chrysene	**84.4**	ug/kg	41.3	7.8	1	12/09/20 08:21	12/09/20 17:22	218-01-9	
Dibenz(a,h)anthracene	**15.4J**	ug/kg	41.3	5.7	1	12/09/20 08:21	12/09/20 17:22	53-70-3	
Fluoranthene	**119**	ug/kg	41.3	4.9	1	12/09/20 08:21	12/09/20 17:22	206-44-0	
Fluorene	**<5.0**	ug/kg	41.3	5.0	1	12/09/20 08:21	12/09/20 17:22	86-73-7	
Indeno(1,2,3-cd)pyrene	**49.2**	ug/kg	41.3	8.6	1	12/09/20 08:21	12/09/20 17:22	193-39-5	
Naphthalene	**5.5J**	ug/kg	41.3	4.0	1	12/09/20 08:21	12/09/20 17:22	91-20-3	
Phenanthrene	**40.3J**	ug/kg	41.3	4.7	1	12/09/20 08:21	12/09/20 17:22	85-01-8	
Pyrene	**103**	ug/kg	41.3	6.1	1	12/09/20 08:21	12/09/20 17:22	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	61	%	17-100		1	12/09/20 08:21	12/09/20 17:22	321-60-8	
Terphenyl-d14 (S)	64	%	17-98		1	12/09/20 08:21	12/09/20 17:22	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: DUP-2 **Lab ID: 40219343007** Collected: 12/02/20 00:00 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**59.6**	%	0.10	0.10	1		12/09/20 17:18		

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: DSRBG001 (0.0-0.5) **Lab ID: 40219343008** Collected: 12/02/20 11:40 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015D Modified Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
TPH - Diesel (C10-C28)	**31.6**	mg/kg	6.0	1.6	1	12/09/20 09:20	12/10/20 07:24		
Surrogates									
o-Terphenyl (S)	37	%	25-101		1	12/09/20 09:20	12/10/20 07:24	84-15-1	
8082A KZOO PCB	Analytical Method: EPA 8082A Preparation Method: EPA 3541								
	Pace Analytical Services - Green Bay								
PCB-1016 (Aroclor 1016)	**<53.5**	ug/kg	181	53.5	1	12/09/20 15:45	12/10/20 18:00	12674-11-2	
PCB-1221 (Aroclor 1221)	**<53.5**	ug/kg	181	53.5	1	12/09/20 15:45	12/10/20 18:00	11104-28-2	
PCB-1232 (Aroclor 1232)	**<53.5**	ug/kg	181	53.5	1	12/09/20 15:45	12/10/20 18:00	11141-16-5	
PCB-1242 (Aroclor 1242)	**<53.5**	ug/kg	181	53.5	1	12/09/20 15:45	12/10/20 18:00	53469-21-9	
PCB-1248 (Aroclor 1248)	**<53.5**	ug/kg	181	53.5	1	12/09/20 15:45	12/10/20 18:00	12672-29-6	
PCB-1254 (Aroclor 1254)	**193**	ug/kg	181	53.5	1	12/09/20 15:45	12/10/20 18:00	11097-69-1	
PCB-1260 (Aroclor 1260)	**<53.5**	ug/kg	181	53.5	1	12/09/20 15:45	12/10/20 18:00	11096-82-5	
PCB, Total	**193**	ug/kg	181	53.5	1	12/09/20 15:45	12/10/20 18:00	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	87	%	50-150		1	12/09/20 15:45	12/10/20 18:00	877-09-8	
Decachlorobiphenyl (S)	82	%	50-150		1	12/09/20 15:45	12/10/20 18:00	2051-24-3	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546								
	Pace Analytical Services - Green Bay								
1-Methylnaphthalene	**10.5J**	ug/kg	60.3	8.8	1	12/09/20 08:21	12/09/20 15:37	90-12-0	M1
2-Methylnaphthalene	**22.4J**	ug/kg	60.3	8.8	1	12/09/20 08:21	12/09/20 15:37	91-57-6	M1
Acenaphthene	**<7.8**	ug/kg	60.3	7.8	1	12/09/20 08:21	12/09/20 15:37	83-32-9	M1
Acenaphthylene	**23.1J**	ug/kg	60.3	7.6	1	12/09/20 08:21	12/09/20 15:37	208-96-8	M1
Anthracene	**25.9J**	ug/kg	60.3	7.5	1	12/09/20 08:21	12/09/20 15:37	120-12-7	M1
Benzo(a)anthracene	**132**	ug/kg	60.3	7.8	1	12/09/20 08:21	12/09/20 15:37	56-55-3	
Benzo(a)pyrene	**173**	ug/kg	60.3	6.8	1	12/09/20 08:21	12/09/20 15:37	50-32-8	M1
Benzo(b)fluoranthene	**209**	ug/kg	60.3	8.4	1	12/09/20 08:21	12/09/20 15:37	205-99-2	M1
Benzo(g,h,i)perylene	**129**	ug/kg	60.3	10.6	1	12/09/20 08:21	12/09/20 15:37	191-24-2	M1
Benzo(k)fluoranthene	**93.9**	ug/kg	60.3	7.7	1	12/09/20 08:21	12/09/20 15:37	207-08-9	M1
Chrysene	**163**	ug/kg	60.3	11.4	1	12/09/20 08:21	12/09/20 15:37	218-01-9	
Dibenz(a,h)anthracene	**32.5J**	ug/kg	60.3	8.3	1	12/09/20 08:21	12/09/20 15:37	53-70-3	M1
Fluoranthene	**238**	ug/kg	60.3	7.1	1	12/09/20 08:21	12/09/20 15:37	206-44-0	M1
Fluorene	**8.5J**	ug/kg	60.3	7.2	1	12/09/20 08:21	12/09/20 15:37	86-73-7	M1
Indeno(1,2,3-cd)pyrene	**103**	ug/kg	60.3	12.6	1	12/09/20 08:21	12/09/20 15:37	193-39-5	M1
Naphthalene	**33.0J**	ug/kg	60.3	5.9	1	12/09/20 08:21	12/09/20 15:37	91-20-3	M1
Phenanthrene	**76.9**	ug/kg	60.3	6.9	1	12/09/20 08:21	12/09/20 15:37	85-01-8	M1
Pyrene	**232**	ug/kg	60.3	8.9	1	12/09/20 08:21	12/09/20 15:37	129-00-0	M1
Surrogates									
2-Fluorobiphenyl (S)	63	%	17-100		1	12/09/20 08:21	12/09/20 15:37	321-60-8	
Terphenyl-d14 (S)	70	%	17-98		1	12/09/20 08:21	12/09/20 15:37	1718-51-0	

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ANALYTICAL RESULTS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Sample: DSRBG001 (0.0-0.5) **Lab ID: 40219343008** Collected: 12/02/20 11:40 Received: 12/04/20 09:20 Matrix: Solid

Results reported on a "dry weight" basis and are adjusted for percent moisture, sample size and any dilutions.

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Percent Moisture	Analytical Method: ASTM D2974-87 Pace Analytical Services - Green Bay								
Percent Moisture	**72.3**	%	0.10	0.10	1		12/09/20 17:18		

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

QC Batch: 373778
QC Batch Method: EPA 7471
Analysis Method: EPA 7471
Analysis Description: 7471 Mercury
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219343006

METHOD BLANK: 2160187 Matrix: Solid
Associated Lab Samples: 40219343006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	<0.010	0.035	0.010	12/16/20 07:51	

LABORATORY CONTROL SAMPLE: 2160188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.83	0.87	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2160189 2160190

Parameter	Units	40219772001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	<0.011	0.9	0.9	0.90	0.91	101	101	85-115	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

QC Batch: 373216
QC Batch Method: EPA 3050
Analysis Method: EPA 6010
Analysis Description: 6010 MET
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219343006

METHOD BLANK: 2157001
Matrix: Solid
Associated Lab Samples: 40219343006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/kg	<1.5	2.5	1.5	12/09/20 20:21	
Barium	mg/kg	<0.15	0.50	0.15	12/09/20 20:21	
Cadmium	mg/kg	<0.13	0.50	0.13	12/09/20 20:21	
Chromium	mg/kg	<0.28	1.0	0.28	12/09/20 20:21	
Copper	mg/kg	<0.28	1.0	0.28	12/09/20 20:21	
Lead	mg/kg	<0.60	2.0	0.60	12/09/20 20:21	
Selenium	mg/kg	<1.3	4.0	1.3	12/09/20 20:21	
Silver	mg/kg	<0.31	1.0	0.31	12/09/20 20:21	
Zinc	mg/kg	<1.2	4.0	1.2	12/09/20 20:21	

LABORATORY CONTROL SAMPLE: 2157002

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	53.2	106	80-120	
Barium	mg/kg	50	51.6	103	80-120	
Cadmium	mg/kg	50	52.8	106	80-120	
Chromium	mg/kg	50	49.1	98	80-120	
Copper	mg/kg	50	49.3	99	80-120	
Lead	mg/kg	50	52.7	105	80-120	
Selenium	mg/kg	50	52.8	106	80-120	
Silver	mg/kg	25	24.7	99	80-120	
Zinc	mg/kg	50	53.8	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2157003 2157004

Parameter	Units	40219314001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	2.5J	50.2	50.3	54.0	55.2	103	105	75-125	2	20	
Barium	mg/kg	8.0	50.2	50.3	57.8	59.4	99	102	75-125	3	20	
Cadmium	mg/kg	0.15J	50.2	50.3	53.7	53.0	107	105	75-125	1	20	
Chromium	mg/kg	4.8	50.2	50.3	51.9	55.1	94	100	75-125	6	20	
Copper	mg/kg	5.7	50.2	50.3	56.2	57.6	101	103	75-125	3	20	
Lead	mg/kg	1.8J	50.2	50.3	49.8	49.9	96	96	75-125	0	20	
Selenium	mg/kg	<1.3	50.2	50.3	52.1	50.7	104	101	75-125	3	20	
Silver	mg/kg	<0.31	25.1	25.2	27.0	26.9	108	107	75-125	0	20	
Zinc	mg/kg	10.9	50.2	50.3	55.2	58.6	88	95	75-125	6	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

QC Batch: 373317
QC Batch Method: EPA 3546
Analysis Method: EPA 8015D Modified
Analysis Description: 8015 Solid GCSV
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219343001, 40219343002, 40219343003, 40219343004, 40219343005, 40219343007, 40219343008

METHOD BLANK: 2157488 Matrix: Solid
Associated Lab Samples: 40219343001, 40219343002, 40219343003, 40219343004, 40219343005, 40219343007, 40219343008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
TPH - Diesel (C10-C28)	mg/kg	0.66J	1.7	0.44	12/10/20 06:52	
o-Terphenyl (S)	%	71	25-101		12/10/20 06:52	

LABORATORY CONTROL SAMPLE: 2157489

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
TPH - Diesel (C10-C28)	mg/kg	16.7	15.1	91	60-120	
o-Terphenyl (S)	%			91	25-101	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2157490 2157491

Parameter	Units	40219343008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
TPH - Diesel (C10-C28)	mg/kg	31.6	60.3	60.3	49.9	54.2	30	38	10-200	8	46	
o-Terphenyl (S)	%						44	59	25-101			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

QC Batch: 373369 | Analysis Method: EPA 8082A
QC Batch Method: EPA 3541 | Analysis Description: 8082A KZOO PCB
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219343001, 40219343002, 40219343003, 40219343004, 40219343005, 40219343006, 40219343007, 40219343008

METHOD BLANK: 2157787 | Matrix: Solid
Associated Lab Samples: 40219343001, 40219343002, 40219343003, 40219343004, 40219343005, 40219343006, 40219343007, 40219343008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1221 (Aroclor 1221)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1232 (Aroclor 1232)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1242 (Aroclor 1242)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1248 (Aroclor 1248)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1254 (Aroclor 1254)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
PCB-1260 (Aroclor 1260)	ug/kg	<14.8	50.0	14.8	12/10/20 11:02	
Decachlorobiphenyl (S)	%	92	50-150		12/10/20 11:02	
Tetrachloro-m-xylene (S)	%	88	50-150		12/10/20 11:02	

LABORATORY CONTROL SAMPLE: 2157788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	500	415	83	50-150	
PCB-1221 (Aroclor 1221)	ug/kg		<14.8			
PCB-1232 (Aroclor 1232)	ug/kg		<14.8			
PCB-1242 (Aroclor 1242)	ug/kg		<14.8			
PCB-1248 (Aroclor 1248)	ug/kg		<14.8			
PCB-1254 (Aroclor 1254)	ug/kg		<14.8			
PCB-1260 (Aroclor 1260)	ug/kg	500	463	93	50-150	
Decachlorobiphenyl (S)	%			94	50-150	
Tetrachloro-m-xylene (S)	%			89	50-150	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2157789 2157790

Parameter	Units	40219343008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<53.5	1800	1810	1440	1410	80	78	50-150	2	20	
PCB-1221 (Aroclor 1221)	ug/kg	<53.5			<53.3	<53.3					20	
PCB-1232 (Aroclor 1232)	ug/kg	<53.5			<53.3	<53.3					20	
PCB-1242 (Aroclor 1242)	ug/kg	<53.5			<53.3	<53.3					20	
PCB-1248 (Aroclor 1248)	ug/kg	<53.5			<53.3	<53.3					20	
PCB-1254 (Aroclor 1254)	ug/kg	193			<53.3	<53.3					20	
PCB-1260 (Aroclor 1260)	ug/kg	<53.5	1800	1810	1490	1480	83	82	50-150	1	20	
Decachlorobiphenyl (S)	%						80	80	50-150			
Tetrachloro-m-xylene (S)	%						89	89	50-150			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2157791 2157792

Parameter	Units	40219480004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<57.6	1940	1950	1420	1500	73	77	50-150	6	20	
PCB-1221 (Aroclor 1221)	ug/kg	<57.6			<57.5	<57.6					20	
PCB-1232 (Aroclor 1232)	ug/kg	<57.6			<57.5	<57.6					20	
PCB-1242 (Aroclor 1242)	ug/kg	<57.6			<57.5	<57.6					20	
PCB-1248 (Aroclor 1248)	ug/kg	104J			<57.5	<57.6					20	
PCB-1254 (Aroclor 1254)	ug/kg	397			466	495				6	20	
PCB-1260 (Aroclor 1260)	ug/kg	95.7J	1940	1950	1550	1650	75	80	50-150	6	20	
Decachlorobiphenyl (S)	%						78	83	50-150			
Tetrachloro-m-xylene (S)	%						86	91	50-150			

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

QC Batch: 373166
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219343004, 40219343005

METHOD BLANK: 2156926
Matrix: Solid
Associated Lab Samples: 40219343004, 40219343005

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	2.4	12/08/20 11:46	
2-Methylnaphthalene	ug/kg	<2.4	16.7	2.4	12/08/20 11:46	
Acenaphthene	ug/kg	<2.2	16.7	2.2	12/08/20 11:46	
Acenaphthylene	ug/kg	<2.1	16.7	2.1	12/08/20 11:46	
Anthracene	ug/kg	<2.1	16.7	2.1	12/08/20 11:46	
Benzo(a)anthracene	ug/kg	<2.2	16.7	2.2	12/08/20 11:46	
Benzo(a)pyrene	ug/kg	<1.9	16.7	1.9	12/08/20 11:46	
Benzo(b)fluoranthene	ug/kg	<2.3	16.7	2.3	12/08/20 11:46	
Benzo(g,h,i)perylene	ug/kg	<2.9	16.7	2.9	12/08/20 11:46	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	2.1	12/08/20 11:46	
Chrysene	ug/kg	<3.1	16.7	3.1	12/08/20 11:46	
Dibenz(a,h)anthracene	ug/kg	<2.3	16.7	2.3	12/08/20 11:46	
Fluoranthene	ug/kg	<2.0	16.7	2.0	12/08/20 11:46	
Fluorene	ug/kg	<2.0	16.7	2.0	12/08/20 11:46	
Indeno(1,2,3-cd)pyrene	ug/kg	<3.5	16.7	3.5	12/08/20 11:46	
Naphthalene	ug/kg	<1.6	16.7	1.6	12/08/20 11:46	
Phenanthrene	ug/kg	<1.9	16.7	1.9	12/08/20 11:46	
Pyrene	ug/kg	<2.5	16.7	2.5	12/08/20 11:46	
2-Fluorobiphenyl (S)	%	69	17-100		12/08/20 11:46	
Terphenyl-d14 (S)	%	90	17-98		12/08/20 11:46	

LABORATORY CONTROL SAMPLE: 2156927

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	221	66	58-101	
2-Methylnaphthalene	ug/kg	333	213	64	59-101	
Acenaphthene	ug/kg	333	252	76	62-97	
Acenaphthylene	ug/kg	333	247	74	67-102	
Anthracene	ug/kg	333	287	86	69-120	
Benzo(a)anthracene	ug/kg	333	263	79	59-101	
Benzo(a)pyrene	ug/kg	333	302	91	70-110	
Benzo(b)fluoranthene	ug/kg	333	276	83	66-111	
Benzo(g,h,i)perylene	ug/kg	333	284	85	64-106	
Benzo(k)fluoranthene	ug/kg	333	303	91	65-108	
Chrysene	ug/kg	333	289	87	61-102	
Dibenz(a,h)anthracene	ug/kg	333	279	84	64-120	
Fluoranthene	ug/kg	333	286	86	69-120	
Fluorene	ug/kg	333	247	74	70-99	
Indeno(1,2,3-cd)pyrene	ug/kg	333	281	84	66-120	

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

LABORATORY CONTROL SAMPLE: 2156927

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	333	227	68	60-95	
Phenanthrene	ug/kg	333	264	79	66-98	
Pyrene	ug/kg	333	268	81	63-120	
2-Fluorobiphenyl (S)	%			72	17-100	
Terphenyl-d14 (S)	%			87	17-98	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2156928 2156929

Parameter	Units	40219228004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	<2.9	396	396	273	257	69	65	48-101	6	25	
2-Methylnaphthalene	ug/kg	<2.9	396	396	268	254	68	64	46-101	5	21	
Acenaphthene	ug/kg	<2.6	396	396	298	284	75	72	52-97	5	20	
Acenaphthylene	ug/kg	<2.5	396	396	303	294	76	74	51-102	3	20	
Anthracene	ug/kg	<2.5	396	396	319	313	80	79	54-120	2	20	
Benzo(a)anthracene	ug/kg	2.6J	396	396	290	277	73	69	34-101	5	22	
Benzo(a)pyrene	ug/kg	<2.3	396	396	344	331	86	83	46-110	4	25	
Benzo(b)fluoranthene	ug/kg	<2.8	396	396	310	285	78	71	40-111	9	23	
Benzo(g,h,i)perylene	ug/kg	<3.5	396	396	324	281	81	71	40-120	14	24	
Benzo(k)fluoranthene	ug/kg	<2.5	396	396	342	324	86	82	47-108	5	24	
Chrysene	ug/kg	<3.7	396	396	322	314	81	79	35-115	3	20	
Dibenz(a,h)anthracene	ug/kg	<2.7	396	396	335	289	84	73	46-120	15	21	
Fluoranthene	ug/kg	2.7J	396	396	317	308	79	77	52-120	3	23	
Fluorene	ug/kg	<2.4	396	396	299	289	75	73	54-99	3	20	
Indeno(1,2,3-cd)pyrene	ug/kg	<4.1	396	396	335	291	84	73	46-120	14	22	
Naphthalene	ug/kg	<1.9	396	396	295	280	74	70	46-95	5	23	
Phenanthrene	ug/kg	<2.3	396	396	294	285	74	72	51-98	3	20	
Pyrene	ug/kg	<2.9	396	396	279	300	70	75	46-120	7	24	
2-Fluorobiphenyl (S)	%						72	66	17-100			
Terphenyl-d14 (S)	%						73	79	17-98			

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1241 Bellevue Street - Suite 9
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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

QC Batch: 373313
QC Batch Method: EPA 3546
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270/3546 MSSV PAH by SIM
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219343007, 40219343008

METHOD BLANK: 2157482
Matrix: Solid
Associated Lab Samples: 40219343007, 40219343008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<2.4	16.7	2.4	12/09/20 11:18	
2-Methylnaphthalene	ug/kg	<2.4	16.7	2.4	12/09/20 11:18	
Acenaphthene	ug/kg	<2.2	16.7	2.2	12/09/20 11:18	
Acenaphthylene	ug/kg	<2.1	16.7	2.1	12/09/20 11:18	
Anthracene	ug/kg	<2.1	16.7	2.1	12/09/20 11:18	
Benzo(a)anthracene	ug/kg	<2.2	16.7	2.2	12/09/20 11:18	
Benzo(a)pyrene	ug/kg	<1.9	16.7	1.9	12/09/20 11:18	
Benzo(b)fluoranthene	ug/kg	<2.3	16.7	2.3	12/09/20 11:18	
Benzo(g,h,i)perylene	ug/kg	<2.9	16.7	2.9	12/09/20 11:18	
Benzo(k)fluoranthene	ug/kg	<2.1	16.7	2.1	12/09/20 11:18	
Chrysene	ug/kg	<3.1	16.7	3.1	12/09/20 11:18	
Dibenz(a,h)anthracene	ug/kg	<2.3	16.7	2.3	12/09/20 11:18	
Fluoranthene	ug/kg	<2.0	16.7	2.0	12/09/20 11:18	
Fluorene	ug/kg	<2.0	16.7	2.0	12/09/20 11:18	
Indeno(1,2,3-cd)pyrene	ug/kg	<3.5	16.7	3.5	12/09/20 11:18	
Naphthalene	ug/kg	<1.6	16.7	1.6	12/09/20 11:18	
Phenanthrene	ug/kg	<1.9	16.7	1.9	12/09/20 11:18	
Pyrene	ug/kg	<2.5	16.7	2.5	12/09/20 11:18	
2-Fluorobiphenyl (S)	%	75	17-100		12/09/20 11:18	
Terphenyl-d14 (S)	%	89	17-98		12/09/20 11:18	

LABORATORY CONTROL SAMPLE: 2157483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	216	65	58-101	
2-Methylnaphthalene	ug/kg	333	207	62	59-101	
Acenaphthene	ug/kg	333	240	72	62-97	
Acenaphthylene	ug/kg	333	239	72	67-102	
Anthracene	ug/kg	333	274	82	69-120	
Benzo(a)anthracene	ug/kg	333	250	75	59-101	
Benzo(a)pyrene	ug/kg	333	287	86	70-110	
Benzo(b)fluoranthene	ug/kg	333	258	77	66-111	
Benzo(g,h,i)perylene	ug/kg	333	270	81	64-106	
Benzo(k)fluoranthene	ug/kg	333	284	85	65-108	
Chrysene	ug/kg	333	274	82	61-102	
Dibenz(a,h)anthracene	ug/kg	333	282	85	64-120	
Fluoranthene	ug/kg	333	272	82	69-120	
Fluorene	ug/kg	333	248	74	70-99	
Indeno(1,2,3-cd)pyrene	ug/kg	333	286	86	66-120	

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

LABORATORY CONTROL SAMPLE: 2157483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/kg	333	218	65	60-95	
Phenanthrene	ug/kg	333	251	75	66-98	
Pyrene	ug/kg	333	256	77	63-120	
2-Fluorobiphenyl (S)	%			69	17-100	
Terphenyl-d14 (S)	%			80	17-98	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2157484 2157485

Parameter	Units	40219343008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1-Methylnaphthalene	ug/kg	10.5J	1200	1200	394	438	32	36	48-101	11	25	M1
2-Methylnaphthalene	ug/kg	22.4J	1200	1200	391	437	31	34	46-101	11	21	M1
Acenaphthene	ug/kg	<7.8	1200	1200	428	479	35	39	52-97	11	20	M1
Acenaphthylene	ug/kg	23.1J	1200	1200	449	485	35	38	51-102	8	20	M1
Anthracene	ug/kg	25.9J	1200	1200	499	540	39	43	54-120	8	20	M1
Benzo(a)anthracene	ug/kg	132	1200	1200	561	593	36	38	34-101	6	22	
Benzo(a)pyrene	ug/kg	173	1200	1200	610	652	36	40	46-110	7	25	M1
Benzo(b)fluoranthene	ug/kg	209	1200	1200	611	645	33	36	40-111	5	23	M1
Benzo(g,h,i)perylene	ug/kg	129	1200	1200	583	615	38	40	40-120	5	24	M1
Benzo(k)fluoranthene	ug/kg	93.9	1200	1200	602	601	42	42	47-108	0	24	M1
Chrysene	ug/kg	163	1200	1200	606	613	37	37	35-115	1	20	
Dibenz(a,h)anthracene	ug/kg	32.5J	1200	1200	565	585	44	46	46-120	4	21	M1
Fluoranthene	ug/kg	238	1200	1200	634	678	33	37	52-120	7	23	M1
Fluorene	ug/kg	8.5J	1200	1200	454	484	37	40	54-99	6	20	M1
Indeno(1,2,3-cd)pyrene	ug/kg	103	1200	1200	591	622	41	43	46-120	5	22	M1
Naphthalene	ug/kg	33.0J	1200	1200	430	471	33	36	46-95	9	23	M1
Phenanthrene	ug/kg	76.9	1200	1200	503	551	35	39	51-98	9	20	M1
Pyrene	ug/kg	232	1200	1200	543	618	26	32	46-120	13	24	M1
2-Fluorobiphenyl (S)	%						49	60	17-100			
Terphenyl-d14 (S)	%						52	65	17-98			

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QUALITY CONTROL DATA

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

QC Batch: 373398
QC Batch Method: ASTM D2974-87
Analysis Method: ASTM D2974-87
Analysis Description: Dry Weight/Percent Moisture
Laboratory: Pace Analytical Services - Green Bay
Associated Lab Samples: 40219343001, 40219343002, 40219343003, 40219343004, 40219343005, 40219343006, 40219343007, 40219343008

SAMPLE DUPLICATE: 2158027

Parameter	Units	40219343008 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	72.3	73.0	1	10	

SAMPLE DUPLICATE: 2158028

Parameter	Units	40219480004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	74.3	74.4	0	10	

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QUALIFIERS

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: 373362

[1] The default spike range of the standard used for QC evaluation is C10-C28. All other carbon ranges may recover outside of spike limits because they may not cover the range of the spike used.

ANALYTE QUALIFIERS

C2 Relative percent difference between results from each column was greater than 40%. The lower of the two results was reported.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 60644031.6.2 MORROW DAM LOGGIN
Pace Project No.: 40219343

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40219343001	**DSLBC002 (0-1.3)**	EPA 3546	373317	EPA 8015D Modified	373362
40219343002	**DSLBC002 (1.3-2.4)**	EPA 3546	373317	EPA 8015D Modified	373362
40219343003	**DUP-1**	EPA 3546	373317	EPA 8015D Modified	373362
40219343004	**DSLBG002 (0.0-0.5)**	EPA 3546	373317	EPA 8015D Modified	373362
40219343005	**DSLBG003 (0.0-0.5)**	EPA 3546	373317	EPA 8015D Modified	373362
40219343007	**DUP-2**	EPA 3546	373317	EPA 8015D Modified	373362
40219343008	**DSRBG001 (0.0-0.5)**	EPA 3546	373317	EPA 8015D Modified	373362
40219343001	**DSLBC002 (0-1.3)**	EPA 3541	373369	EPA 8082A	373388
40219343002	**DSLBC002 (1.3-2.4)**	EPA 3541	373369	EPA 8082A	373388
40219343003	**DUP-1**	EPA 3541	373369	EPA 8082A	373388
40219343004	**DSLBG002 (0.0-0.5)**	EPA 3541	373369	EPA 8082A	373388
40219343005	**DSLBG003 (0.0-0.5)**	EPA 3541	373369	EPA 8082A	373388
40219343006	**WCDMACS001**	EPA 3541	373369	EPA 8082A	373388
40219343007	**DUP-2**	EPA 3541	373369	EPA 8082A	373388
40219343008	**DSRBG001 (0.0-0.5)**	EPA 3541	373369	EPA 8082A	373388
40219343006	**WCDMACS001**	EPA 3050	373216	EPA 6010	373393
40219343006	**WCDMACS001**	EPA 7471	373778	EPA 7471	373839
40219343004	**DSLBG002 (0.0-0.5)**	EPA 3546	373166	EPA 8270 by SIM	373222
40219343005	**DSLBG003 (0.0-0.5)**	EPA 3546	373166	EPA 8270 by SIM	373222
40219343007	**DUP-2**	EPA 3546	373313	EPA 8270 by SIM	373346
40219343008	**DSRBG001 (0.0-0.5)**	EPA 3546	373313	EPA 8270 by SIM	373346
40219343001	**DSLBC002 (0-1.3)**	ASTM D2974-87	373398		
40219343002	**DSLBC002 (1.3-2.4)**	ASTM D2974-87	373398		
40219343003	**DUP-1**	ASTM D2974-87	373398		
40219343004	**DSLBG002 (0.0-0.5)**	ASTM D2974-87	373398		
40219343005	**DSLBG003 (0.0-0.5)**	ASTM D2974-87	373398		
40219343006	**WCDMACS001**	ASTM D2974-87	373398		
40219343007	**DUP-2**	ASTM D2974-87	373398		
40219343008	**DSRBG001 (0.0-0.5)**	ASTM D2974-87	373398		

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-in Number Here: 40219343

ALL SHADED AREAS are for LAB USE ONLY

Company: AECOM Technical Services, Inc.
Address: 27777 Franklin Road, Suite 2150 Southfield, MI 48034
Report To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)
Copy To: Alison Bitel (Alison.Bitel@aecom.com)

Billing Information: Submit invoices to USAPImaging@aecom.com
Email To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)
Site Collection Info/Address: Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080

Customer Project Name/Number: 60644031.6.2
State: MI / County/City: Comstock / Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: 248-204-4149
Email: Alison.Bitel@aecom.com
Site/Facility ID #: NA
Compliance Monitoring? [ ] Yes [x] No
Collected By (print): Jennifer Bush
Purchase Order # :
Quote #: 00084840
DW PWS ID #:
DW Location Code: NA
Collected By (signature):
Turnaround Date Required: 10-Day Standard.
Immediately Packed on Ice: [ ] Yes [ ] No
Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: ____ [ ] Hold:
Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)
Field Filtered (if applicable): [ ] Yes [X] No
Analysis: ND

Container Preservative Type **
Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other ____

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PCB (8082A)	TPH (8015M)	PCB (M1686)	MI Metals (6010D)	PAHs (8270 SIM)						Lab Sample #
DSLBC002(0-1.3)	SL	Comp	12-2-2020	1910				1	X	X									001
DSLBC002(1.3-2.4)	SL	Comp	12-2-2020	1936				1	X	X									002
Dup-1	SL	Comp	12-02-20	—				1	X	X									003
DSLBG002 (0.0-0.5)	SL	grab	12-2-2020	0955				2	X	X	X		X						004
DSLBG003 (0.0-0.5)	SL	grab	12-2-2020	1500				2	X	X	X		X						005
WCDMACS001	SL	comp	12-2-2020	1130				2	X	X	X*	X							006
Dup-2	SL	Comp-	12-02-20	—				2	X	X	X		X						007
DSRBG001(0.0-0.5)	SL	grab	12-2-2020	1140				2	X	X	X		X						008
DSRBG001(0.0-0.5)MS	SL	grab	12-2-2020	1140				2	X	X	X		X						009
DSRBG001(0.0-0.5)MSD	SL	grab	12-2-2020	1140				2	X	X	X		X						010

JB JB

Lab Profile/Line:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:
LAB USE ONLY:
Lab Sample # Comments: gel SCW 12/4/20 VP

Customer Remarks / Special Conditions / Possible Hazards:
*Dup-2 is a grab per AB at AECOM.
TN at Pace 12/7/20

Type of Ice Used: Wet Blue Dry None
Packing Material Used:
Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours) : Y N N/A
Lab Tracking #:
Samples received via: FEDEX UPS Client Courier Pace Courier

LAB Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: __oC
Cooler 1 Therm Corr. Factor: __oC
Cooler 1 Corrected Temp: __oC
Comments: gel SCW 12/4/20 VP

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Alison Bitel/AECOM	12/02/20 1800	FedEx	12/02/20
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Fedex	12/4/20 0920	[illegible]	12/4/20 0920
Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCL MeOH TSP Other

Non Conformance(s): YES / NO
Page: ____ of: ____

Client Name: Aecom

Sample Preservation Receipt Form

Project # 60219343

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

All containers needing preservation have been checked and noted below: □Yes □No ☒N/A

Lab Lot# of pH paper:

Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass								Plastic					Vials						Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)	Initial when completed:	Date/ Time:
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN									
001																																	2.5 / 5 / 10		
002																				1													2.5 / 5 / 10		
003																				1													2.5 / 5 / 10		
004																				2													2.5 / 5 / 10		
005																				2													2.5 / 5 / 10		
006																				2													2.5 / 5 / 10		
007																				2													2.5 / 5 / 10		
008																				6													2.5 / 5 / 10		
009																																	2.5 / 5 / 10		
010																																	2.5 / 5 / 10		
011																																	2.5 / 5 / 10		
012																																	2.5 / 5 / 10		
013																																	2.5 / 5 / 10		
014																																	2.5 / 5 / 10		
015																																	2.5 / 5 / 10		
016																																	2.5 / 5 / 10		
017																													12/4/20				2.5 / 5 / 10		
018																																	2.5 / 5 / 10		
019																																	2.5 / 5 / 10		
020																																	2.5 / 5 / 10		

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : □Yes □No ☒N/A *If yes look in headspace column

AG1U	1 liter amber glass
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Pace Analytical® 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: AECOM

Project #: WO#: 40219343

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☐ Client ☐ Pace Other:

Tracking #: 3998 1902 9805

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used SR - 86 **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 0 /Corr: 0.5

Temp Blank Present: ☒ yes ☐ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:
Date: 12/4/20 Initials: MP
Labeled By Initials: SRK

Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	1.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	3.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	4.
Samples Arrived within Hold Time:	☒ Yes ☐ No	5.
- VOA Samples frozen upon receipt	☐ Yes ☐ No	Date/Time:
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No	7.
Sufficient Volume: For Analysis: ☒ Yes ☐ No MS/MSD: (☒) Yes ☒ No ☐ N/A	12/4/20	8.
Correct Containers Used:	☒ Yes ☐ No	9.
-Pace Containers Used:	☒ Yes ☐ No ☐ N/A	
-Pace IR Containers Used:	☐ Yes ☐ No ☒ N/A	
Containers Intact:	☒ Yes ☐ No	10.
Filtered volume received for Dissolved tests	☐ Yes ☐ No ☒ N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: S	☒ Yes ☐ No ☐ N/A	12.
Trip Blank Present:	☐ Yes ☐ No ☒ N/A	13.
Trip Blank Custody Seals Present	☐ Yes ☐ No ☒ N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:
Person Contacted: _____ Date/Time: _____ If checked, see attached form for additional comments ☐
Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

www.pacelabs.com

Report Prepared for:

Tod Noltemeyer
PACE Wisconsin
6409 Odana Road
Madison WI 53719

REPORT OF LABORATORY ANALYSIS FOR PCBs

Report Information:

Pace Project #: 10543742
Sample Receipt Date: 12/31/2020
Client Project #: 40219343 AECOM
Client Sub PO #: N/A
State Cert #: 9909

Invoicing & Reporting Options:

The report provided has been invoiced as a Level 2 PCB Report. If an upgrade of this report package is requested, an additional charge may be applied.

Please review the attached invoice for accuracy and forward any questions to Scott Unze, your Pace Project Manager.

This report has been reviewed by:

January 18, 2021

Scott Unze, Project Manager
(612) 607-6383
(612) 607-6444 (fax)
scott.unze@pacelabs.com

Report Prepared Date:
January 18, 2021

Report of Laboratory Analysis

Pace Analytical Services, LLC.
1700 Elm Street
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

DISCUSSION

This report presents the results from the analyses performed on five samples submitted by a representative of Pace Analytical Services, LLC. The samples were analyzed for the presence or absence of selected polychlorinated biphenyl (PCB) congeners using USEPA Method 1668A. Reporting limits were set to correspond to the method detection limits, and adjusted for the total amount of sample extracted. Levels present below the calibration range were flagged "J" as estimated concentrations.

The recoveries of the isotopically-labeled PCB internal standards in the sample extracts ranged from 28-100 %. All of the labeled standard recoveries obtained for this project were within the target ranges specified in Method 1668A. Since the quantification of the native congeners was based on isotope dilution and internal standard methodology, the data were automatically corrected for variation in recovery and accurate values were obtained. Incorrect isotope ratios were obtained for selected PCB congeners. The affected congeners were flagged "I" on the results tables.

A laboratory method blank was prepared and analyzed with the sample batch as part of our routine quality control procedures. The results show the blank to contain trace levels or produce signals at the retention times of several PCB congeners. The sample extracts contained levels similar to those seen in the method blank that may have, at least partially, originated in the laboratory. Congeners present at similar levels in both the method blank and sample extracts were flagged "B" on the results tables.

Laboratory and matrix spike samples were also prepared with the sample batch using the reference or sample matrix that had been fortified with native standards. The results show that the spiked native compounds in the lab spike were recovered at 83-105%. These values were within method limits, Matrix spike recoveries were impacted by the levels present in the sample material and ranged from 85-416%, with relative percent differences of 0.0-14.7%.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Minnesota Laboratory Certifications

Authority	Certificate #	Authority	Certificate #
		Mississippi	MN00064
A2LA	2926.01	Missouri	10100
Alabama	40770	Montana	CERT0092
Alaska-DW	MN00064	Nebraska	NE-OS-18-06
Alaska-UST	17-009	Nevada	MN00064
Arizona	AZ0014	New Hampshire	2081
Arkansas - WW	88-0680	New Jersey	MN002
Arkansas-DW	MN00064	New York	11647
California	2929	North Carolina-	27700
Colorado	MN00064	North Carolina-	530
Connecticut	PH-0256	North Dakota	R-036
Florida	E87605	Ohio - VAP	CL101
Georgia	959	Ohio-DW	41244
Hawaii	MN00064	Oklahoma	9507
Idaho	MN00064	Oregon- rimary	MN300001
Illinois	200011	Oregon-Second	MN200001
Indiana	C-MN-01	Pennsylvania	68-00563
Iowa	368	Puerto Rico	MN00064
Kansas	E-10167	South Carolina	74003
Kentucky-DW	90062	Tennessee	TN02818
Kentucky-WW	90062	Texas	T104704192
Louisiana-DEQ	AI-84596	Utah	MN00064
Louisiana-DW	MN00064	Vermont	VT-027053137
Maine	MN00064	Virginia	460163
Maryland	322	Washington	C486
Michigan	9909	West Virginia-D	382
Minnesota	027-053-137	West Virginia-D	9952C
Minnesota-Ag	via MN 027-053	Wisconsin	999407970
Minnesota-Petr	1240	Wyoming-UST	via A2LA 2926.

REPORT OF LABORATORY ANALYSIS

Appendix A

Sample Management

Internal Transfer Chain of Custody

[x] Samples Pre-Logged into eCOC.

Pace Analytical®
www.pacelabs.com

State Of Origin: MI
Cert. Needed: [ ] Yes [x] No

Workorder: 40219343 **Workorder Name:** 60644031.6.2 MORROW DAM LOGGIN **Owner Received Date:** 12/4/2020 **Results Requested By:** 12/31/2020

Report To

Rod Noltemeyer
Pace Analytical Green Bay
4241 Bellevue Street
Suite 9
Green Bay, WI 54302
Phone (920)469-2436

Subcontract To

Pace Analytical Minnesota
1700 Elm Street SE
Suite 200
Minneapolis, MN 55414
Phone (612)607-1700

Requested Analysis

WO#: 10543742

10543742

Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	Preserved Containers: Unpreserved	1668 PCB Congeners - Full List	LAB USE ONLY
1	DSLBG002 (0.0-0.5)	PS	12/2/2020 09:55	40219343004	Solid	1	X	004
2	DSLBG003 (0.0-0.5)	PS	12/2/2020 15:00	40219343005	Solid	1	X	005
3	WCDMACS001	PS	12/2/2020 11:30	40219343006	Solid	1	X	006
4	DUP-2	PS	12/2/2020 00:00	40219343007	Solid	1	X	007
5	DSRBG001 (0.0-0.5)	RQS	12/2/2020 11:40	40219343008	Solid	1	X DO MS/MSD ON THIS SAMPLE	008

Transfers	Released By	Date/Time	Received By	Date/Time
1	Madeline I Nobel Pace HL 12-30-20	12-30-20 1700	TN/Pace	12/30/20 1830
2				
3				

Comments

Cooler Temperature on Receipt 5.1 °C **Custody Seal** (Y) or N **Received on Ice** (Y) or N **Samples Intact** (Y) or N

****In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document. This chain of custody is considered complete as is since this information is available in the owner laboratory.*

Pace Analytical®	Document Name: **Sample Condition Upon Receipt (SCUR) - MN**	Document Revised: 12Aug2020 **Page 1 of 1**
	Document No.: **ENV-FRM-MIN4-0150 Rev.01**	Pace Analytical Services - **Minneapolis**

Sample Condition Upon Receipt

Client Name: Green Bay

Project #:

WO#: 10543742
PM: SCU **Due Date: 01/22/21**
CLIENT: PASI-WI

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Pace ☐ SpeeDee ☑ Commercial

Tracking Number: _____ See Exceptions ☐ ENV-FRM-MIN4-0142

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ N/A

Packing Material: ☑ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: _____ **Temp Blank?** ☑ Yes ☐ No

Thermometer: ☐ T1(0461) ☐ T2(1336) ☑ T3(0459) ☐ T4(0254) ☐ T5(0489) **Type of Ice:** ☑ Wet ☐ Blue ☐ None ☐ Dry ☐ Melted

Did Samples Originate in West Virginia? ☐ Yes ☑ No **Were All Container Temps Taken?** ☐ Yes ☐ No ☑ N/A

Temp should be above freezing to 6°C **Cooler Temp Read w/temp blank:** 5.2 °C

Correction Factor: -0.1 **Cooler Temp Corrected w/temp blank:** 5.1 °C

Average Corrected Temp (no temp blank only): _____ °C ☐ See Exceptions ENV-FRM-MIN4-0142 ☐ 1 Container

USDA Regulated Soil: (☑ N/A, water sample/Other: _____) **Date/Initials of Person Examining Contents:** 12 31 20 TN

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☐ Yes ☑ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present and Filled Out?	☑ Yes	☐ No		1.
Chain of Custody Relinquished?	☑ Yes	☐ No		2.
Sampler Name and/or Signature on COC?	☐ Yes	☐ No	☑ N/A	3.
Samples Arrived within Hold Time?	☑ Yes	☐ No		4.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No		5. ☐ Fecal Coliform ☐ HPC ☐ Total Coliform/E coli ☐ BOD/cBOD ☐ Hex Chrome ☐ Turbidity ☐ Nitrate ☐ Nitrite ☐ Orthophos ☐ Other _____
Rush Turn Around Time Requested?	☑ Yes	☐ No		6.
Sufficient Volume?	☑ Yes	☐ No		7.
Correct Containers Used?	☑ Yes	☐ No		8.
-Pace Containers Used?	☐ Yes	☑ No		
Containers Intact?	☑ Yes	☐ No		9.
Field Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	10. Is sediment visible in the dissolved container? ☐ Yes ☐ No
Is sufficient information available to reconcile the samples to the COC? Matrix: ☐ Water ☑ Soil ☐ Oil ☐ Other _____	☑ Yes	☐ No		11. If no, write ID/ Date/Time on Container Below: See Exception ☐ ENV-FRM-MIN4-0142
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	12. Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, <2pH, NaOH >9 Sulfide, NaOH>10 Cyanide)	☐ Yes	☐ No	☑ N/A	☐ NaOH ☐ HNO_3 ☐ H_2SO_4 ☐ Zinc Acetate
Exceptions: VOA, Coliform, TOC/DOC Oil and Grease, DRO/8015 (water) and Dioxin/PFAS	☐ Yes	☐ No	☑ N/A	Positive for Res. Chlorine? ☐ Yes ☐ No pH Paper Lot# See Exception ☐ ENV-FRM-MIN4-0142
				Res. Chlorine / 0-6 Roll / 0-6 Strip / 0-14 Strip
Extra labels present on soil VOA or WIDRO containers?	☐ Yes	☐ No	☑ N/A	13. See Exception ☐ ENV-FRM-MIN4-0140
Headspace in VOA Vials (greater than 6mm)?	☐ Yes	☐ No	☑ N/A	
Trip Blank Present?	☐ Yes	☐ No	☑ N/A	14.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	Pace Trip Blank Lot # (if purchased): _____

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: _____ Date/Time: _____

Comments/Resolution: _____

Project Manager Review: _____ **Date:** 01/04/21

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers).

Labeled by: TN

CHAIN-OF-CUSTODY Analytical Request Document

Pace Analytical®

Chain-of-Custody is a LEGAL DOCUMENT - Complete all relevent fields

LAB USE ONLY- Affix Workorder/Login Label Here or List Pace Workorder Number or MTJL Log-In Number Here: 40219343

ALL SHADED AREAS are for LAB USE ONLY

Company: AECOM Technical Services, Inc.

Billing Information: Submit Invoices to USAPImaging@aecom.com

Address: 27777 Franklin Road, Suite 2150 Southfield, MI 48034

Report To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)

Email To: Andrea Peak (Andrea.Peak@aecom.com) & Brian Mastin (brian.mastin@aecom.com)

Copy To: Alison Bitel (Alison.Bitel@aecom.com)

Site Collection Info/Address: Morrow Dam Logging Facility, 285 12th St, Plainwell, MI 49080

Customer Project Name/Number: 60644031.6.2

State: MI / County/City: Comstock / Time Zone Collected: [ ]PT [ ]MT [ ]CT [X]ET

Phone: 248-204-4149

Email: Alison.Bitel@aecom.com

Site/Facility ID #: NA

Compliance Monitoring? [ ] Yes [x] No

Collected By (print): Jennifer Bush

Purchase Order # :

Quote #: 00084840

DW PWS ID #:

DW Location Code: NA

Collected By (signature):

Turnaround Date Required: 10-Day Standard

Immediately Packed on Ice: [ ] Yes [ ] No

Sample Disposal: [ ] Dispose as appropriate [ ] Return [ ] Archive: [ ] Hold:

Rush: [ ] Same Day [ ] Next Day [ ] 2 Day [ ] 3 Day [ ] 4 Day [ ] 5 Day (Expedite Charges Apply)

Field Filtered (if applicable): [ ] Yes [X] No

Analysis: NA

* Matrix Codes (Insert in Matrix box below): Drinking Water (DW), Ground Water (GW), Wastewater (WW), Product (P), Soil/Solid (SL), Oil (OL), Wipe (WP), Air (AR), Tissue (TS), Bioassay (B), Vapor (V), Other (OT)

Container Preservative Type **

Lab Project Manager:

** Preservative Types: (1) nitric acid, (2) sulfuric acid, (3) hydrochloric acid, (4) sodium hydroxide, (5) zinc acetate, (6) methanol, (7) sodium bisulfate, (8) sodium thiosulfate, (9) hexane, (A) ascorbic acid, (B) ammonium sulfate, (C) ammonium hydroxide, (D) TSP, (U) Unpreserved, (O) Other _____

Customer Sample ID	Matrix *	Comp / Grab	Collected (or Composite Start) Date	Collected (or Composite Start) Time	Composite End Date	Composite End Time	Res Cl	# of Ctns	PCB (8082A)	TPH (8015M)	PCB (M1668)	Mi Metals (6010D)	PAHs (8270 SIM)						Lab Profile/Line:
DSLBC002(0-1.3)	SL	Comp	12-2-2020	1910				1	X	X									001
DSLBC002(1.3-2.4)	SL	Comp	12-2-2020	1936				1	X	X									002
Dup-1	SL	Comp	12-02-20	—				1	X	X									003
DSLBG002 (0.0-0.5)	SL	grab	12-2-2020	0955				2	X	X	X		X						004
DSLBG003 (0.0-0.5)	SL	grab	12-2-2020	1500				2	X	X	X		X						005
WCDMACS001	SL	Comp	12-2-2020	1130				2	X	X	X*	X	X						006
Dup-2	SL	Comp	12-02-20	—				2	X	X	X		X						007
DSRBG001(0.0-0.5)	SL	grab	12-2-2020	1140				2	X	X	X		X						008
DSRBG001(0.0-0.5)MS	SL	grab	12-2-2020	1140				2	X	X	X		X						009
DSRBG001(0.0-0.5)MSD	SL	grab	12-2-2020	1140				2	X	X	X		X						010

Customer Remarks / Special Conditions / Possible Hazards:
*Dup-2 is a grab per AB at AECOM.
TN at Pace 12/7/20

Type of Ice Used: Wet Blue Dry None

Packing Material Used:

Radchem sample(s) screened (<500 cpm): Y N NA

SHORT HOLDS PRESENT (<72 hours): Y N N/A

Lab Tracking #:

Samples received via: FEDEX UPS Client Courier Pace Courier

Lab Sample Temperature Info:
Temp Blank Received: Y N NA
Therm ID#:
Cooler 1 Temp Upon Receipt: oC
Cooler 1 Therm Corr. Factor: oC
Cooler 1 Corrected Temp: oC
Comments:

Lab Sample Receipt Checklist:
Custody Seals Present/Intact Y N NA
Custody Signatures Present Y N NA
Collector Signature Present Y N NA
Bottles Intact Y N NA
Correct Bottles Y N NA
Sufficient Volume Y N NA
Samples Received on Ice Y N NA
VOA - Headspace Acceptable Y N NA
USDA Regulated Soils Y N NA
Samples in Holding Time Y N NA
Residual Chlorine Present Y N NA
Cl Strips:
Sample pH Acceptable Y N NA
pH Strips:
Sulfide Present Y N NA
Lead Acetate Strips:
LAB USE ONLY:
Lab Sample # Comments:

Relinquished by/Company: (Signature)	Date/Time:	Received by/Company: (Signature)	Date/Time:
Alison Bitel/AECOM	12/02/20 1800	FedEx	12/02/20
Fedex	12/4/20 0920	[illegible]	12/4/20 0920

MTJL LAB USE ONLY
Table #:
Acctnum:
Template:
Prelogin:
PM:
PB:

Trip Blank Received: Y N NA
HCl MeOH TSP Other

Non Conformance(s): YES / NO

Page: ____ of: ____

Client Name: Accom

Sample Preservation Receipt Form

Project # 60219343

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 9
Green Bay, WI 54302

All containers needing preservation have been checked and noted below: ☐Yes ☐No ☒N/A

Lab Lot# of pH paper: Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass								Plastic					Vials						Jars				General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)	Initial when completed:	Date/ Time:
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	WGFU	WPFU	SP5T	ZPLC	GN									
001																																	2.5 / 5 / 10		
002																																	2.5 / 5 / 10		
003																				1													2.5 / 5 / 10		
004																				2													2.5 / 5 / 10		
005																				2													2.5 / 5 / 10		
006																				2													2.5 / 5 / 10		
007																				2													2.5 / 5 / 10		
008																				6													2.5 / 5 / 10		
009																																	2.5 / 5 / 10		
010																																	2.5 / 5 / 10		
011																																	2.5 / 5 / 10		
012																																	2.5 / 5 / 10		
013																																	2.5 / 5 / 10		
014																																	2.5 / 5 / 10		
015																																	2.5 / 5 / 10		
016																																	2.5 / 5 / 10		
017																																	2.5 / 5 / 10		
018																																	2.5 / 5 / 10		
019																																	2.5 / 5 / 10		
020																																	2.5 / 5 / 10		

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : ☐Yes ☐No ☒N/A *If yes look in headspace column

G1U	1 liter amber glass
G1U	1 liter clear glass
G1H	1 liter amber glass HCL
G4S	125 mL amber glass H2SO4
G4U	120 mL amber glass unpres
G5U	100 mL amber glass unpres
G2S	500 mL amber glass H2SO4
G3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

Pace Analytical® 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Client Name: AECOM

Project #:

WO#: 40219343

40219343

Courier: ☐ CS Logistics ☒ Fed Ex ☐ Speedee ☐ UPS ☐ Waltco ☐ Client ☐ Pace Other:

Tracking #: 3998 1902 9805

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer Used SR - 86 **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 0 /Corr: 0.5

Temp Blank Present: ☒ yes ☐ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C if shipped on Dry Ice.

Person examining contents:
Date: 12/4/20 Initials: [illegible]
Labeled By Initials: SRK

Chain of Custody Present:	☒Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☒Yes ☐No ☐N/A	2.
Chain of Custody Relinquished:	☒Yes ☐No ☐N/A	3.
Sampler Name & Signature on COC:	☒Yes ☐No ☐N/A	4.
Samples Arrived within Hold Time:	☒Yes ☐No	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☐Yes ☒No	6.
Rush Turn Around Time Requested:	☐Yes ☒No	7.
Sufficient Volume: For Analysis: ☒Yes ☐No MS/MSD: (Yes) ☒No ☐N/A	12/4/20	8.
Correct Containers Used:	☒Yes ☐No	9.
-Pace Containers Used:	☒Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☒N/A	
Containers Intact:	☒Yes ☐No	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☒N/A	11.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix: S	☒Yes ☐No ☐N/A	12.
Trip Blank Present:	☐Yes ☐No ☒N/A	13.
Trip Blank Custody Seals Present	☐Yes ☐No ☒N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample login

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Reporting Flags

A = Reporting Limit based on signal to noise (EDL)

B = Less than 10x higher than method blank level

C = Result obtained from confirmation analysis

D = Result obtained from analysis of diluted sample

E = Exceeds calibration range

I = Interference present

J = Estimated value

L = Suppressive interference, analyte may be biased low

Nn = Value obtained from additional analysis

P = PCDE Interference

R = Recovery outside target range

S = Peak saturated

U = Analyte not detected

V = Result verified by confirmation analysis

X = %D Exceeds limits

Y = Calculated using average of daily RFs

* = See Discussion

REPORT OF LABORATORY ANALYSIS

Appendix B

Sample Analysis Summary

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DSLBG002 (0.0-0.5)		
Lab Sample ID	40219343004-R		
Filename	P210115A_12		
Injected By	CVS		
Total Amount Extracted	23.9 g	Matrix	Solid
% Moisture	57.4	Dilution	NA
Dry Weight Extracted	10.2 g	Collected	12/02/2020 09:55
ICAL ID	P210115A02	Received	12/31/2020 08:50
CCal Filename(s)	P210115A_01	Extracted	01/11/2021 14:05
Method Blank ID	BLANK-85487	Analyzed	01/15/2021 23:39

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	9.481	2.72	2.0	0.636	32
13C-4-MoCB	3	12.285	2.70	2.0	0.759	38
13C-2,2'-DiCB	4	12.579	1.47	2.0	0.910	45
13C-4,4'-DiCB	15	19.652	1.56	2.0	0.825	41
13C-2,2',6-TrCB	19	16.380	1.11	2.0	0.907	45
13C-3,4,4'-TrCB	37	27.439	1.01	2.0	0.650	32
13C-2,2',6,6'-TeCB	54	19.981	0.81	2.0	0.568	28
13C-3,4,4',5-TeCB	81	34.578	0.76	2.0	0.656	33
13C-3,3',4,4'-TeCB	77	35.166	0.80	2.0	0.670	33
13C-2,2',4,6,6'-PeCB	104	26.108	1.51	2.0	0.720	36
13C-2,3,3',4,4'-PeCB	105	38.760	1.60	2.0	0.600	30
13C-2,3,4,4',5-PeCB	114	38.106	1.53	2.0	0.623	31
13C-2,3',4,4',5-PeCB	118	37.570	1.55	2.0	0.603	30
13C-2,3',4,4',5'-PeCB	123	37.217	1.53	2.0	0.599	30
13C-3,3',4,4',5-PeCB	126	41.930	1.46	2.0	0.638	32
13C-2,2',4,4',6,6'-HxCB	155	32.257	1.29	2.0	0.715	36
13C-HxCB(156/157)	156/157	45.003	1.30	4.0	1.21	30
13C-2,3',4,4',5,5'-HxCB	167	43.829	1.24	2.0	0.623	31
13C-3,3',4,4',5,5'-HxCB	169	48.290	1.23	2.0	0.627	31
13C-2,2',3,4',5,6,6'-HpCB	188	38.090	1.02	2.0	0.850	43
13C-2,3,3',4,4',5,5'-HpCB	189	50.829	1.03	2.0	0.680	34
13C-2,2',3,3',5,5',6,6'-OcCB	202	43.561	0.90	2.0	0.766	38
13C-2,3,3',4,4',5,5',6-OcCB	205	53.438	0.88	2.0	0.659	33
13C-2,2',3,3',4,4',5,5',6-NoCB	206	55.183	0.82	2.0	0.713	36
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	50.355	0.85	2.0	0.684	34
13C-DeCB	209	56.800	0.74	2.0	0.735	37
CleanupStandards						
13C-2,4,4'-TrCB	28	23.076	1.04	2.0	1.13	57
13C-2,3,3',5,5'-PeCB	111	35.197	1.55	2.0	1.29	65
13C-2,2',3,3',5,5',6-HpCB	178	41.208	1.07	2.0	1.47	73
Recovery Standards						
13C-2,5-DiCB	9	15.032	1.56	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.087	0.79	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	32.427	1.55	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	40.739	1.26	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	52.963	0.89	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses
Results reported on a dry weight basis

* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG002 (0.0-0.5)
Lab Sample ID 40219343004-R
Filename P210115A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		9.492	2.71	22.9		---	3.01
2		12.070	3.13	23.6		---	3.47
3		12.297	3.30	34.6		---	5.40
4		12.590	0.94	---	I	40.5	6.98
5		---	---	ND		---	3.30
6		15.540	1.31	---	I	44.7	3.79
7		---	---	ND		---	4.32
8		16.060	1.64	122		---	7.17
9		---	---	ND		---	3.83
10		---	---	ND		---	2.63
11		18.967	1.47	236		---	115
12	12/13	19.321	0.84	---	I	43.5	7.06
13	12/13	19.321	0.84	---	I	(43.5)	7.06
14		---	---	ND		---	2.70
15		19.674	1.42	143		---	6.46
16		19.597	1.01	61.2		---	8.33
17		19.088	1.07	92.9		---	6.83
18	18/30	18.613	1.05	109		---	12.2
19		16.392	1.13	18.9	J	---	3.90
20	20/28	23.107	1.06	491		---	33.7
21	21/33	23.354	1.05	321		---	32.7
22		23.788	1.03	113		---	20.7
23		---	---	ND		---	5.25
24		---	---	ND		---	3.13
25		22.426	1.12	92.1		---	3.61
26	26/29	22.163	1.13	114		---	8.54
27		19.343	1.19	20.8		---	2.76
28	20/28	23.107	1.06	(491)		---	33.7
29	26/29	22.163	1.13	(114)		---	8.54
30	18/30	18.613	1.05	(109)		---	12.2
31		22.766	1.06	294		---	37.4
32		20.213	1.01	61.0		---	5.88
33	21/33	23.354	1.05	(321)		---	32.7
34		21.652	1.32	---	IJ	13.0	4.38
35		27.021	1.30	---	IJ	12.3	3.98
36		---	---	ND		---	3.99
37		27.469	1.05	194		---	12.8
38		---	---	ND		---	5.23
39		---	---	ND		---	4.83
40	40/41/71	27.268	0.77	319		---	16.5
41	40/41/71	27.268	0.77	(319)		---	16.5
42		26.742	0.79	206		---	8.33
43	43/73	25.365	0.89	15.6	J	---	9.52
44	44/47/65	26.154	0.77	790		---	38.9

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG002 (0.0-0.5)
Lab Sample ID 40219343004-R
Filename P210115A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	23.184	0.79	95.9		---	13.4
46		23.540	0.74	32.9		---	4.69
47	44/47/65	26.154	0.77	(790)		---	38.9
48		25.953	0.80	75.9		---	5.71
49	49/69	25.644	0.79	632		---	14.3
50	50/53	22.441	0.79	88.0		---	11.7
51	45/51	23.184	0.79	(95.9)		---	13.4
52		25.103	0.78	1200		---	29.2
53	50/53	22.441	0.79	(88.0)		---	11.7
54		19.997	0.68	2.74	J	---	2.68
55		---	---	ND		---	4.54
56		31.344	0.80	379		---	13.8
57		29.194	0.85	7.70	J	---	4.13
58		29.441	0.78	12.8	J	---	4.36
59	59/62/75	26.526	0.81	56.6	J	---	13.4
60		31.592	0.78	94.1		---	9.81
61	61/70/74/76	30.261	0.77	1370		---	39.3
62	59/62/75	26.526	0.81	(56.6)	J	---	13.4
63		29.921	0.77	41.4		---	4.39
64		27.516	0.78	302		---	14.6
65	44/47/65	26.154	0.77	(790)		---	38.9
66		30.632	0.78	863		---	4.89
67		29.658	0.72	19.8		---	3.50
68		28.745	0.79	21.7		---	4.89
69	49/69	25.644	0.79	(632)		---	14.3
70	61/70/74/76	30.261	0.77	(1370)		---	39.3
71	40/41/71	27.268	0.77	(319)		---	16.5
72		28.435	0.77	27.7		---	4.44
73	43/73	25.365	0.89	(15.6)	J	---	9.52
74	61/70/74/76	30.261	0.77	(1370)		---	39.3
75	59/62/75	26.526	0.81	(56.6)	J	---	13.4
76	61/70/74/76	30.261	0.77	(1370)		---	39.3
77		35.181	0.80	98.7		---	4.79
78		---	---	ND		---	4.15
79		33.557	0.78	21.0		---	3.10
80		---	---	ND		---	3.71
81		---	---	ND		---	5.05
82		34.794	1.48	253		---	5.46
83		32.907	1.53	138		---	4.04
84		30.462	1.52	570		---	7.46
85	85/116/117	34.315	1.67	376		---	9.42
86	86/87/97/108/119/125	33.650	1.59	1460		---	19.0
87	86/87/97/108/119/125	33.650	1.59	(1460)		---	19.0
88	88/91	30.246	1.64	297		---	7.16

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
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ND = Not Detected
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NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG002 (0.0-0.5)
Lab Sample ID 40219343004-R
Filename P210115A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		30.989	1.72	18.7	J	---	5.42
90	90/101/113	32.458	1.54	2170		---	16.4
91	88/91	30.246	1.64	(297)		---	7.16
92		31.917	1.55	470		---	3.74
93	93/98/100/102	29.704	1.49	74.9	J	---	16.5
94		28.838	1.46	9.41	J	---	4.85
95		29.317	1.52	1390		---	19.6
96		26.526	1.59	10.8	J	---	4.23
97	86/87/97/108/119/125	33.650	1.59	(1460)		---	19.0
98	93/98/100/102	29.704	1.49	(74.9)	J	---	16.5
99		33.046	1.54	1030		---	8.66
100	93/98/100/102	29.704	1.49	(74.9)	J	---	16.5
101	90/101/113	32.458	1.54	(2170)		---	16.4
102	93/98/100/102	29.704	1.49	(74.9)	J	---	16.5
103		28.636	1.65	22.9		---	4.67
104		---	---	ND		---	5.67
105		38.794	1.53	727		---	10.0
106		---	---	ND		---	2.46
107	107/124	36.865	1.51	63.8		---	6.50
108	86/87/97/108/119/125	33.650	1.59	(1460)		---	19.0
109		37.117	1.53	183		---	3.24
110	110/115	34.470	1.54	2910		---	26.6
111		---	---	ND		---	4.56
112		---	---	ND		---	4.67
113	90/101/113	32.458	1.54	(2170)		---	16.4
114		38.123	1.52	30.2		---	4.56
115	110/115	34.470	1.54	(2910)		---	26.6
116	85/116/117	34.315	1.67	(376)		---	9.42
117	85/116/117	34.315	1.67	(376)		---	9.42
118		37.586	1.53	2110		---	18.1
119	86/87/97/108/119/125	33.650	1.59	(1460)		---	19.0
120		35.707	1.32	14.1	J	---	4.10
121		---	---	ND		---	4.16
122		37.905	1.57	29.5		---	3.58
123		37.251	1.69	35.9		---	5.91
124	107/124	36.865	1.51	(63.8)		---	6.50
125	86/87/97/108/119/125	33.650	1.59	(1460)		---	19.0
126		41.930	1.72	8.05	J	---	6.28
127		---	---	ND		---	3.53
128	128/166	42.047	1.25	481		---	9.03
129	129/138/163	40.772	1.24	2670		---	23.4
130		40.102	1.23	198		---	5.34
131		37.201	1.23	40.6		---	4.31
132		37.670	1.24	713		---	7.62

Conc = Concentration
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ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG002 (0.0-0.5)
Lab Sample ID 40219343004-R
Filename P210115A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
133		38.224	1.19	36.5	---	4.58
134	134/143	36.580	1.20	148	---	9.91
135	135/151	35.429	1.24	581	---	6.28
136		32.938	1.23	254	---	3.62
137		40.336	1.27	126	---	5.52
138	129/138/163	40.772	1.24	(2670)	---	23.4
139	139/140	37.016	1.19	47.2	---	9.81
140	139/140	37.016	1.19	(47.2)	---	9.81
141		39.699	1.24	330	---	6.12
142		---	---	ND	---	5.06
143	134/143	36.580	1.20	(148)	---	9.91
144		36.017	1.19	77.3	---	3.01
145		---	---	ND	---	4.56
146		38.861	1.23	330	---	3.20
147	147/149	36.379	1.27	1540	---	15.2
148		---	---	ND	---	4.77
149	147/149	36.379	1.27	(1540)	---	15.2
150		---	---	ND	---	3.53
151	135/151	35.429	1.24	(581)	---	6.28
152		---	---	ND	---	4.88
153	153/168	39.498	1.24	1650	---	14.9
154		35.707	1.23	24.2	---	3.20
155		---	---	ND	---	4.75
156	156/157	45.003	1.29	338	---	9.22
157	156/157	45.003	1.29	(338)	---	9.22
158		41.175	1.20	211	---	2.79
159		---	---	ND	---	4.32
160		---	---	ND	---	4.43
161		---	---	ND	---	3.93
162		43.343	1.22	6.78 J	---	3.44
163	129/138/163	40.772	1.24	(2670)	---	23.4
164		40.454	1.25	171	---	4.03
165		---	---	ND	---	4.95
166	128/166	42.047	1.25	(481)	---	9.03
167		43.863	1.19	112	---	4.43
168	153/168	39.498	1.24	(1650)	---	14.9
169		---	---	ND	---	4.61
170		47.703	1.03	346	---	4.22
171	171/173	44.115	1.01	112	---	5.63
172		45.758	1.03	58.5	---	3.62
173	171/173	44.115	1.01	(112)	---	5.63
174		43.008	1.02	298	---	4.00
175		41.896	1.08	13.0 J	---	3.84
176		39.347	0.96	38.4	---	3.63

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Minneapolis, MN 55414

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG002 (0.0-0.5)
Lab Sample ID 40219343004-R
Filename P210115A_12

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		43.461	1.04	200		---	2.99
178		41.225	1.06	58.6		---	5.27
179		38.442	1.00	118		---	3.12
180	180/193	46.429	1.01	612		---	7.85
181		---	---	ND		---	4.72
182		---	---	ND		---	2.20
183	183/185	42.790	1.04	209		---	6.08
184		---	---	ND		---	3.72
185	183/185	42.790	1.04	(209)		---	6.08
186		---	---	ND		---	4.16
187		42.164	1.04	318		---	5.40
188		---	---	ND		---	4.57
189		50.873	0.92	18.7	J	---	5.80
190		48.257	1.01	63.8		---	4.30
191		46.764	1.09	11.8	J	---	4.28
192		---	---	ND		---	3.69
193	180/193	46.429	1.01	(612)		---	7.85
194		52.985	0.91	132		---	3.68
195		50.614	0.91	48.7		---	3.86
196		49.061	0.95	64.2		---	3.69
197	197/200	45.573	0.79	23.4	J	---	5.89
198	198/199	48.407	0.87	155		---	7.85
199	198/199	48.407	0.87	(155)		---	7.85
200	197/200	45.573	0.79	(23.4)	J	---	5.89
201		44.550	0.88	17.4	J	---	3.52
202		43.595	0.91	32.0		---	4.45
203		49.279	0.90	84.2		---	2.24
204		---	---	ND		---	4.23
205		53.459	0.95	7.03	J	---	5.10
206		55.205	0.76	105		---	5.99
207		51.325	0.81	12.8	J	---	3.95
208		50.355	0.75	37.2		---	4.54
209		56.821	0.74	96.7		---	12.4

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DSLBG002 (0.0-0.5)
Lab Sample ID	40219343004-R
Filename	P210115A_12

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	81.0
Total Dichloro Biphenyls	501
Total Trichloro Biphenyls	1980
Total Tetrachloro Biphenyls	6770
Total Pentachloro Biphenyls	14400
Total Hexachloro Biphenyls	10100
Total Heptachloro Biphenyls	2480
Total Octachloro Biphenyls	564
Total Nonachloro Biphenyls	155
DecachloroBiphenyls	96.7
Total PCBs	37100

ND = Not Detected
Results reported on a dry weight basis

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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DSLBG003 (0.0-0.5)		
Lab Sample ID	40219343005-R		
Filename	P210115A_11		
Injected By	CVS		
Total Amount Extracted	31.8 g	Matrix	Solid
% Moisture	68.4	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	12/02/2020 15:00
ICAL ID	P210115A02	Received	12/31/2020 08:50
CCal Filename(s)	P210115A_01	Extracted	01/11/2021 14:05
Method Blank ID	BLANK-85487	Analyzed	01/15/2021 22:39

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	9.492	3.01	2.0	0.681	34
13C-4-MoCB	3	12.297	3.06	2.0	0.856	43
13C-2,2'-DiCB	4	12.590	1.53	2.0	1.10	55
13C-4,4'-DiCB	15	19.674	1.57	2.0	1.03	52
13C-2,2',6-TrCB	19	16.392	0.99	2.0	1.23	61
13C-3,4,4'-TrCB	37	27.455	1.02	2.0	0.962	48
13C-2,2',6,6'-TeCB	54	19.997	0.87	2.0	0.876	44
13C-3,4,4',5-TeCB	81	34.578	0.80	2.0	0.932	47
13C-3,3',4,4'-TeCB	77	35.166	0.79	2.0	0.904	45
13C-2,2',4,6,6'-PeCB	104	26.124	1.57	2.0	1.03	52
13C-2,3,3',4,4'-PeCB	105	38.778	1.58	2.0	0.837	42
13C-2,3,4,4',5-PeCB	114	38.124	1.56	2.0	0.857	43
13C-2,3',4,4',5-PeCB	118	37.570	1.54	2.0	0.817	41
13C-2,3',4,4',5'-PeCB	123	37.235	1.52	2.0	0.827	41
13C-3,3',4,4',5-PeCB	126	41.947	1.47	2.0	0.910	45
13C-2,2',4,4',6,6'-HxCB	155	32.273	1.21	2.0	1.03	52
13C-HxCB(156/157)	156/157	45.021	1.28	4.0	1.74	44
13C-2,3',4,4',5,5'-HxCB	167	43.848	1.26	2.0	0.881	44
13C-3,3',4,4',5,5'-HxCB	169	48.292	1.23	2.0	0.873	44
13C-2,2',3,4',5,6,6'-HpCB	188	38.107	1.01	2.0	1.22	61
13C-2,3,3',4,4',5,5'-HpCB	189	50.857	1.05	2.0	0.994	50
13C-2,2',3,3',5,5',6,6'-OcCB	202	43.579	0.91	2.0	1.14	57
13C-2,3,3',4,4',5,5',6-OcCB	205	53.444	0.94	2.0	0.939	47
13C-2,2',3,3',4,4',5,5',6-NoCB	206	55.190	0.82	2.0	1.03	51
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	50.362	0.79	2.0	1.04	52
13C-DeCB	209	56.806	0.72	2.0	1.10	55
CleanupStandards						
13C-2,4,4'-TrCB	28	23.076	1.05	2.0	1.23	61
13C-2,3,3',5,5'-PeCB	111	35.213	1.58	2.0	1.32	66
13C-2,2',3,3',5,5',6-HpCB	178	41.209	1.07	2.0	1.51	75
Recovery Standards						
13C-2,5-DiCB	9	15.043	1.54	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.087	0.74	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	32.443	1.57	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	40.757	1.25	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	52.970	0.89	2.0	NA	NA

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG003 (0.0-0.5)
Lab Sample ID 40219343005-R
Filename P210115A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		9.503	2.69	16.3	J	---	3.06
2		12.082	3.02	22.7		---	3.53
3		12.319	3.14	33.1		---	5.48
4		12.602	0.82	---	I	32.5	7.09
5		---	---	ND		---	3.35
6		15.552	1.76	44.6		---	3.85
7		---	---	ND		---	4.39
8		16.071	1.28	---	I	118	7.29
9		---	---	ND		---	3.89
10		---	---	ND		---	2.67
11		18.978	1.47	203		---	117
12	12/13	19.343	1.42	43.3		---	7.18
13	12/13	19.343	1.42	(43.3)		---	7.18
14		---	---	ND		---	2.74
15		19.685	1.38	138		---	6.56
16		19.608	1.05	50.9		---	8.46
17		19.111	1.10	88.6		---	6.94
18	18/30	18.613	1.05	101		---	12.4
19		16.392	1.11	15.0	J	---	3.97
20	20/28	23.107	1.02	456		---	34.2
21	21/33	23.370	1.02	313		---	33.2
22		23.803	1.06	102		---	21.0
23		---	---	ND		---	5.33
24		---	---	ND		---	3.18
25		22.426	1.04	85.3		---	3.67
26	26/29	22.163	1.03	112		---	8.67
27		19.332	1.05	15.7	J	---	2.80
28	20/28	23.107	1.02	(456)		---	34.2
29	26/29	22.163	1.03	(112)		---	8.67
30	18/30	18.613	1.05	(101)		---	12.4
31		22.782	1.04	296		---	38.0
32		20.229	1.03	63.9		---	5.97
33	21/33	23.370	1.02	(313)		---	33.2
34		21.668	1.13	12.4	J	---	4.45
35		27.037	1.10	16.0	J	---	4.05
36		---	---	ND		---	4.06
37		27.486	1.06	182		---	13.0
38		---	---	ND		---	5.31
39		---	---	ND		---	4.90
40	40/41/71	27.300	0.79	387		---	16.7
41	40/41/71	27.300	0.79	(387)		---	16.7
42		26.759	0.78	239		---	8.46
43	43/73	25.366	0.69	24.7	J	---	9.67
44	44/47/65	26.171	0.77	1300		---	39.5

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG003 (0.0-0.5)
Lab Sample ID 40219343005-R
Filename P210115A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	23.184	0.79	109		---	13.7
46		23.525	0.70	40.5		---	4.77
47	44/47/65	26.171	0.77	(1300)		---	39.5
48		25.954	0.78	95.8		---	5.80
49	49/69	25.645	0.76	944		---	14.6
50	50/53	22.457	0.77	124		---	11.9
51	45/51	23.184	0.79	(109)		---	13.7
52		25.118	0.77	2920		---	29.7
53	50/53	22.457	0.77	(124)		---	11.9
54		20.013	1.00	---	IJ	2.91	2.72
55		---	---	ND		---	4.62
56		31.344	0.78	480		---	14.1
57		29.209	0.82	8.58	J	---	4.20
58		29.457	0.77	13.0	J	---	4.43
59	59/62/75	26.527	0.77	67.1		---	13.7
60		31.608	0.78	126		---	9.97
61	61/70/74/76	30.261	0.78	2610		---	40.0
62	59/62/75	26.527	0.77	(67.1)		---	13.7
63		29.921	0.76	53.8		---	4.46
64		27.532	0.79	453		---	14.9
65	44/47/65	26.171	0.77	(1300)		---	39.5
66		30.633	0.78	1100		---	4.96
67		29.643	0.82	24.5		---	3.56
68		28.761	0.77	21.9		---	4.96
69	49/69	25.645	0.76	(944)		---	14.6
70	61/70/74/76	30.261	0.78	(2610)		---	40.0
71	40/41/71	27.300	0.79	(387)		---	16.7
72		28.451	0.80	35.0		---	4.52
73	43/73	25.366	0.69	(24.7)	J	---	9.67
74	61/70/74/76	30.261	0.78	(2610)		---	40.0
75	59/62/75	26.527	0.77	(67.1)		---	13.7
76	61/70/74/76	30.261	0.78	(2610)		---	40.0
77		35.197	0.79	249		---	4.86
78		---	---	ND		---	4.22
79		33.557	0.67	50.2		---	3.15
80		---	---	ND		---	3.77
81		34.609	0.68	8.47	J	---	5.13
82		34.795	1.57	581		---	5.54
83		32.938	1.74	339		---	4.11
84		30.478	1.55	1430		---	7.58
85	85/116/117	34.315	1.57	853		---	9.57
86	86/87/97/108/119/125	33.665	1.53	3760		---	19.3
87	86/87/97/108/119/125	33.665	1.53	(3760)		---	19.3
88	88/91	30.261	1.58	679		---	7.28

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ng's = Nanograms

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG003 (0.0-0.5)
Lab Sample ID 40219343005-R
Filename P210115A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		31.004	1.45	42.5		---	5.50
90	90/101/113	32.474	1.55	5760		---	16.6
91	88/91	30.261	1.58	(679)		---	7.28
92		31.932	1.57	1130		---	3.80
93	93/98/100/102	29.720	1.53	163		---	16.7
94		28.869	1.48	19.8	J	---	4.92
95		29.333	1.57	4060		---	19.9
96		26.527	1.51	28.0		---	4.30
97	86/87/97/108/119/125	33.665	1.53	(3760)		---	19.3
98	93/98/100/102	29.720	1.53	(163)		---	16.7
99		33.062	1.55	2290		---	8.80
100	93/98/100/102	29.720	1.53	(163)		---	16.7
101	90/101/113	32.474	1.55	(5760)		---	16.6
102	93/98/100/102	29.720	1.53	(163)		---	16.7
103		28.653	1.39	41.4		---	4.75
104		---	---	ND		---	5.76
105		38.794	1.55	1830		---	10.2
106		---	---	ND		---	2.50
107	107/124	36.883	1.47	189		---	6.60
108	86/87/97/108/119/125	33.665	1.53	(3760)		---	19.3
109		37.134	1.48	375		---	3.29
110	110/115	34.486	1.57	6830		---	27.0
111		---	---	ND		---	4.64
112		---	---	ND		---	4.75
113	90/101/113	32.474	1.55	(5760)		---	16.6
114		38.157	1.53	82.4		---	4.64
115	110/115	34.486	1.57	(6830)		---	27.0
116	85/116/117	34.315	1.57	(853)		---	9.57
117	85/116/117	34.315	1.57	(853)		---	9.57
118		37.604	1.54	5010		---	18.3
119	86/87/97/108/119/125	33.665	1.53	(3760)		---	19.3
120		35.708	1.53	21.9		---	4.17
121		---	---	ND		---	4.23
122		37.956	1.72	47.9		---	3.64
123		37.252	1.42	81.2		---	6.00
124	107/124	36.883	1.47	(189)		---	6.60
125	86/87/97/108/119/125	33.665	1.53	(3760)		---	19.3
126		41.947	1.47	44.3		---	6.38
127		40.354	1.20	---	IJ	11.4	3.59
128	128/166	42.065	1.24	1040		---	9.17
129	129/138/163	40.790	1.24	6120		---	23.7
130		40.119	1.24	438		---	5.42
131		37.235	1.17	118		---	4.38
132		37.671	1.24	1580		---	7.75

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
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ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG003 (0.0-0.5)
Lab Sample ID 40219343005-R
Filename P210115A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		38.224	1.25	79.3		---	4.66
134	134/143	36.598	1.24	371		---	10.1
135	135/151	35.429	1.22	1310		---	6.38
136		32.938	1.21	616		---	3.68
137		40.354	1.28	334		---	5.61
138	129/138/163	40.790	1.24	(6120)		---	23.7
139	139/140	37.034	1.27	132		---	9.97
140	139/140	37.034	1.27	(132)		---	9.97
141		39.700	1.22	835		---	6.22
142		---	---	ND		---	5.14
143	134/143	36.598	1.24	(371)		---	10.1
144		36.033	1.18	227		---	3.06
145		---	---	ND		---	4.64
146		38.895	1.22	682		---	3.25
147	147/149	36.396	1.24	3510		---	15.5
148		34.841	1.35	5.01	J	---	4.84
149	147/149	36.396	1.24	(3510)		---	15.5
150		32.613	1.39	6.73	J	---	3.59
151	135/151	35.429	1.22	(1310)		---	6.38
152		32.443	1.16	5.77	J	---	4.95
153	153/168	39.516	1.25	3630		---	15.2
154		35.723	1.27	52.4		---	3.25
155		---	---	ND		---	4.82
156	156/157	45.021	1.25	812		---	9.37
157	156/157	45.021	1.25	(812)		---	9.37
158		41.193	1.22	579		---	2.83
159		43.076	1.66	---	IJ	4.97	4.39
160		---	---	ND		---	4.50
161		---	---	ND		---	4.00
162		43.378	1.27	22.5		---	3.50
163	129/138/163	40.790	1.24	(6120)		---	23.7
164		40.455	1.23	382		---	4.10
165		---	---	ND		---	5.03
166	128/166	42.065	1.24	(1040)		---	9.17
167		43.864	1.21	279		---	4.50
168	153/168	39.516	1.25	(3630)		---	15.2
169		---	---	ND		---	4.69
170		47.704	1.02	652		---	4.29
171	171/173	44.133	0.99	230		---	5.72
172		45.776	1.02	109		---	3.68
173	171/173	44.133	0.99	(230)		---	5.72
174		43.026	0.97	516		---	4.07
175		41.897	0.98	25.1		---	3.90
176		39.365	1.04	72.5		---	3.69

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Results reported on a dry weight basis

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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSLBG003 (0.0-0.5)
Lab Sample ID 40219343005-R
Filename P210115A_11

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		43.479	1.01	338		---	3.04
178		41.243	1.07	96.4		---	5.35
179		38.476	1.04	183		---	3.17
180	180/193	46.430	1.04	1030		---	7.98
181		43.898	1.18	14.5	J	---	4.80
182		42.383	1.60	---	IJ	3.73	2.23
183	183/185	42.808	1.05	366		---	6.18
184		---	---	ND		---	3.78
185	183/185	42.808	1.05	(366)		---	6.18
186		---	---	ND		---	4.23
187		42.165	1.02	467		---	5.48
188		---	---	ND		---	4.65
189		50.857	1.07	33.5		---	5.89
190		48.258	0.98	117		---	4.37
191		46.799	1.14	26.4		---	4.35
192		---	---	ND		---	3.75
193	180/193	46.430	1.04	(1030)		---	7.98
194		52.991	0.92	145		---	3.74
195		50.620	1.00	61.0		---	3.92
196		49.097	0.86	78.1		---	3.75
197	197/200	45.575	0.94	25.2	J	---	5.98
198	198/199	48.426	0.85	169		---	7.98
199	198/199	48.426	0.85	(169)		---	7.98
200	197/200	45.575	0.94	(25.2)	J	---	5.98
201		44.552	1.03	---	IJ	19.4	3.58
202		43.630	0.96	35.4		---	4.53
203		49.298	0.93	95.5		---	2.27
204		---	---	ND		---	4.30
205		53.509	1.10	---	IJ	8.04	5.18
206		55.233	0.77	84.0		---	6.08
207		51.353	0.65	10.4	J	---	4.02
208		50.383	0.89	26.6		---	4.62
209		---	---	ND		---	12.6

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DSLBG003 (0.0-0.5)
Lab Sample ID	40219343005-R
Filename	P210115A_11

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	72.1
Total Dichloro Biphenyls	429
Total Trichloro Biphenyls	1910
Total Tetrachloro Biphenyls	11500
Total Pentachloro Biphenyls	35700
Total Hexachloro Biphenyls	23200
Total Heptachloro Biphenyls	4280
Total Octachloro Biphenyls	609
Total Nonachloro Biphenyls	121
DecachloroBiphenyls	ND
Total PCBs	77800

ND = Not Detected
Results reported on a dry weight basis

Pace Analytical Services, LLC
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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	WCDMACS001		
Lab Sample ID	40219343006-R		
Filename	P210115A_10		
Injected By	CVS		
Total Amount Extracted	27.2 g	Matrix	Solid
% Moisture	63.1	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	12/02/2020 11:30
ICAL ID	P210115A02	Received	12/31/2020 08:50
CCal Filename(s)	P210115A_01	Extracted	01/11/2021 14:05
Method Blank ID	BLANK-85487	Analyzed	01/15/2021 21:38

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	9.481	2.79	2.0	0.943	47
13C-4-MoCB	3	12.285	3.05	2.0	1.25	63
13C-2,2'-DiCB	4	12.580	1.55	2.0	1.63	82
13C-4,4'-DiCB	15	19.664	1.55	2.0	1.74	87
13C-2,2',6-TrCB	19	16.381	1.10	2.0	1.60	80
13C-3,4,4'-TrCB	37	27.454	1.00	2.0	1.38	69
13C-2,2',6,6'-TeCB	54	19.982	0.79	2.0	1.32	66
13C-3,4,4',5-TeCB	81	34.593	0.86	2.0	1.45	73
13C-3,3',4,4'-TeCB	77	35.212	0.82	2.0	1.50	75
13C-2,2',4,6,6'-PeCB	104	26.124	1.53	2.0	1.67	83
13C-2,3,3',4,4'-PeCB	105	38.793	1.55	2.0	1.33	66
13C-2,3,4,4',5-PeCB	114	38.139	1.62	2.0	1.40	70
13C-2,3',4,4',5-PeCB	118	37.586	1.56	2.0	1.35	67
13C-2,3',4,4',5'-PeCB	123	37.234	1.56	2.0	1.33	66
13C-3,3',4,4',5-PeCB	126	41.946	1.46	2.0	1.46	73
13C-2,2',4,4',6,6'-HxCB	155	32.319	1.23	2.0	1.70	85
13C-HxCB(156/157)	156/157	45.003	1.23	4.0	2.73	68
13C-2,3',4,4',5,5'-HxCB	167	43.846	1.26	2.0	1.43	72
13C-3,3',4,4',5,5'-HxCB	169	48.307	1.24	2.0	1.40	70
13C-2,2',3,4',5,6,6'-HpCB	188	38.123	1.04	2.0	1.88	94
13C-2,3,3',4,4',5,5'-HpCB	189	50.851	1.07	2.0	1.62	81
13C-2,2',3,3',5,5',6,6'-OcCB	202	43.578	0.90	2.0	1.75	87
13C-2,3,3',4,4',5,5',6-OcCB	205	53.459	0.89	2.0	1.47	73
13C-2,2',3,3',4,4',5,5',6-NoCB	206	55.205	0.72	2.0	1.51	76
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	50.355	0.78	2.0	1.60	80
13C-DeCB	209	56.800	0.69	2.0	1.68	84
CleanupStandards						
13C-2,4,4'-TrCB	28	23.091	0.89	2.0	1.57	79
13C-2,3,3',5,5'-PeCB	111	35.243	1.58	2.0	1.43	72
13C-2,2',3,3',5,5',6-HpCB	178	41.225	1.07	2.0	1.67	83
Recovery Standards						
13C-2,5-DiCB	9	15.032	1.59	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.087	0.85	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	32.489	1.54	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	40.756	1.24	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	52.963	0.89	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID WCDMACS001
Lab Sample ID 40219343006-R
Filename P210115A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		9.492	2.91	23.9		---	3.06
2		12.082	2.71	37.5		---	3.53
3		12.308	2.99	45.4		---	5.48
4		12.591	1.38	82.4		---	7.09
5		---	---	ND		---	3.35
6		15.541	1.74	59.5		---	3.85
7		15.264	1.41	22.7		---	4.39
8		16.060	1.33	176		---	7.29
9		15.054	1.38	17.4	J	---	3.89
10		---	---	ND		---	2.67
11		18.978	1.57	168		---	117
12	12/13	19.354	1.06	---	I	54.6	7.18
13	12/13	19.354	1.06	---	I	(54.6)	7.18
14		---	---	ND		---	2.74
15		19.686	1.46	182		---	6.56
16		19.597	1.04	87.2		---	8.47
17		19.100	0.98	174		---	6.94
18	18/30	18.603	1.05	158		---	12.4
19		16.403	1.10	35.8		---	3.97
20	20/28	23.107	1.06	828		---	34.2
21	21/33	23.354	1.04	500		---	33.2
22		23.788	1.07	174		---	21.0
23		---	---	ND		---	5.34
24		---	---	ND		---	3.18
25		22.426	1.02	189		---	3.67
26	26/29	22.148	1.02	242		---	8.68
27		19.343	1.06	36.9		---	2.80
28	20/28	23.107	1.06	(828)		---	34.2
29	26/29	22.148	1.02	(242)		---	8.68
30	18/30	18.603	1.05	(158)		---	12.4
31		22.782	1.04	515		---	38.0
32		20.214	1.04	112		---	5.97
33	21/33	23.354	1.04	(500)		---	33.2
34		21.653	0.94	20.7		---	4.45
35		27.021	1.12	13.8	J	---	4.05
36		---	---	ND		---	4.06
37		27.470	1.04	258		---	13.0
38		---	---	ND		---	5.32
39		---	---	ND		---	4.91
40	40/41/71	27.284	0.79	480		---	16.8
41	40/41/71	27.284	0.79	(480)		---	16.8
42		26.758	0.75	318		---	8.47
43	43/73	25.366	0.76	29.9	J	---	9.67
44	44/47/65	26.170	0.77	1460		---	39.5

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID WCDMACS001
Lab Sample ID 40219343006-R
Filename P210115A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	23.184	0.77	164		---	13.7
46		23.525	0.80	60.0		---	4.77
47	44/47/65	26.170	0.77	(1460)		---	39.5
48		25.969	0.77	113		---	5.80
49	49/69	25.644	0.79	1130		---	14.6
50	50/53	22.442	0.79	170		---	11.9
51	45/51	23.184	0.77	(164)		---	13.7
52		25.103	0.77	2620		---	29.7
53	50/53	22.442	0.79	(170)		---	11.9
54		20.013	0.86	5.93	J	---	2.72
55		30.803	0.92	---	IJ	14.4	4.62
56		31.360	0.77	577		---	14.1
57		29.194	0.67	11.0	J	---	4.20
58		29.457	0.80	18.4	J	---	4.43
59	59/62/75	26.542	0.80	92.5		---	13.7
60		31.607	0.78	142		---	9.97
61	61/70/74/76	30.277	0.77	2370		---	40.0
62	59/62/75	26.542	0.80	(92.5)		---	13.7
63		29.936	0.78	62.8		---	4.46
64		27.532	0.78	491		---	14.9
65	44/47/65	26.170	0.77	(1460)		---	39.5
66		30.648	0.78	1320		---	4.97
67		29.658	0.84	27.8		---	3.56
68		28.776	0.80	31.2		---	4.97
69	49/69	25.644	0.79	(1130)		---	14.6
70	61/70/74/76	30.277	0.77	(2370)		---	40.0
71	40/41/71	27.284	0.79	(480)		---	16.8
72		28.466	0.80	45.6		---	4.52
73	43/73	25.366	0.76	(29.9)	J	---	9.67
74	61/70/74/76	30.277	0.77	(2370)		---	40.0
75	59/62/75	26.542	0.80	(92.5)		---	13.7
76	61/70/74/76	30.277	0.77	(2370)		---	40.0
77		35.228	0.80	141		---	4.87
78		---	---	ND		---	4.22
79		33.572	0.77	42.9		---	3.15
80		31.963	0.76	28.4		---	3.77
81		34.593	0.95	---	IJ	5.99	5.14
82		34.810	1.58	284		---	5.54
83		32.953	1.56	270		---	4.11
84		30.493	1.55	1120		---	7.58
85	85/116/117	34.330	1.53	754		---	9.57
86	86/87/97/108/119/125	33.665	1.53	2940		---	19.3
87	86/87/97/108/119/125	33.665	1.53	(2940)		---	19.3
88	88/91	30.261	1.53	550		---	7.28

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
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R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID WCDMACS001
Lab Sample ID 40219343006-R
Filename P210115A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		31.004	1.72	34.4		---	5.50
90	90/101/113	32.505	1.55	4360		---	16.7
91	88/91	30.261	1.53	(550)		---	7.28
92		31.948	1.58	930		---	3.80
93	93/98/100/102	29.735	1.51	141		---	16.8
94		28.869	1.48	17.2	J	---	4.93
95		29.333	1.53	2890		---	19.9
96		26.526	1.54	24.2		---	4.30
97	86/87/97/108/119/125	33.665	1.53	(2940)		---	19.3
98	93/98/100/102	29.735	1.51	(141)		---	16.8
99		33.092	1.55	1940		---	8.81
100	93/98/100/102	29.735	1.51	(141)		---	16.8
101	90/101/113	32.505	1.55	(4360)		---	16.7
102	93/98/100/102	29.735	1.51	(141)		---	16.8
103		28.652	1.48	40.9		---	4.75
104		---	---	ND		---	5.76
105		38.810	1.55	1480		---	10.2
106		---	---	ND		---	2.50
107	107/124	36.899	1.56	131		---	6.60
108	86/87/97/108/119/125	33.665	1.53	(2940)		---	19.3
109		37.150	1.55	338		---	3.29
110	110/115	34.485	1.55	5690		---	27.0
111		---	---	ND		---	4.64
112		---	---	ND		---	4.75
113	90/101/113	32.505	1.55	(4360)		---	16.7
114		38.173	1.65	60.8		---	4.64
115	110/115	34.485	1.55	(5690)		---	27.0
116	85/116/117	34.330	1.53	(754)		---	9.57
117	85/116/117	34.330	1.53	(754)		---	9.57
118		37.603	1.55	4090		---	18.3
119	86/87/97/108/119/125	33.665	1.53	(2940)		---	19.3
120		35.722	1.59	24.6		---	4.17
121		---	---	ND		---	4.23
122		37.955	1.57	38.8		---	3.64
123		37.268	1.65	75.0		---	6.00
124	107/124	36.899	1.56	(131)		---	6.60
125	86/87/97/108/119/125	33.665	1.53	(2940)		---	19.3
126		41.946	1.69	12.0	J	---	6.38
127		40.353	1.48	7.00	J	---	3.59
128	128/166	42.063	1.22	894		---	9.17
129	129/138/163	40.789	1.23	5080		---	23.7
130		40.118	1.22	369		---	5.42
131		37.234	1.21	81.1		---	4.38
132		37.687	1.22	1160		---	7.75

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID WCDMACS001
Lab Sample ID 40219343006-R
Filename P210115A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		38.240	1.25	67.0		---	4.66
134	134/143	36.613	1.25	258		---	10.1
135	135/151	35.459	1.24	1060		---	6.38
136		32.968	1.22	476		---	3.68
137		40.353	1.17	234		---	5.61
138	129/138/163	40.789	1.23	(5080)		---	23.7
139	139/140	37.033	1.22	98.2		---	9.97
140	139/140	37.033	1.22	(98.2)		---	9.97
141		39.716	1.24	631		---	6.22
142		---	---	ND		---	5.15
143	134/143	36.613	1.25	(258)		---	10.1
144		36.047	1.27	148		---	3.06
145		---	---	ND		---	4.64
146		38.894	1.25	584		---	3.25
147	147/149	36.412	1.24	2820		---	15.5
148		---	---	ND		---	4.85
149	147/149	36.412	1.24	(2820)		---	15.5
150		32.644	1.17	4.82	J	---	3.59
151	135/151	35.459	1.24	(1060)		---	6.38
152		---	---	ND		---	4.96
153	153/168	39.515	1.26	3130		---	15.2
154		35.738	1.21	45.0		---	3.25
155		---	---	ND		---	4.83
156	156/157	45.020	1.26	632		---	9.37
157	156/157	45.020	1.26	(632)		---	9.37
158		41.192	1.24	400		---	2.83
159		43.058	1.06	9.44	J	---	4.39
160		---	---	ND		---	4.50
161		---	---	ND		---	4.00
162		43.377	1.33	19.8	J	---	3.50
163	129/138/163	40.789	1.23	(5080)		---	23.7
164		40.471	1.19	314		---	4.10
165		---	---	ND		---	5.04
166	128/166	42.063	1.22	(894)		---	9.17
167		43.880	1.22	202		---	4.50
168	153/168	39.515	1.26	(3130)		---	15.2
169		---	---	ND		---	4.69
170		47.703	1.03	645		---	4.29
171	171/173	44.131	1.01	213		---	5.72
172		45.775	0.96	105		---	3.68
173	171/173	44.131	1.01	(213)		---	5.72
174		43.025	1.04	568		---	4.07
175		41.896	1.02	25.4		---	3.90
176		39.381	1.03	74.4		---	3.69

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Results reported on a dry weight basis

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID WCDMACS001
Lab Sample ID 40219343006-R
Filename P210115A_10

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		43.477	1.02	381		---	3.04
178		41.242	1.06	115		---	5.36
179		38.475	1.06	211		---	3.17
180	180/193	46.446	1.01	1160		---	7.98
181		43.896	1.06	10.6	J	---	4.80
182		42.382	1.53	---	IJ	3.76	2.23
183	183/185	42.806	1.01	377		---	6.18
184		---	---	ND		---	3.78
185	183/185	42.806	1.01	(377)		---	6.18
186		---	---	ND		---	4.23
187		42.164	1.05	585		---	5.48
188		---	---	ND		---	4.65
189		50.894	1.06	29.8		---	5.89
190		48.257	1.04	116		---	4.37
191		46.781	1.05	23.9		---	4.35
192		---	---	ND		---	3.75
193	180/193	46.446	1.01	(1160)		---	7.98
194		52.985	0.86	231		---	3.74
195		50.635	0.87	93.8		---	3.92
196		49.078	0.86	119		---	3.75
197	197/200	45.557	0.92	41.6		---	5.98
198	198/199	48.424	0.90	286		---	7.98
199	198/199	48.424	0.90	(286)		---	7.98
200	197/200	45.557	0.92	(41.6)		---	5.98
201		44.550	0.82	32.6		---	3.58
202		43.611	0.87	61.5		---	4.53
203		49.296	0.91	161		---	2.27
204		---	---	ND		---	4.30
205		53.480	0.95	12.8	J	---	5.19
206		55.226	0.78	155		---	6.08
207		51.325	0.69	18.7	J	---	4.02
208		50.377	0.84	51.1		---	4.62
209		56.843	0.70	93.0		---	12.6

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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	WCDMACS001
Lab Sample ID	40219343006-R
Filename	P210115A_10

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	107
Total Dichloro Biphenyls	707
Total Trichloro Biphenyls	3340
Total Tetrachloro Biphenyls	11900
Total Pentachloro Biphenyls	28300
Total Hexachloro Biphenyls	18700
Total Heptachloro Biphenyls	4640
Total Octachloro Biphenyls	1040
Total Nonachloro Biphenyls	225
DecachloroBiphenyls	93.0
Total PCBs	69100

ND = Not Detected
Results reported on a dry weight basis

Pace Analytical Services, LLC
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Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DUP-2		
Lab Sample ID	40219343007-R		
Filename	P210115A_09		
Injected By	CVS		
Total Amount Extracted	24.8 g	Matrix	Solid
% Moisture	59.6	Dilution	NA
Dry Weight Extracted	10.0 g	Collected	12/02/2020
ICAL ID	P210115A02	Received	12/31/2020 08:50
CCal Filename(s)	P210115A_01	Extracted	01/11/2021 14:05
Method Blank ID	BLANK-85487	Analyzed	01/15/2021 20:38

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	9.469	2.89	2.0	0.819	41
13C-4-MoCB	3	12.285	3.16	2.0	0.946	47
13C-2,2'-DiCB	4	12.568	1.53	2.0	1.19	60
13C-4,4'-DiCB	15	19.664	1.61	2.0	0.990	49
13C-2,2',6-TrCB	19	16.381	1.08	2.0	1.42	71
13C-3,4,4'-TrCB	37	27.440	1.14	2.0	0.866	43
13C-2,2',6,6'-TeCB	54	19.982	0.86	2.0	0.680	34
13C-3,4,4',5-TeCB	81	34.579	0.76	2.0	0.757	38
13C-3,3',4,4'-TeCB	77	35.151	0.80	2.0	0.802	40
13C-2,2',4,6,6'-PeCB	104	26.125	1.58	2.0	0.848	42
13C-2,3,3',4,4'-PeCB	105	38.761	1.52	2.0	0.690	35
13C-2,3,4,4',5-PeCB	114	38.107	1.58	2.0	0.705	35
13C-2,3',4,4',5-PeCB	118	37.554	1.57	2.0	0.696	35
13C-2,3',4,4',5'-PeCB	123	37.219	1.61	2.0	0.689	34
13C-3,3',4,4',5-PeCB	126	41.931	1.54	2.0	0.721	36
13C-2,2',4,4',6,6'-HxCB	155	32.227	1.28	2.0	0.957	48
13C-HxCB(156/157)	156/157	44.988	1.29	4.0	1.48	37
13C-2,3',4,4',5,5'-HxCB	167	43.831	1.25	2.0	0.746	37
13C-3,3',4,4',5,5'-HxCB	169	48.292	1.26	2.0	0.758	38
13C-2,2',3,4',5,6,6'-HpCB	188	38.107	1.03	2.0	1.06	53
13C-2,3,3',4,4',5,5'-HpCB	189	50.836	1.11	2.0	0.834	42
13C-2,2',3,3',5,5',6,6'-OcCB	202	43.563	0.92	2.0	0.956	48
13C-2,3,3',4,4',5,5',6-OcCB	205	53.444	0.85	2.0	0.819	41
13C-2,2',3,3',4,4',5,5',6-NoCB	206	55.190	0.83	2.0	0.841	42
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	50.362	0.77	2.0	0.841	42
13C-DeCB	209	56.806	0.66	2.0	0.927	46
CleanupStandards						
13C-2,4,4'-TrCB	28	23.076	0.90	2.0	1.37	69
13C-2,3,3',5,5'-PeCB	111	35.198	1.52	2.0	1.48	74
13C-2,2',3,3',5,5',6-HpCB	178	41.210	1.09	2.0	1.75	87
Recovery Standards						
13C-2,5-DiCB	9	15.043	1.58	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.072	0.86	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	32.413	1.52	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	40.740	1.22	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	52.948	0.85	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-2
Lab Sample ID 40219343007-R
Filename P210115A_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		9.492	2.76	13.2	J	---	3.06
2		12.070	3.20	19.1	J	---	3.52
3		12.308	3.11	27.5		---	5.48
4		12.590	0.57	---	I	36.9	7.08
5		---	---	ND		---	3.35
6		15.541	1.02	---	I	38.9	3.84
7		---	---	ND		---	4.38
8		16.060	1.45	107		---	7.28
9		---	---	ND		---	3.88
10		---	---	ND		---	2.67
11		18.968	1.37	235		---	116
12	12/13	19.299	0.55	---	IJ	35.7	7.17
13	12/13	19.299	0.55	---	IJ	(35.7)	7.17
14		---	---	ND		---	2.74
15		19.686	1.39	119		---	6.55
16		19.587	1.00	46.4		---	8.45
17		19.100	1.05	76.9	B	---	6.93
18	18/30	18.614	1.07	89.3		---	12.3
19		16.414	1.05	13.4	J	---	3.96
20	20/28	23.108	1.03	399		---	34.1
21	21/33	23.355	1.01	251		---	33.2
22		23.788	1.04	93.8		---	21.0
23		---	---	ND		---	5.33
24		---	---	ND		---	3.18
25		22.411	1.11	83.6		---	3.66
26	26/29	22.163	1.02	109		---	8.66
27		19.354	1.08	14.7	J	---	2.80
28	20/28	23.108	1.03	(399)		---	34.1
29	26/29	22.163	1.02	(109)		---	8.66
30	18/30	18.614	1.07	(89.3)		---	12.3
31		22.767	1.01	248		---	37.9
32		20.214	1.11	50.0		---	5.96
33	21/33	23.355	1.01	(251)		---	33.2
34		21.653	0.95	10.1	J	---	4.44
35		27.038	1.63	---	IJ	8.92	4.04
36		---	---	ND		---	4.05
37		27.471	1.03	154		---	12.9
38		---	---	ND		---	5.31
39		---	---	ND		---	4.90
40	40/41/71	27.270	0.80	338		---	16.7
41	40/41/71	27.270	0.80	(338)		---	16.7
42		26.759	0.82	217		---	8.45
43	43/73	25.351	0.77	15.8	J	---	9.66
44	44/47/65	26.171	0.78	863		---	39.4

Conc = Concentration
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-2
Lab Sample ID 40219343007-R
Filename P210115A_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	23.185	0.73	89.3		---	13.6
46		23.525	0.75	34.8		---	4.76
47	44/47/65	26.171	0.78	(863)		---	39.4
48		25.954	0.81	77.6		---	5.79
49	49/69	25.645	0.79	686		---	14.5
50	50/53	22.442	0.76	84.3		---	11.8
51	45/51	23.185	0.73	(89.3)		---	13.6
52		25.103	0.77	1320		---	29.7
53	50/53	22.442	0.76	(84.3)		---	11.8
54		---	---	ND		---	2.72
55		---	---	ND		---	4.61
56		31.330	0.78	385		---	14.0
57		29.179	0.76	5.66	J	---	4.19
58		29.442	0.67	11.9	J	---	4.42
59	59/62/75	26.542	0.77	62.2		---	13.6
60		31.593	0.79	96.1		---	9.96
61	61/70/74/76	30.247	0.79	1460		---	39.9
62	59/62/75	26.542	0.77	(62.2)		---	13.6
63		29.922	0.91	---	I	38.8	4.45
64		27.517	0.77	331		---	14.8
65	44/47/65	26.171	0.78	(863)		---	39.4
66		30.618	0.80	871		---	4.96
67		29.628	0.74	18.6	J	---	3.55
68		28.761	0.68	21.2		---	4.96
69	49/69	25.645	0.79	(686)		---	14.5
70	61/70/74/76	30.247	0.79	(1460)		---	39.9
71	40/41/71	27.270	0.80	(338)		---	16.7
72		28.437	0.76	28.3		---	4.51
73	43/73	25.351	0.77	(15.8)	J	---	9.66
74	61/70/74/76	30.247	0.79	(1460)		---	39.9
75	59/62/75	26.542	0.77	(62.2)		---	13.6
76	61/70/74/76	30.247	0.79	(1460)		---	39.9
77		35.182	0.75	92.5		---	4.86
78		---	---	ND		---	4.21
79		33.542	0.85	19.7	J	---	3.15
80		---	---	ND		---	3.76
81		---	---	ND		---	5.13
82		34.795	1.52	248		---	5.54
83		32.908	1.57	157		---	4.10
84		30.463	1.59	596		---	7.57
85	85/116/117	34.300	1.49	404		---	9.56
86	86/87/97/108/119/125	33.651	1.51	1570		---	19.3
87	86/87/97/108/119/125	33.651	1.51	(1570)		---	19.3
88	88/91	30.247	1.50	313		---	7.27

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference
ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-2
Lab Sample ID 40219343007-R
Filename P210115A_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		30.974	1.58	21.3		---	5.50
90	90/101/113	32.444	1.53	2360		---	16.6
91	88/91	30.247	1.50	(313)		---	7.27
92		31.902	1.49	503		---	3.79
93	93/98/100/102	29.721	1.50	80.8		---	16.7
94		28.854	1.70	9.75	J	---	4.92
95		29.319	1.52	1520		---	19.9
96		26.511	1.29	---	IJ	11.6	4.29
97	86/87/97/108/119/125	33.651	1.51	(1570)		---	19.3
98	93/98/100/102	29.721	1.50	(80.8)		---	16.7
99		33.047	1.54	1130		---	8.79
100	93/98/100/102	29.721	1.50	(80.8)		---	16.7
101	90/101/113	32.444	1.53	(2360)		---	16.6
102	93/98/100/102	29.721	1.50	(80.8)		---	16.7
103		28.638	1.76	25.3		---	4.74
104		---	---	ND		---	5.75
105		38.795	1.53	765		---	10.2
106		---	---	ND		---	2.50
107	107/124	36.883	1.53	67.1		---	6.59
108	86/87/97/108/119/125	33.651	1.51	(1570)		---	19.3
109		37.118	1.57	188		---	3.29
110	110/115	34.471	1.56	3100		---	27.0
111		---	---	ND		---	4.63
112		---	---	ND		---	4.74
113	90/101/113	32.444	1.53	(2360)		---	16.6
114		38.158	1.46	30.8		---	4.63
115	110/115	34.471	1.56	(3100)		---	27.0
116	85/116/117	34.300	1.49	(404)		---	9.56
117	85/116/117	34.300	1.49	(404)		---	9.56
118		37.588	1.58	2200		---	18.3
119	86/87/97/108/119/125	33.651	1.51	(1570)		---	19.3
120		35.708	1.76	16.6	J	---	4.16
121		---	---	ND		---	4.22
122		37.923	1.48	21.0		---	3.63
123		37.252	1.63	37.8		---	5.99
124	107/124	36.883	1.53	(67.1)		---	6.59
125	86/87/97/108/119/125	33.651	1.51	(1570)		---	19.3
126		41.948	1.38	7.68	J	---	6.37
127		---	---	ND		---	3.58
128	128/166	42.065	1.19	486		---	9.16
129	129/138/163	40.774	1.28	2760		---	23.7
130		40.103	1.30	207		---	5.42
131		37.202	1.28	43.9		---	4.37
132		37.671	1.20	656		---	7.74

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-2
Lab Sample ID 40219343007-R
Filename P210115A_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
133		38.208	1.19	36.9	---	4.65
134	134/143	36.582	1.16	148	---	10.1
135	135/151	35.414	1.23	651	---	6.37
136		32.923	1.24	274	---	3.67
137		40.338	1.23	128	---	5.61
138	129/138/163	40.774	1.28	(2760)	---	23.7
139	139/140	37.017	1.26	53.9	---	9.96
140	139/140	37.017	1.26	(53.9)	---	9.96
141		39.701	1.24	350	---	6.21
142		---	---	ND	---	5.14
143	134/143	36.582	1.16	(148)	---	10.1
144		36.018	1.21	88.2	---	3.06
145		---	---	ND	---	4.63
146		38.862	1.25	336	---	3.25
147	147/149	36.380	1.23	1550	---	15.4
148		---	---	ND	---	4.84
149	147/149	36.380	1.23	(1550)	---	15.4
150		---	---	ND	---	3.58
151	135/151	35.414	1.23	(651)	---	6.37
152		---	---	ND	---	4.95
153	153/168	39.516	1.24	1730	---	15.1
154		35.708	1.10	27.4	---	3.25
155		---	---	ND	---	4.82
156	156/157	45.005	1.26	364	---	9.36
157	156/157	45.005	1.26	(364)	---	9.36
158		41.176	1.31	221	---	2.83
159		---	---	ND	---	4.38
160		---	---	ND	---	4.49
161		---	---	ND	---	3.99
162		43.345	1.20	8.44 J	---	3.49
163	129/138/163	40.774	1.28	(2760)	---	23.7
164		40.455	1.32	181	---	4.09
165		---	---	ND	---	5.03
166	128/166	42.065	1.19	(486)	---	9.16
167		43.848	1.23	119	---	4.49
168	153/168	39.516	1.24	(1730)	---	15.1
169		---	---	ND	---	4.68
170		47.705	1.06	351	---	4.28
171	171/173	44.116	1.01	117	---	5.71
172		45.777	1.11	62.0	---	3.67
173	171/173	44.116	1.01	(117)	---	5.71
174		43.026	0.99	310	---	4.06
175		41.881	0.98	14.0 J	---	3.89
176		39.365	1.08	41.4	---	3.68

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DUP-2
Lab Sample ID 40219343007-R
Filename P210115A_09

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		43.462	1.04	206		---	3.04
178		41.227	0.97	61.5		---	5.35
179		38.460	1.07	121		---	3.17
180	180/193	46.431	1.04	628		---	7.96
181		---	---	ND		---	4.79
182		---	---	ND		---	2.23
183	183/185	42.792	1.04	208		---	6.17
184		---	---	ND		---	3.77
185	183/185	42.792	1.04	(208)		---	6.17
186		---	---	ND		---	4.22
187		42.166	1.00	335		---	5.48
188		---	---	ND		---	4.64
189		50.879	1.18	18.6	J	---	5.88
190		48.242	1.00	63.8		---	4.36
191		46.799	1.11	14.1	J	---	4.34
192		---	---	ND		---	3.74
193	180/193	46.431	1.04	(628)		---	7.96
194		52.970	0.81	127		---	3.73
195		50.620	0.83	46.7		---	3.91
196		49.080	0.86	64.9		---	3.74
197	197/200	45.592	0.96	22.1	J	---	5.97
198	198/199	48.409	0.87	152		---	7.96
199	198/199	48.409	0.87	(152)		---	7.96
200	197/200	45.592	0.96	(22.1)	J	---	5.97
201		44.552	0.87	19.5	J	---	3.57
202		43.597	0.85	35.0		---	4.52
203		49.281	0.99	87.0		---	2.27
204		---	---	ND		---	4.29
205		53.466	1.00	6.96	J	---	5.18
206		55.211	0.70	86.5		---	6.07
207		51.310	0.69	8.28	J	---	4.01
208		50.362	0.73	26.2		---	4.61
209		56.828	0.75	51.2		---	12.5

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DUP-2
Lab Sample ID	40219343007-R
Filename	P210115A_09

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	59.8
Total Dichloro Biphenyls	461
Total Trichloro Biphenyls	1640
Total Tetrachloro Biphenyls	7130
Total Pentachloro Biphenyls	15400
Total Hexachloro Biphenyls	10400
Total Heptachloro Biphenyls	2550
Total Octachloro Biphenyls	561
Total Nonachloro Biphenyls	121
DecachloroBiphenyls	51.2
Total PCBs	38400

ND = Not Detected
Results reported on a dry weight basis

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl Sample Analysis Results

Client - PACE Wisconsin

Client's Sample ID	DSRBG001 (0.0-0.5)		
Lab Sample ID	40219343008-R		
Filename	P210115A_08		
Injected By	CVS		
Total Amount Extracted	8.94 g	Matrix	Solid
% Moisture	72.3	Dilution	NA
Dry Weight Extracted	2.48 g	Collected	12/02/2020 11:40
ICAL ID	P210115A02	Received	12/31/2020 08:50
CCal Filename(s)	P210115A_01	Extracted	01/11/2021 14:05
Method Blank ID	BLANK-85487	Analyzed	01/15/2021 19:37

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	9.469	3.16	2.0	0.939	47
13C-4-MoCB	3	12.285	3.06	2.0	1.22	61
13C-2,2'-DiCB	4	12.568	1.51	2.0	1.55	77
13C-4,4'-DiCB	15	19.652	1.52	2.0	1.52	76
13C-2,2',6-TrCB	19	16.380	1.03	2.0	1.58	79
13C-3,4,4'-TrCB	37	27.438	1.12	2.0	1.34	67
13C-2,2',6,6'-TeCB	54	19.966	0.87	2.0	1.12	56
13C-3,4,4',5-TeCB	81	34.562	0.78	2.0	1.28	64
13C-3,3',4,4'-TeCB	77	35.150	0.79	2.0	1.38	69
13C-2,2',4,6,6'-PeCB	104	26.108	1.59	2.0	1.53	77
13C-2,3,3',4,4'-PeCB	105	38.760	1.56	2.0	1.24	62
13C-2,3,4,4',5-PeCB	114	38.105	1.56	2.0	1.25	63
13C-2,3',4,4',5-PeCB	118	37.552	1.59	2.0	1.25	63
13C-2,3',4,4',5'-PeCB	123	37.217	1.56	2.0	1.28	64
13C-3,3',4,4',5-PeCB	126	41.929	1.53	2.0	1.34	67
13C-2,2',4,4',6,6'-HxCB	155	32.194	1.24	2.0	1.69	85
13C-HxCB(156/157)	156/157	45.003	1.26	4.0	2.66	67
13C-2,3',4,4',5,5'-HxCB	167	43.829	1.26	2.0	1.39	69
13C-3,3',4,4',5,5'-HxCB	169	48.273	1.29	2.0	1.32	66
13C-2,2',3,4',5,6,6'-HpCB	188	38.089	1.00	2.0	1.86	93
13C-2,3,3',4,4',5,5'-HpCB	189	50.829	1.06	2.0	1.51	75
13C-2,2',3,3',5,5',6,6'-OcCB	202	43.561	0.88	2.0	1.70	85
13C-2,3,3',4,4',5,5',6-OcCB	205	53.437	0.82	2.0	1.44	72
13C-2,2',3,3',4,4',5,5',6-NoCB	206	55.183	0.84	2.0	1.52	76
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	50.333	0.80	2.0	1.59	80
13C-DeCB	209	56.778	0.71	2.0	1.66	83
CleanupStandards						
13C-2,4,4'-TrCB	28	23.075	1.10	2.0	1.30	65
13C-2,3,3',5,5'-PeCB	111	35.196	1.61	2.0	1.47	74
13C-2,2',3,3',5,5',6-HpCB	178	41.191	1.04	2.0	1.79	90
Recovery Standards						
13C-2,5-DiCB	9	15.054	1.51	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.071	0.77	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	32.396	1.48	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	40.738	1.27	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	52.942	0.88	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
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REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG001 (0.0-0.5)
Lab Sample ID 40219343008-R
Filename P210115A_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		9.492	2.74	24.0	J	---	12.4
2		12.082	2.72	37.1	J	---	14.3
3		12.297	2.70	51.3	J	---	22.2
4		12.591	1.00	---	IJ	46.2	28.7
5		---	---	ND		---	13.6
6		15.540	1.41	51.0	J	---	15.6
7		---	---	ND		---	17.8
8		16.060	0.94	---	I	180	29.5
9		---	---	ND		---	15.7
10		---	---	ND		---	10.8
11		18.967	1.64	638		---	472
12	12/13	---	---	ND		---	29.1
13	12/13	---	---	ND		---	29.1
14		---	---	ND		---	11.1
15		19.685	1.56	182		---	26.6
16		19.597	0.99	85.0		---	34.3
17		19.088	1.03	114		---	28.1
18	18/30	18.591	0.99	149	J	---	50.1
19		16.403	1.16	22.2	J	---	16.1
20	20/28	23.106	1.07	664		---	139
21	21/33	23.354	1.09	493		---	134
22		23.771	1.14	163		---	85.2
23		---	---	ND		---	21.6
24		---	---	ND		---	12.9
25		22.410	1.10	98.8		---	14.9
26	26/29	22.147	1.13	124	J	---	35.1
27		19.331	1.11	21.4	J	---	11.3
28	20/28	23.106	1.07	(664)		---	139
29	26/29	22.147	1.13	(124)	J	---	35.1
30	18/30	18.591	0.99	(149)	J	---	50.1
31		22.766	1.06	392		---	154
32		20.198	1.04	82.1		---	24.2
33	21/33	23.354	1.09	(493)		---	134
34		21.652	0.95	20.7	J	---	18.0
35		27.021	1.04	25.0	J	---	16.4
36		---	---	ND		---	16.4
37		27.469	1.00	255		---	52.5
38		---	---	ND		---	21.5
39		---	---	ND		---	19.9
40	40/41/71	27.268	0.79	439		---	67.8
41	40/41/71	27.268	0.79	(439)		---	67.8
42		26.742	0.79	281		---	34.3
43	43/73	---	---	ND		---	39.2
44	44/47/65	26.154	0.80	1060		---	160

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Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG001 (0.0-0.5)
Lab Sample ID 40219343008-R
Filename P210115A_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
45	45/51	23.168	0.76	126	J	---	55.3
46		23.508	0.86	43.1	J	---	19.3
47	44/47/65	26.154	0.80	(1060)		---	160
48		25.938	0.70	105		---	23.5
49	49/69	25.628	0.77	832		---	59.0
50	50/53	22.426	0.80	103	J	---	48.1
51	45/51	23.168	0.76	(126)	J	---	55.3
52		25.102	0.79	1600		---	120
53	50/53	22.426	0.80	(103)	J	---	48.1
54		---	---	ND		---	11.0
55		---	---	ND		---	18.7
56		31.328	0.77	508		---	56.9
57		---	---	ND		---	17.0
58		29.425	0.75	18.4	J	---	17.9
59	59/62/75	26.587	0.70	78.0	J	---	55.3
60		31.560	0.81	124		---	40.4
61	61/70/74/76	30.245	0.76	1880		---	162
62	59/62/75	26.587	0.70	(78.0)	J	---	55.3
63		29.905	0.82	58.1	J	---	18.1
64		27.516	0.78	407		---	60.2
65	44/47/65	26.154	0.80	(1060)		---	160
66		30.601	0.78	1170		---	20.1
67		29.626	0.66	26.8	J	---	14.4
68		28.744	0.81	32.7	J	---	20.1
69	49/69	25.628	0.77	(832)		---	59.0
70	61/70/74/76	30.245	0.76	(1880)		---	162
71	40/41/71	27.268	0.79	(439)		---	67.8
72		28.435	0.88	38.9	J	---	18.3
73	43/73	---	---	ND		---	39.2
74	61/70/74/76	30.245	0.76	(1880)		---	162
75	59/62/75	26.587	0.70	(78.0)	J	---	55.3
76	61/70/74/76	30.245	0.76	(1880)		---	162
77		35.180	0.79	117		---	19.7
78		---	---	ND		---	17.1
79		33.540	0.69	31.1	J	---	12.8
80		---	---	ND		---	15.3
81		---	---	ND		---	20.8
82		34.793	1.70	318		---	22.5
83		32.891	1.48	198		---	16.6
84		30.446	1.49	737		---	30.7
85	85/116/117	34.299	1.58	509		---	38.8
86	86/87/97/108/119/125	33.540	1.54	1950		---	78.3
87	86/87/97/108/119/125	33.540	1.54	(1950)		---	78.3
88	88/91	30.245	1.48	406		---	29.5

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
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RT = Retention Time
I = Interference
ng's = Nanograms

Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG001 (0.0-0.5)
Lab Sample ID 40219343008-R
Filename P210115A_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
89		30.957	1.50	26.9	J	---	22.3
90	90/101/113	32.426	1.56	2930		---	67.4
91	88/91	30.245	1.48	(406)		---	29.5
92		31.839	1.50	633		---	15.4
93	93/98/100/102	29.704	1.63	105	J	---	67.8
94		---	---	ND		---	19.9
95		29.302	1.60	1970		---	80.8
96		---	---	ND		---	17.4
97	86/87/97/108/119/125	33.540	1.54	(1950)		---	78.3
98	93/98/100/102	29.704	1.63	(105)	J	---	67.8
99		33.030	1.60	1410		---	35.7
100	93/98/100/102	29.704	1.63	(105)	J	---	67.8
101	90/101/113	32.426	1.56	(2930)		---	67.4
102	93/98/100/102	29.704	1.63	(105)	J	---	67.8
103		28.605	1.18	---	IJ	31.0	19.2
104		---	---	ND		---	23.3
105		38.777	1.54	933		---	41.2
106		---	---	ND		---	10.1
107	107/124	36.882	1.55	82.6	J	---	26.7
108	86/87/97/108/119/125	33.540	1.54	(1950)		---	78.3
109		37.116	1.61	245		---	13.3
110	110/115	34.453	1.57	3800		---	109
111		---	---	ND		---	18.8
112		---	---	ND		---	19.2
113	90/101/113	32.426	1.56	(2930)		---	67.4
114		38.122	1.72	43.7	J	---	18.8
115	110/115	34.453	1.57	(3800)		---	109
116	85/116/117	34.299	1.58	(509)		---	38.8
117	85/116/117	34.299	1.58	(509)		---	38.8
118		37.586	1.53	2860		---	74.3
119	86/87/97/108/119/125	33.540	1.54	(1950)		---	78.3
120		35.691	1.40	21.9	J	---	16.9
121		---	---	ND		---	17.1
122		37.921	1.70	40.4	J	---	14.7
123		37.217	1.46	52.8	J	---	24.3
124	107/124	36.882	1.55	(82.6)	J	---	26.7
125	86/87/97/108/119/125	33.540	1.54	(1950)		---	78.3
126		---	---	ND		---	25.8
127		---	---	ND		---	14.5
128	128/166	42.047	1.22	625		---	37.2
129	129/138/163	40.772	1.21	3480		---	96.1
130		40.101	1.28	258		---	22.0
131		37.200	1.15	53.4	J	---	17.7
132		37.653	1.25	985		---	31.4

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Results reported on a dry weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG001 (0.0-0.5)
Lab Sample ID 40219343008-R
Filename P210115A_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
133		38.189	1.52	---	IJ	43.7	18.9
134	134/143	36.580	1.23	202		---	40.8
135	135/151	35.412	1.24	802		---	25.8
136		32.906	1.21	343		---	14.9
137		40.336	1.21	176		---	22.7
138	129/138/163	40.772	1.21	(3480)		---	96.1
139	139/140	36.999	1.20	69.5	J	---	40.4
140	139/140	36.999	1.20	(69.5)	J	---	40.4
141		39.699	1.26	429		---	25.2
142		---	---	ND		---	20.8
143	134/143	36.580	1.23	(202)		---	40.8
144		36.000	1.11	107		---	12.4
145		---	---	ND		---	18.8
146		38.860	1.27	437		---	13.2
147	147/149	36.378	1.24	2010		---	62.6
148		---	---	ND		---	19.6
149	147/149	36.378	1.24	(2010)		---	62.6
150		---	---	ND		---	14.5
151	135/151	35.412	1.24	(802)		---	25.8
152		---	---	ND		---	20.1
153	153/168	39.498	1.24	2200		---	61.4
154		35.722	1.28	36.8	J	---	13.2
155		---	---	ND		---	19.5
156	156/157	45.003	1.21	452		---	38.0
157	156/157	45.003	1.21	(452)		---	38.0
158		41.175	1.21	280		---	11.5
159		---	---	ND		---	17.8
160		---	---	ND		---	18.2
161		---	---	ND		---	16.2
162		---	---	ND		---	14.2
163	129/138/163	40.772	1.21	(3480)		---	96.1
164		40.437	1.25	222		---	16.6
165		---	---	ND		---	20.4
166	128/166	42.047	1.22	(625)		---	37.2
167		43.846	1.13	144		---	18.2
168	153/168	39.498	1.24	(2200)		---	61.4
169		---	---	ND		---	19.0
170		47.686	1.05	476		---	17.4
171	171/173	44.098	1.05	159	J	---	23.2
172		45.741	1.03	79.5	J	---	14.9
173	171/173	44.098	1.05	(159)	J	---	23.2
174		43.008	0.96	424		---	16.5
175		41.862	1.00	20.2	J	---	15.8
176		39.363	1.01	55.7	J	---	14.9

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Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID DSRBG001 (0.0-0.5)
Lab Sample ID 40219343008-R
Filename P210115A_08

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
177		43.461	1.00	285		---	12.3
178		41.225	1.12	88.1		---	21.7
179		38.441	1.07	160		---	12.8
180	180/193	46.412	1.06	865		---	32.3
181		---	---	ND		---	19.4
182		---	---	ND		---	9.05
183	183/185	42.790	1.03	278		---	25.0
184		---	---	ND		---	15.3
185	183/185	42.790	1.03	(278)		---	25.0
186		---	---	ND		---	17.1
187		42.147	1.05	429		---	22.2
188		---	---	ND		---	18.8
189		---	---	ND		---	23.9
190		48.239	0.98	86.9		---	17.7
191		46.781	1.14	19.6	J	---	17.6
192		---	---	ND		---	15.2
193	180/193	46.412	1.06	(865)		---	32.3
194		52.963	0.88	181		---	15.1
195		50.592	0.92	68.5	J	---	15.9
196		49.061	0.91	92.9		---	15.2
197	197/200	45.556	0.93	30.6	J	---	24.2
198	198/199	48.407	0.89	222		---	32.3
199	198/199	48.407	0.89	(222)		---	32.3
200	197/200	45.556	0.93	(30.6)	J	---	24.2
201		44.550	0.86	25.6	J	---	14.5
202		43.578	0.83	47.6	J	---	18.3
203		49.279	0.87	124		---	9.21
204		---	---	ND		---	17.4
205		---	---	ND		---	21.0
206		55.205	0.77	117		---	24.6
207		---	---	ND		---	16.3
208		50.355	0.65	33.9	J	---	18.7
209		56.800	0.61	68.0	J	---	50.9

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REPORT OF LABORATORY ANALYSIS

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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Sample Analysis Results

Client Sample ID	DSRBG001 (0.0-0.5)
Lab Sample ID	40219343008-R
Filename	P210115A_08

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	112
Total Dichloro Biphenyls	870
Total Trichloro Biphenyls	2710
Total Tetrachloro Biphenyls	9080
Total Pentachloro Biphenyls	19300
Total Hexachloro Biphenyls	13300
Total Heptachloro Biphenyls	3430
Total Octachloro Biphenyls	791
Total Nonachloro Biphenyls	151
DecachloroBiphenyls	68.0
Total PCBs	49800

ND = Not Detected
Results reported on a dry weight basis

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Minneapolis, MN 55414

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Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID	BLANK-85487		
Filename	P210115A_07		
Injected By	CVS	Matrix	Solid
Total Amount Extracted	10.1 g	Extracted	01/11/2021 14:05
ICAL ID	P210115A02	Analyzed	01/15/2021 18:37
CCal Filename(s)	P210115A_01	Dilution	NA

PCB Isomer	IUPAC	RT	Ratio	ng's Added	ng's Found	% Recovery
Labeled Analytes						
13C-2-MoCB	1	9.469	3.07	2.0	0.739	37
13C-4-MoCB	3	12.285	3.05	2.0	0.934	47
13C-2,2'-DiCB	4	12.568	1.46	2.0	1.22	61
13C-4,4'-DiCB	15	19.675	1.57	2.0	1.21	61
13C-2,2',6-TrCB	19	16.381	1.11	2.0	1.49	74
13C-3,4,4'-TrCB	37	27.455	0.94	2.0	1.14	57
13C-2,2',6,6'-TeCB	54	19.966	0.81	2.0	0.917	46
13C-3,4,4',5-TeCB	81	34.578	0.76	2.0	1.27	63
13C-3,3',4,4'-TeCB	77	35.166	0.73	2.0	1.26	63
13C-2,2',4,6,6'-PeCB	104	26.109	1.54	2.0	1.36	68
13C-2,3,3',4,4'-PeCB	105	38.761	1.57	2.0	1.08	54
13C-2,3,4,4',5-PeCB	114	38.106	1.60	2.0	1.11	56
13C-2,3',4,4',5-PeCB	118	37.553	1.52	2.0	1.09	55
13C-2,3',4,4',5'-PeCB	123	37.218	1.57	2.0	1.08	54
13C-3,3',4,4',5-PeCB	126	41.947	1.51	2.0	1.10	55
13C-2,2',4,4',6,6'-HxCB	155	32.165	1.23	2.0	1.60	80
13C-HxCB (156/157)	156/157	45.004	1.28	4.0	2.42	61
13C-2,3',4,4',5,5'-HxCB	167	43.830	1.24	2.0	1.23	62
13C-3,3',4,4',5,5'-HxCB	169	48.291	1.31	2.0	1.15	57
13C-2,2',3,4',5,6,6'-HpCB	188	38.090	0.99	2.0	1.92	96
13C-2,3,3',4,4',5,5'-HpCB	189	50.835	1.07	2.0	1.39	69
13C-2,2',3,3',5,5',6,6'-OcCB	202	43.562	0.91	2.0	1.78	89
13C-2,3,3',4,4',5,5',6-OcCB	205	53.443	0.92	2.0	1.44	72
13C-2,2',3,3',4,4',5,5',6-NoCB	206	55.189	0.88	2.0	1.58	79
13C-2,2',3,3',4,5,5',6,6'-NoCB	208	50.339	0.83	2.0	1.59	80
13C-DeCB	209	56.806	0.73	2.0	1.83	92
Cleanup Standards						
13C-2,4,4'-TrCB	28	23.076	0.97	2.0	1.07	54
13C-2,3,3',5,5'-PeCB	111	35.181	1.46	2.0	1.24	62
13C-2,2',3,3',5,5',6-HpCB	178	41.209	1.09	2.0	1.57	78
Recovery Standards						
13C-2,5-DiCB	9	15.043	1.57	2.0	NA	NA
13C-2,2',5,5'-TeCB	52	25.072	0.81	2.0	NA	NA
13C-2,2',4,5,5'-PeCB	101	32.381	1.59	2.0	NA	NA
13C-2,2',3,4,4',5'-HxCB	138	40.739	1.20	2.0	NA	NA
13C-2,2',3,3',4,4',5,5'-OcCB	194	52.947	0.87	2.0	NA	NA

R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses
Results reported on a total weight basis

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REPORT OF LABORATORY ANALYSIS

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Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-85487
Filename P210115A_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg		EMPC ng/Kg	EML ng/Kg
1		---	---	ND		---	3.05
2		---	---	ND		---	3.52
3		---	---	ND		---	5.46
4		---	---	ND		---	7.06
5		---	---	ND		---	3.34
6		---	---	ND		---	3.83
7		---	---	ND		---	4.37
8		16.049	0.36	---	IJ	9.47	7.26
9		---	---	ND		---	3.87
10		---	---	ND		---	2.66
11		---	---	ND		---	116
12	12/13	---	---	ND		---	7.15
13	12/13	---	---	ND		---	7.15
14		---	---	ND		---	2.73
15		---	---	ND		---	6.53
16		---	---	ND		---	8.43
17		19.089	1.11	8.44	J	---	6.91
18	18/30	---	---	ND		---	12.3
19		---	---	ND		---	3.95
20	20/28	---	---	ND		---	34.1
21	21/33	---	---	ND		---	33.1
22		---	---	ND		---	21.0
23		---	---	ND		---	5.31
24		---	---	ND		---	3.17
25		---	---	ND		---	3.65
26	26/29	---	---	ND		---	8.64
27		---	---	ND		---	2.79
28	20/28	---	---	ND		---	34.1
29	26/29	---	---	ND		---	8.64
30	18/30	---	---	ND		---	12.3
31		---	---	ND		---	37.8
32		---	---	ND		---	5.95
33	21/33	---	---	ND		---	33.1
34		---	---	ND		---	4.43
35		---	---	ND		---	4.03
36		---	---	ND		---	4.04
37		---	---	ND		---	12.9
38		---	---	ND		---	5.29
39		---	---	ND		---	4.89
40	40/41/71	---	---	ND		---	16.7
41	40/41/71	---	---	ND		---	16.7
42		---	---	ND		---	8.43
43	43/73	---	---	ND		---	9.63
44	44/47/65	---	---	ND		---	39.3
45	45/51	---	---	ND		---	13.6

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Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-85487
Filename P210115A_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
46		---	---	ND	---	4.75
47	44/47/65	---	---	ND	---	39.3
48		---	---	ND	---	5.78
49	49/69	---	---	ND	---	14.5
50	50/53	---	---	ND	---	11.8
51	45/51	---	---	ND	---	13.6
52		---	---	ND	---	29.6
53	50/53	---	---	ND	---	11.8
54		---	---	ND	---	2.71
55		---	---	ND	---	4.60
56		---	---	ND	---	14.0
57		---	---	ND	---	4.18
58		---	---	ND	---	4.41
59	59/62/75	---	---	ND	---	13.6
60		---	---	ND	---	9.93
61	61/70/74/76	---	---	ND	---	39.8
62	59/62/75	---	---	ND	---	13.6
63		---	---	ND	---	4.44
64		---	---	ND	---	14.8
65	44/47/65	---	---	ND	---	39.3
66		30.602	0.68	13.5 J	---	4.95
67		---	---	ND	---	3.55
68		---	---	ND	---	4.95
69	49/69	---	---	ND	---	14.5
70	61/70/74/76	---	---	ND	---	39.8
71	40/41/71	---	---	ND	---	16.7
72		---	---	ND	---	4.50
73	43/73	---	---	ND	---	9.63
74	61/70/74/76	---	---	ND	---	39.8
75	59/62/75	---	---	ND	---	13.6
76	61/70/74/76	---	---	ND	---	39.8
77		---	---	ND	---	4.85
78		---	---	ND	---	4.20
79		---	---	ND	---	3.14
80		---	---	ND	---	3.75
81		---	---	ND	---	5.11
82		---	---	ND	---	5.52
83		---	---	ND	---	4.09
84		---	---	ND	---	7.55
85	85/116/117	---	---	ND	---	9.53
86	86/87/97/108/119/125	---	---	ND	---	19.3
87	86/87/97/108/119/125	---	---	ND	---	19.3
88	88/91	---	---	ND	---	7.25
89		---	---	ND	---	5.48
90	90/101/113	---	---	ND	---	16.6

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1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-85487
Filename P210115A_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
91	88/91	---	---	ND	---	7.25
92		---	---	ND	---	3.78
93	93/98/100/102	---	---	ND	---	16.7
94		---	---	ND	---	4.91
95		---	---	ND	---	19.9
96		---	---	ND	---	4.28
97	86/87/97/108/119/125	---	---	ND	---	19.3
98	93/98/100/102	---	---	ND	---	16.7
99		---	---	ND	---	8.77
100	93/98/100/102	---	---	ND	---	16.7
101	90/101/113	---	---	ND	---	16.6
102	93/98/100/102	---	---	ND	---	16.7
103		---	---	ND	---	4.73
104		---	---	ND	---	5.74
105		---	---	ND	---	10.1
106		---	---	ND	---	2.49
107	107/124	---	---	ND	---	6.57
108	86/87/97/108/119/125	---	---	ND	---	19.3
109		---	---	ND	---	3.28
110	110/115	---	---	ND	---	26.9
111		---	---	ND	---	4.62
112		---	---	ND	---	4.73
113	90/101/113	---	---	ND	---	16.6
114		---	---	ND	---	4.62
115	110/115	---	---	ND	---	26.9
116	85/116/117	---	---	ND	---	9.53
117	85/116/117	---	---	ND	---	9.53
118		---	---	ND	---	18.3
119	86/87/97/108/119/125	---	---	ND	---	19.3
120		---	---	ND	---	4.15
121		---	---	ND	---	4.21
122		---	---	ND	---	3.62
123		---	---	ND	---	5.98
124	107/124	---	---	ND	---	6.57
125	86/87/97/108/119/125	---	---	ND	---	19.3
126		---	---	ND	---	6.36
127		---	---	ND	---	3.57
128	128/166	---	---	ND	---	9.14
129	129/138/163	---	---	ND	---	23.6
130		---	---	ND	---	5.40
131		---	---	ND	---	4.36
132		---	---	ND	---	7.72
133		---	---	ND	---	4.64
134	134/143	---	---	ND	---	10.0
135	135/151	---	---	ND	---	6.36

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-85487
Filename P210115A_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
136		---	---	ND	---	3.66
137		---	---	ND	---	5.59
138	129/138/163	---	---	ND	---	23.6
139	139/140	---	---	ND	---	9.93
140	139/140	---	---	ND	---	9.93
141		---	---	ND	---	6.20
142		---	---	ND	---	5.12
143	134/143	---	---	ND	---	10.0
144		---	---	ND	---	3.05
145		---	---	ND	---	4.62
146		---	---	ND	---	3.24
147	147/149	---	---	ND	---	15.4
148		---	---	ND	---	4.83
149	147/149	---	---	ND	---	15.4
150		---	---	ND	---	3.57
151	135/151	---	---	ND	---	6.36
152		---	---	ND	---	4.94
153	153/168	---	---	ND	---	15.1
154		---	---	ND	---	3.24
155		---	---	ND	---	4.81
156	156/157	---	---	ND	---	9.33
157	156/157	---	---	ND	---	9.33
158		---	---	ND	---	2.82
159		---	---	ND	---	4.37
160		---	---	ND	---	4.48
161		---	---	ND	---	3.98
162		---	---	ND	---	3.49
163	129/138/163	---	---	ND	---	23.6
164		---	---	ND	---	4.08
165		---	---	ND	---	5.01
166	128/166	---	---	ND	---	9.14
167		---	---	ND	---	4.48
168	153/168	---	---	ND	---	15.1
169		---	---	ND	---	4.67
170		---	---	ND	---	4.27
171	171/173	---	---	ND	---	5.70
172		---	---	ND	---	3.66
173	171/173	---	---	ND	---	5.70
174		---	---	ND	---	4.05
175		---	---	ND	---	3.88
176		---	---	ND	---	3.67
177		---	---	ND	---	3.03
178		---	---	ND	---	5.33
179		---	---	ND	---	3.16
180	180/193	---	---	ND	---	7.94

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyl
Blank Analysis Results

Lab Sample ID BLANK-85487
Filename P210115A_07

IUPAC	Co-elutions	RT	Ratio	Concentration ng/Kg	EMPC ng/Kg	EML ng/Kg
181		---	---	ND	---	4.78
182		---	---	ND	---	2.22
183	183/185	---	---	ND	---	6.16
184		---	---	ND	---	3.76
185	183/185	---	---	ND	---	6.16
186		---	---	ND	---	4.21
187		---	---	ND	---	5.46
188		---	---	ND	---	4.63
189		---	---	ND	---	5.87
190		---	---	ND	---	4.35
191		---	---	ND	---	4.33
192		---	---	ND	---	3.73
193	180/193	---	---	ND	---	7.94
194		---	---	ND	---	3.72
195		---	---	ND	---	3.90
196		---	---	ND	---	3.73
197	197/200	---	---	ND	---	5.96
198	198/199	---	---	ND	---	7.94
199	198/199	---	---	ND	---	7.94
200	197/200	---	---	ND	---	5.96
201		---	---	ND	---	3.57
202		---	---	ND	---	4.51
203		---	---	ND	---	2.26
204		---	---	ND	---	4.28
205		---	---	ND	---	5.16
206		---	---	ND	---	6.06
207		---	---	ND	---	4.00
208		---	---	ND	---	4.60
209		---	---	ND	---	12.5

Conc = Concentration
EML =Method Reporting/Quantitation Limit (1668A)
EMPC = Estimated Maximum Possible Concentration
A = Limit of Detection based on signal to noise (EDL)
B = Less than 10 times higher than method blank level
R = Recovery outside of Method 1668A control limits
Nn = Value obtained from additional analyses

ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
X = Outside QC Limits
RT = Retention Time
I = Interference

Results reported on a total weight basis

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Method 1668A Polychlorobiphenyl
Blank Analysis Results

Client Sample ID	CBLKBV
Lab Sample ID	BLANK-85487
Filename	P210115A_07

Congener Group	Concentration ng/Kg
Total Monochloro Biphenyls	ND
Total Dichloro Biphenyls	ND
Total Trichloro Biphenyls	8.44
Total Tetrachloro Biphenyls	13.5
Total Pentachloro Biphenyls	ND
Total Hexachloro Biphenyls	ND
Total Heptachloro Biphenyls	ND
Total Octachloro Biphenyls	ND
Total Nonachloro Biphenyls	ND
DecachloroBiphenyls	ND
Total PCBs	21.9

ND = Not Detected
Results reported on a total weight basis

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
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Method 1668A Polychlorobiphenyls
Laboratory Control Spike Analysis Results

Lab Sample ID	LCS-85488		
Filename	P210115A_03	Matrix	Solid
Total Amount Extracted	10.1 g	Dilution	NA
ICAL ID	P210115A02	Extracted	01/11/2021 14:05
CCal Filename(s)	P210115A_01	Analyzed	01/15/2021 14:35
Method Blank ID	BLANK-85487	Injected By	CVS

	Native Analytes			Labeled Analytes		
PCB Isomer	Spiked (ng)	Found (ng)	% Recovery	Spiked (ng)	Found (ng)	% Recovery
1	1.0	0.825	83	2.0	1.20	60
3	1.0	0.894	89	2.0	1.50	75
4	1.0	0.842	84	2.0	1.96	98
15	1.0	0.928	93	2.0	1.85	92
19	1.0	0.893	89	2.0	1.83	91
37	1.0	0.994	99	2.0	1.48	74
54	1.0	0.967	97	2.0	1.30	65
81	1.0	0.938	94	2.0	1.50	75
77	1.0	0.969	97	2.0	1.55	77
104	1.0	0.969	97	2.0	1.61	80
105	1.0	1.05	105	2.0	1.29	65
114	1.0	0.953	95	2.0	1.35	68
118	1.0	1.05	105	2.0	1.32	66
123	1.0	1.02	102	2.0	1.29	64
126	1.0	1.01	101	2.0	1.37	69
155	1.0	1.02	102	2.0	1.67	84
156/157	2.0	2.01	101	4.0	2.86	72
167	1.0	1.03	103	2.0	1.38	69
169	1.0	1.01	101	2.0	1.42	71
188	1.0	0.993	99	2.0	1.89	95
189	1.0	1.04	104	2.0	1.59	79
202	1.0	1.05	105	2.0	1.74	87
205	1.0	1.05	105	2.0	1.63	81
206	1.0	0.982	98	2.0	1.77	88
208	1.0	1.05	105	2.0	1.69	85
209	1.0	0.951	95	2.0	1.94	97

R = Recovery outside of method 1668A control limits
Nn = Result obtained from alternate analysis
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
ng = Nanograms
I = Interference

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyls
Matrix Spike Analysis Results

Client - PACE Wisconsin

Lab Sample ID	40219343008-MS-R		
Filename	P210115A_04	Matrix	Solid
Total Amount Extracted	10.0 g	Dilution	NA
ICAL ID	P210115A02	Extracted	01/11/2021 14:05
CCal Filename(s)	P210115A_01	Analyzed	01/15/2021 15:35
Method Blank ID	BLANK-85487	Injected By	CVS

	Native Analytes			Labeled Analytes		
PCB Isomer	**Spiked (ng)**	**Found (ng)**	**% Recovery**	**Spiked (ng)**	**Found (ng)**	**% Recovery**
1	1.0	0.995	100	2.0	0.930	46
3	1.0	1.07	107	2.0	1.17	59
4	1.0	1.01	101	2.0	1.55	77
15	1.0	1.54	154	2.0	1.55	78
19	1.0	0.903	90	2.0	1.53	77
37	1.0	1.80	180	2.0	1.35	68
54	1.0	0.938	94	2.0	1.14	57
81	1.0	0.948	95	2.0	1.35	67
77	1.0	1.35	135	2.0	1.40	70
104	1.0	0.932	93	2.0	1.50	75
105	1.0	4.37	437	2.0	1.12	56
114	1.0	1.08	108	2.0	1.20	60
118	1.0	11.2	1124	2.0	1.18	59
123	1.0	1.13	113	2.0	1.17	58
126	1.0	0.906	91	2.0	1.23	62
155	1.0	1.00	100	2.0	1.62	81
156/157	2.0	3.45	173	4.0	2.44	61
167	1.0	1.47	147	2.0	1.25	62
169	1.0	0.973	97	2.0	1.24	62
188	1.0	0.971	97	2.0	1.96	98
189	1.0	1.09	109	2.0	1.45	73
202	1.0	1.09	109	2.0	1.85	93
205	1.0	0.990	99	2.0	1.44	72
206	1.0	1.33	133	2.0	1.52	76
208	1.0	1.13	113	2.0	1.60	80
209	1.0	1.09	109	2.0	1.76	88

R = Recovery outside of method
1668A control limits
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
ng = Nanograms

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method 1668A Polychlorobiphenyls
Matrix Spike Analysis Results

Client - PACE Wisconsin

Lab Sample ID	40219343008-MSD-R		
Filename	P210115A_05	Matrix	Solid
Total Amount Extracted	7.08 g	Dilution	NA
ICAL ID	P210115A02	Extracted	01/11/2021 14:05
CCal Filename(s)	P210115A_01	Analyzed	01/15/2021 16:36
Method Blank ID	BLANK-85487	Injected By	CVS

	Native Analytes			Labeled Analytes		
PCB Isomer	**Spiked (ng)**	**Found (ng)**	**% Recovery**	**Spiked (ng)**	**Found (ng)**	**% Recovery**
1	1.0	0.981	98	2.0	0.967	48
3	1.0	1.02	102	2.0	1.20	60
4	1.0	1.05	105	2.0	1.50	75
15	1.0	1.56	156	2.0	1.45	72
19	1.0	0.958	96	2.0	1.50	75
37	1.0	1.71	171	2.0	1.32	66
54	1.0	1.02	102	2.0	1.13	56
81	1.0	0.953	95	2.0	1.26	63
77	1.0	1.35	135	2.0	1.27	63
104	1.0	0.983	98	2.0	1.51	76
105	1.0	4.24	424	2.0	1.14	57
114	1.0	1.11	111	2.0	1.14	57
118	1.0	10.9	1094	2.0	1.12	56
123	1.0	1.19	119	2.0	1.10	55
126	1.0	1.05	105	2.0	1.07	53
155	1.0	0.992	99	2.0	1.70	85
156/157	2.0	3.68	184	4.0	2.38	60
167	1.0	1.54	154	2.0	1.28	64
169	1.0	1.12	112	2.0	1.14	57
188	1.0	1.02	102	2.0	1.99	100
189	1.0	1.13	113	2.0	1.44	72
202	1.0	1.19	119	2.0	1.79	90
205	1.0	0.992	99	2.0	1.43	72
206	1.0	1.32	132	2.0	1.57	78
208	1.0	1.16	116	2.0	1.57	79
209	1.0	1.26	126	2.0	1.73	87

R = Recovery outside of method
1668A control limits
ND = Not Detected
NA = Not Applicable
NC = Not Calculated
* = See Discussion
ng = Nanograms

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
1700 Elm Street - Suite 200
Minneapolis, MN 55414

Tel: 612-607-1700
Fax: 612- 607-6444

Method PCB1668-209 Spike Sample Results

Client - PACE Wisconsin

Client Sample ID	DSRBG001 (0.0-0.5)			Dry Weights	
Lab Sample ID	40219343008-R	Sample Filename	P210115A_08	Sample Amount	2.48 g
MS ID	40219343008-MS-R	MS Filename	P210115A_04	MS Amount	2.8 g
MSD ID	40219343008-MSD-R	MSD Filename	P210115A_05	MSD Amount	2.0 g

Analyte	Sample Qm (ng)	MS/MSD Qs (ng)	MS Qm (ng)	MSD Qm (ng)	RPD	Background Subtracted MS % Rec.	MSD % Rec.	RPD
2-MoCB	0.06	1.00	1.00	0.98	1.4	94	92	1.5
4-MoCB	0.13	1.00	1.07	1.02	5.6	95	89	6.4
2,2'-DiCB	0.11	1.00	1.01	1.05	3.9	90	94	4.4
4,4'-DiCB	0.45	1.00	1.54	1.56	1.2	109	111	1.7
2,2',6-TrCB	0.05	1.00	0.90	0.96	5.9	85	90	6.2
3,4,4'-TrCB	0.63	1.00	1.80	1.71	5.3	117	108	8.2
2,2',6,6'-TeCB	0.00	1.00	0.94	1.02	8.4	94	102	8.4
3,3',4,4'-TeCB	0.29	1.00	1.35	1.35	0.3	106	106	0.4
3,4,4',5-TeCB	0.02	1.00	0.95	0.95	0.5	92	93	0.5
2,2',4,6,6'-PeCB	0.00	1.00	0.93	0.98	5.3	93	98	5.3
2,3,3',4,4'-PeCB	2.31	1.00	4.37	4.24	3.0	206	193	6.4
2,3,4,4',5-PeCB	0.11	1.00	1.08	1.11	2.2	97	100	2.4
2,3',4,4',5-PeCB	7.08	1.00	11.24	10.94	2.6	416	386	7.3
2,3',4,4',5'-PeCB	0.13	1.00	1.13	1.19	5.2	100	106	5.8
3,3',4,4',5-PeCB	0.02	1.00	0.91	1.05	14.7	89	103	15.0
2,2',4,4',6,6'-HxCB	0.00	1.00	1.00	0.99	0.9	100	99	0.9
(156/157)	1.12	2.00	3.45	3.68	6.3	117	128	9.1
2,3',4,4',5,5'-HxCB	0.36	1.00	1.47	1.54	4.6	111	118	6.1
3,3',4,4',5,5'-HxCB	0.00	1.00	0.97	1.12	13.7	97	112	13.7
2,2',3,4',5,6,6'-HpCB	0.00	1.00	0.97	1.02	4.7	97	102	4.7
2,3,3',4,4',5,5'-HpCB	0.00	1.00	1.09	1.13	3.6	109	113	3.6
2,2',3,3',5,5',6,6'-OcCB	0.12	1.00	1.09	1.19	8.5	97	107	9.5
2,3,3',4,4',5,5',6-OcCB	0.00	1.00	0.99	0.99	0.1	99	99	0.1
2,2',3,3',4,4',5,5',6-NoCB	0.29	1.00	1.33	1.32	1.0	105	103	1.3
2,2',3,3',4,5,5',6,6'-NoCB	0.08	1.00	1.13	1.16	3.2	104	108	3.5
Decachlorobiphenyl	0.17	1.00	1.09	1.26	14.3	93	109	16.7

Definitions

MS = Matrix Spike Qm = Quantity Measured % Rec. = Percent Recovery
MSD = Matrix Spike Duplicate Qs = Quantity Spiked RPD = Relative Percent Difference NA = Not Applicable

December 24, 2020
Project No. 201553

Alison Bitel
AECOM
27777 Franklin Road, Suite 2150
Southfield, MI 48035

Reference: Morrow Dam Sediment Rem Laboratory Testing

Dear Ms. Bitel:

Materials Testing Consultants, Inc. performed geotechnical testing on samples retrieved from the referenced project. The following tests have been requested to be performed:

- Particle-Size Analysis of Soils, ASTM D422
- Water Content of Soil by Mass, ASTM D2216
- Specific Gravity of Soil Solids by Water Pycnometer, ASTM D854
- Liquid Limit, Plastic Limit, and Plasticity Index of Soils, ASTM D4318
- Organic Materials of Peat and Other Organic Soils, ASTM D2974
- Unconfined Compressive Strength of Cohesive Soil, ASTM D2166
- Paint Filter Liquids Test, Method 9095B

Samples delivered to our laboratory for testing were dropped off in 2-gallon buckets, with one sample in a 5-gallon bucket. The 2-gallon buckets contained loose, disturbed sediment samples for testing. The 5-gallon bucket contained the intact sample for the Unconfined Compressive Test, as well as the composite sample for testing. Atterberg Limits were attempted on all samples, but some were unable to roll the plastic limit and unable to run the liquid limits and were identified as Non-Plastic, NP, Material.

Test reports for the Particle-Size Distribution and the Unconfined Compressive Strength Test can be found attached. Index test results are recorded in the following table. In cases where Atterberg limits were not performed, fines were classified by visual methods, along with review of moisture data.

Should you have any questions or require additional assistance, please contact me at your earliest convenience.

Sincerely,

MATERIALS TESTING CONSULTANTS, INC.

Keith VanStrate
Laboratory Manager

Timothy J. Lautenbach, P.E.
Senior Project Engineer

Attachments: Index Results Table
Particle Size Analysis Reports
Unconfined Compressive Strength Test

SUMMARY OF LABORATORY TEST DATA

Boring Number	Sample No.	Sample Depth (ft)	Sample Description (USCS Symbol)	Organic Content (%)	Natural Moisture Content (%)	Specific Gravity	Passing #200 Sieve (%)	Paint Filter Liquid Test	Unconfined Compression (psf)	Atterberg Limits ASTM D4318		
										LL	PL	PI
WCSCA1CS-GEO	157738	COMPOSITE			280.3			No Free Liquids	106			
WCDMACS001	157739	COMPOSITE	OH	18.9	180.1	2.417	69.3			100	70	30
USRBG001	157740	0-0.5	SM	7.0	112.3	2.581	18.6				NP	
USCCG002	157741	0-0.5	SP	0.6	23.0	2.626	2.0				NP	
USCCG003	157742	0-0.5	OH	19.6	298.0	2.424	83.1			112	81	31
USCCG004	157743	0-0.5	OH	22.3	203.4	2.351	83.9			127	89	38
DSRBG001	157744	0-0.5	OH	17.6	287.0	2.450	82.3			107	75	32
DSLBG002	157745	0-0.5	OH	8.3	134.4	2.551	39.0			56	44	12
DSLBG003	157747	0-0.5	OH	16.9	245.6	2.398	68.5			92	68	24
DSLBG004	157749	0-0.5	OH	20.0	320.5	2.456	84.2			115	77	38
DSCCG005	157750	0-0.5	OH	19.4	267.3	2.419	71.6			110	81	29
DSRBG006	157751	0-0.5	OH	14.0	212.0	2.478	63.4				NP	
DSLBG007	157752	0-0.5	OH	20.4	302.9	2.418	81.2			117	67	50
DSRBG008	157753	0-0.5	OH	17.2	246.9	2.368	64.5			106	84	22

PROJECT NO.: 201553

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Boring Number	Sample No.	Sample Depth (ft)	Sample Description (USCS Symbol)	Organic Content (%)	Natural Moisture Content (%)	Specific Gravity	Passing #200 Sieve (%)	Paint Filter Liquid Test	Unconfined Compression (psf)	Atterberg Limits ASTM D4318		
										LL	PL	PI
DSLBG009	157754	0-0.5	OH	13.9	212.5	2.417	76.4			99	68	31
DSRBG010	157755	0-0.5	OH	20.1	353.4	2.385	83.6			122	81	41
DSRBG011	157756	0-0.5	OH	16.2	258.0	2.414	79.3			106	73	33
USCCC004-GEO	157757	COMPOSITE	OH	14.6	147.6	2.492	63.3			78	55	23
DSLBC002-GEO	157758	COMPOSITE	SP-SM	4.2	48.8	2.636	7.2				NP	
DSLBC004-GEO	157759	COMPOSITE	SM	4.7	70.8	2.616	21.5				NP	
DSRBC008-GEO	157760	COMPOSITE	SM	4.8	61.2	2.628	10.9				NP	
DSRBC011-GEO	157761	COMPOSITE	MH	8.9	78.3	2.509	19.4			58	43	15

PROJECT NO.: 201553

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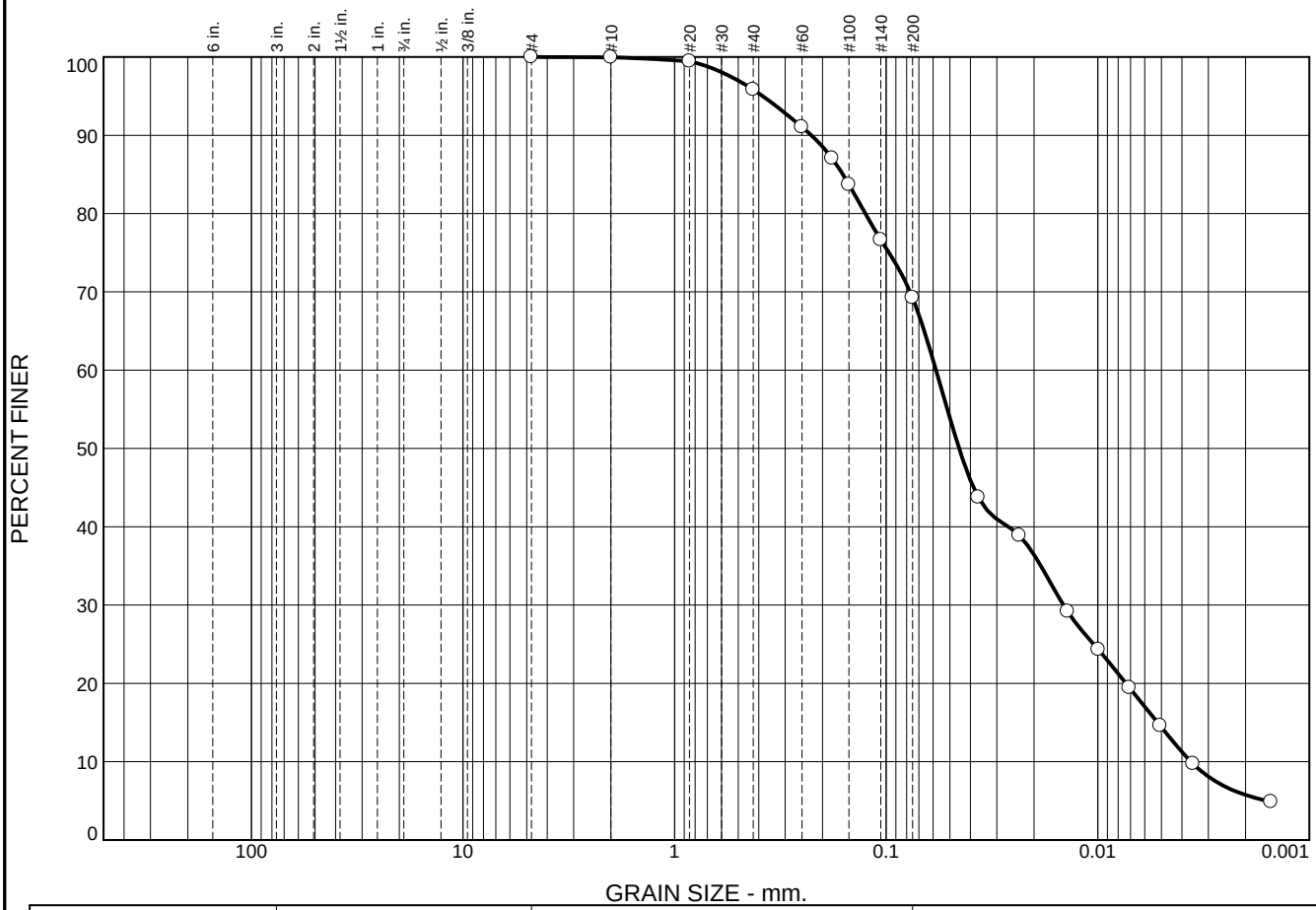
Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	4.2	26.5	54.9	14.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	100	70	0.1603	0.0581	0.0452	0.0145	0.0052	0.0036	1.00	16.01

Material Description	USCS	AASHTO
○ Dark Brown Sandy Organic Silt	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** WCDMACS001 **Sample Number:** 157739

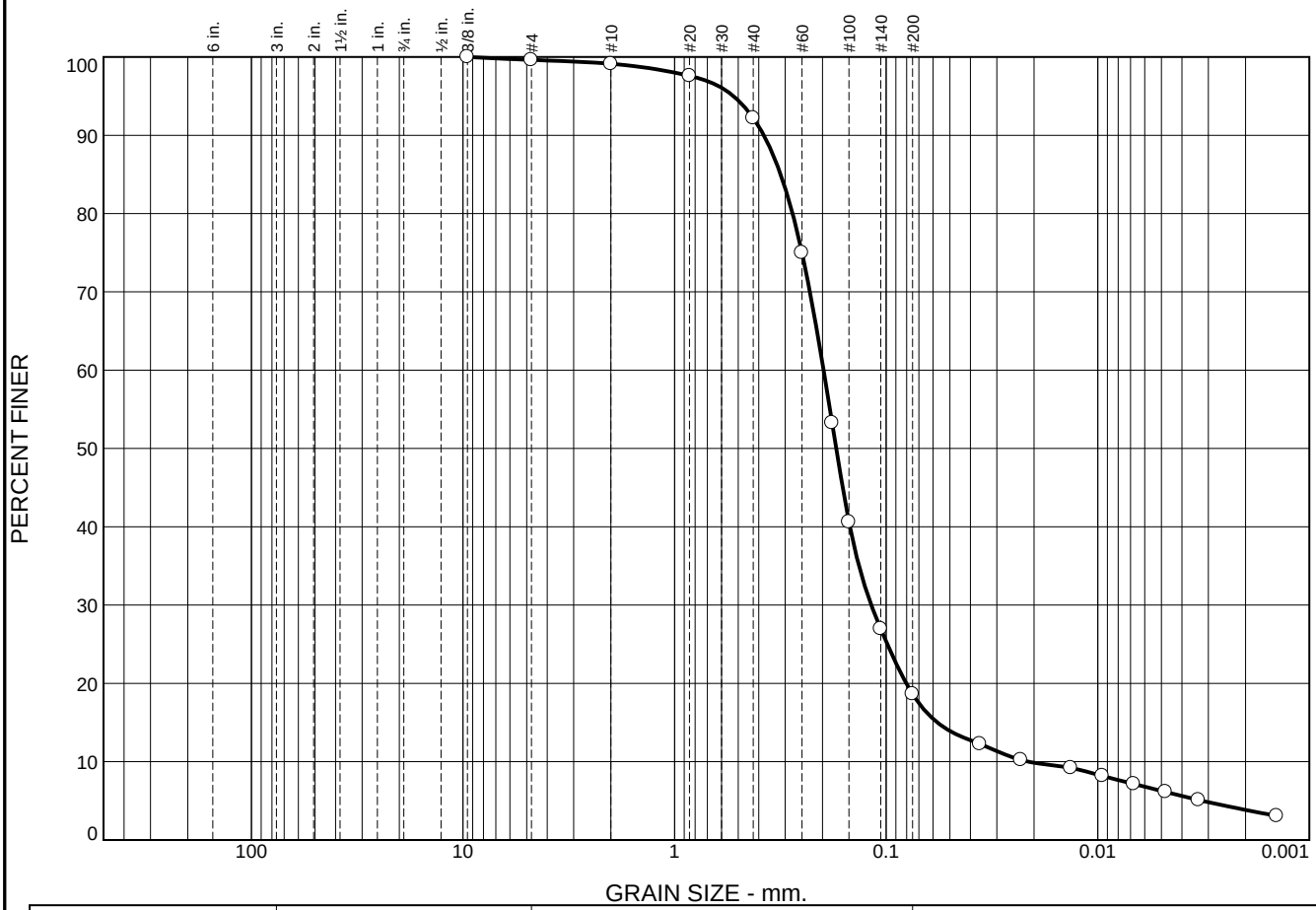
Remarks:

MATERIALS TESTING CONSULTANTS, INC.

Grand Rapids, MI

Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.4	0.5	6.9	73.6	12.3	6.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○		NP	0.3152	0.1975	0.1722	0.1175	0.0573	0.0213	3.28	9.27

Material Description	USCS	AASHTO
○ Brown Silty Sand	SM	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** USRBG001 **Depth:** 0-0.5 ft **Sample Number:** 157740

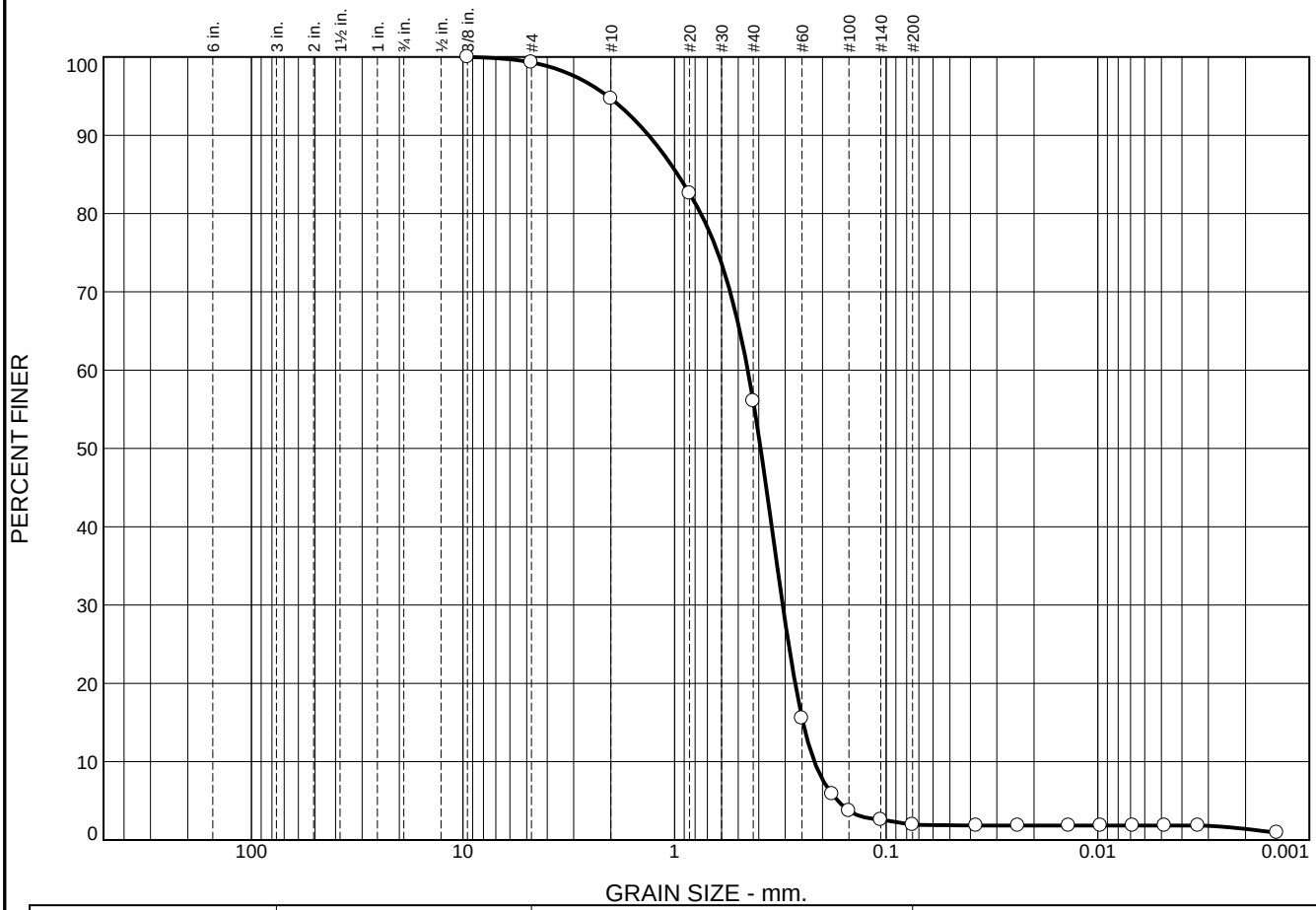
Remarks:

MATERIALS TESTING CONSULTANTS, INC.

Grand Rapids, MI

Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.7	4.6	38.6	54.1	0.2	1.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○		NP	0.9671	0.4508	0.3920	0.3081	0.2474	0.2185	0.96	2.06

Material Description	USCS	AASHTO
○ Brown Poorly Graded Sand	SP	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** USCCG002 **Depth:** 0-0.5 ft **Sample Number:** 157741

Remarks:

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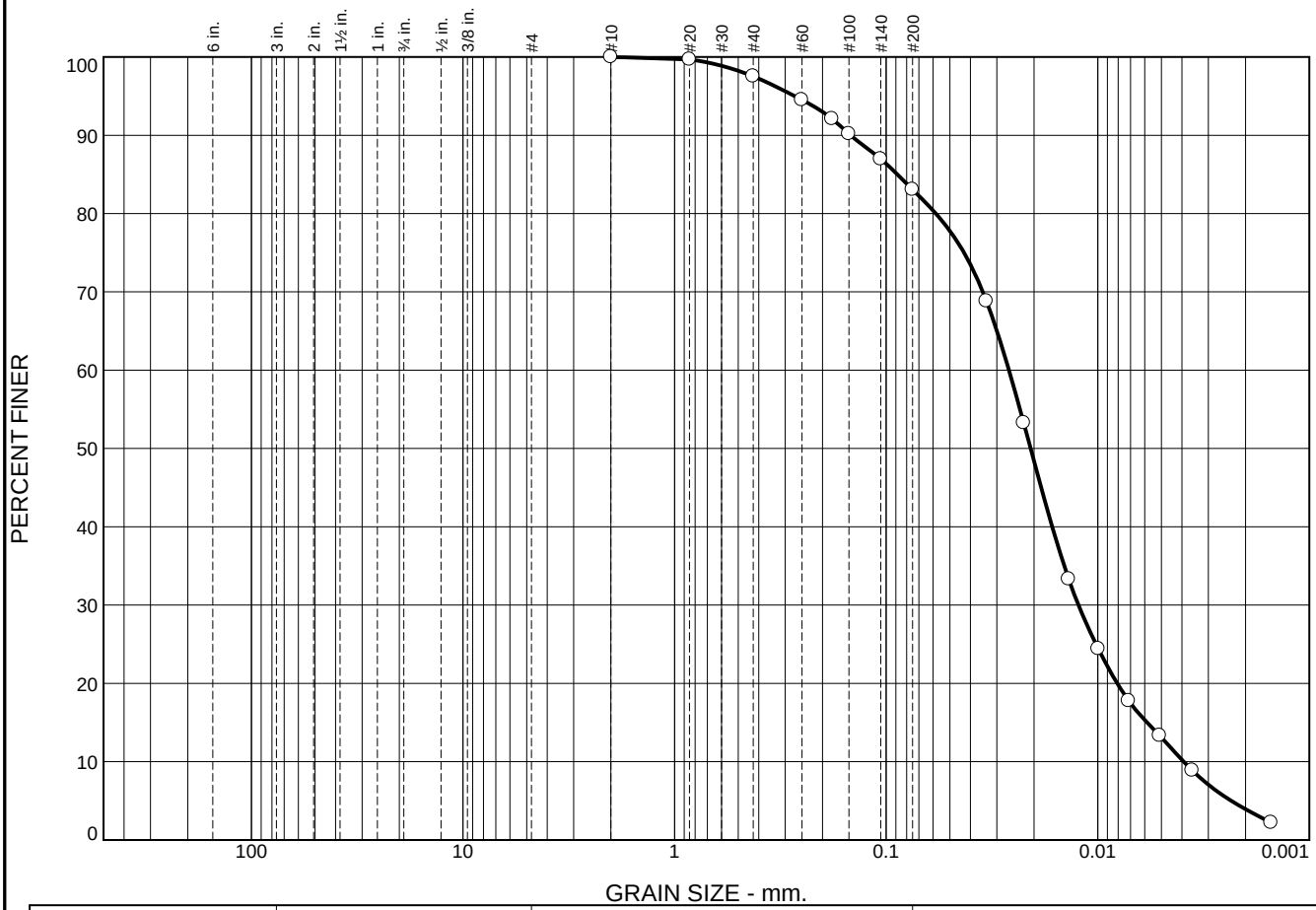
Grand Rapids, MI

Figure

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	14.4	70.0	13.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	112	81	0.0885	0.0263	0.0208	0.0123	0.0058	0.0039	1.48	6.70

Material Description	USCS	AASHTO
○ Dark Brown Organic Silt with Sand	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** USCCG003 **Depth:** 0-0.5 ft **Sample Number:** 157742

Remarks:

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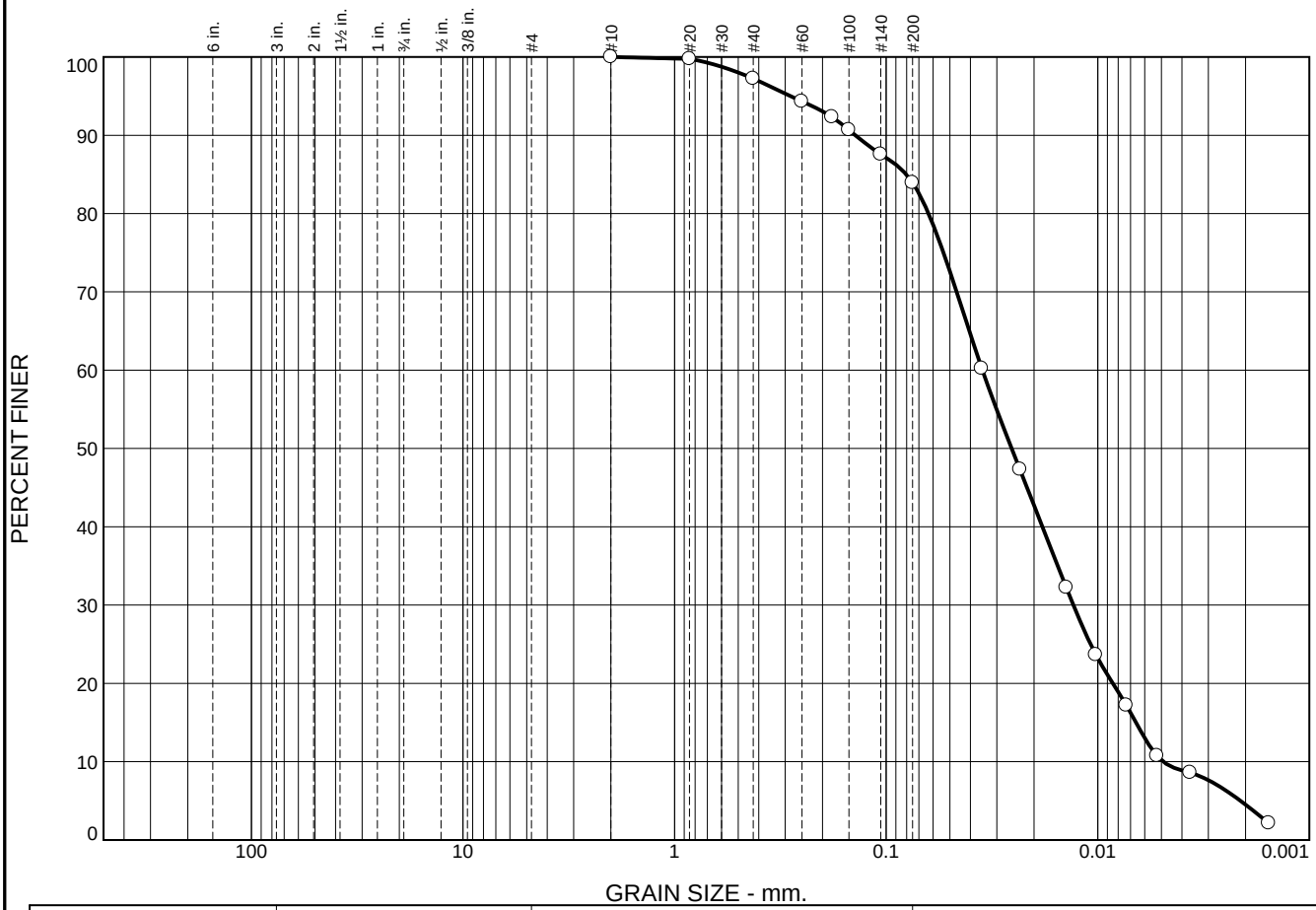
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	2.8	13.3	73.7	10.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	127	89	0.0803	0.0351	0.0255	0.0130	0.0066	0.0049	0.99	7.15

Material Description	USCS	AASHTO
○ Dark Brown Organic Silt with Sand	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** USCCG004 **Depth:** 0-0.5 ft **Sample Number:** 157743

Remarks:

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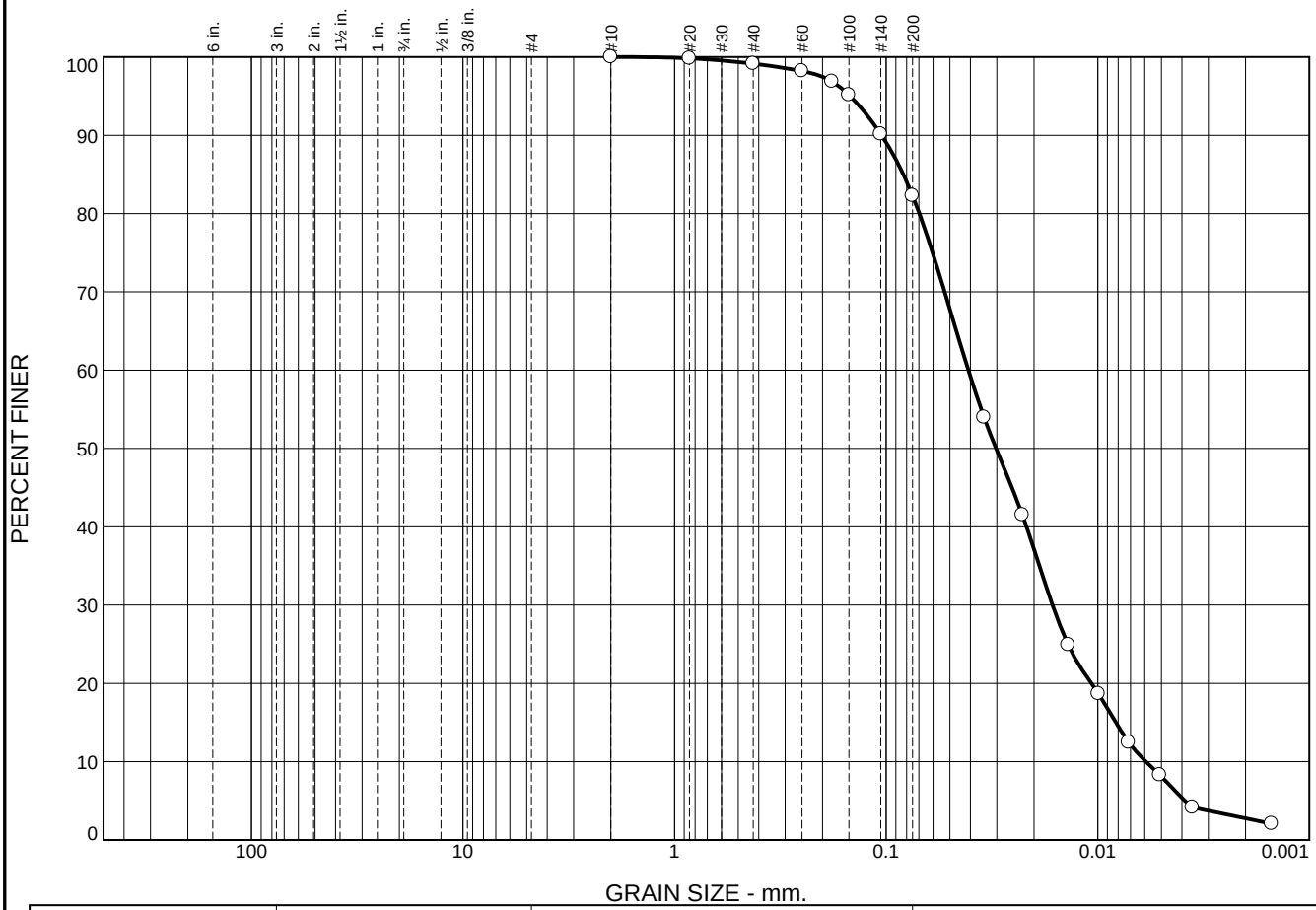
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.9	16.8	74.2	8.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	107	75	0.0829	0.0409	0.0303	0.0164	0.0082	0.0059	1.11	6.90

Material Description	USCS	AASHTO
○ Dark Brown Organic Silt with Sand	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSRBG001 **Depth:** 0-0.5 ft **Sample Number:** 157744

Remarks:

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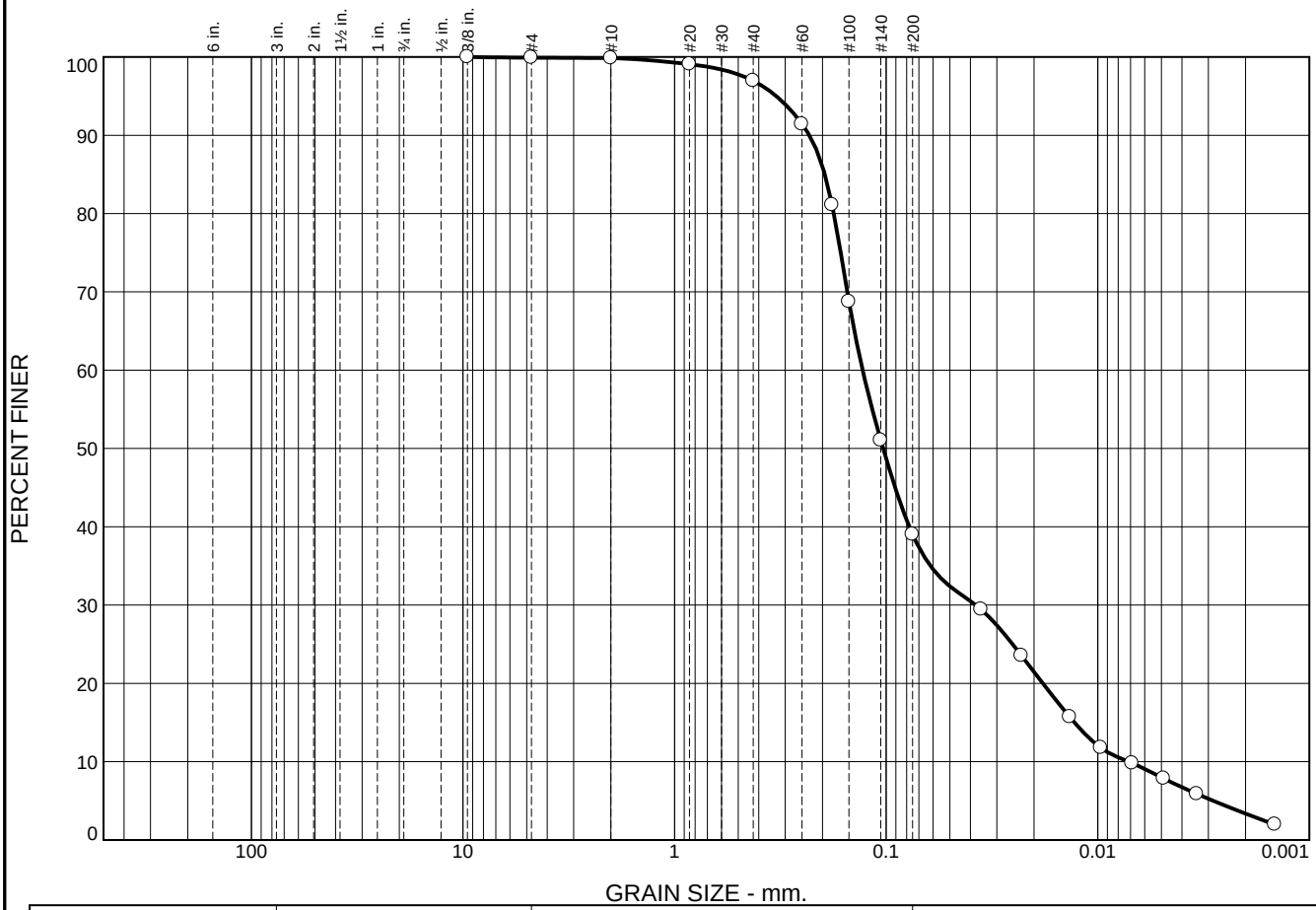
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.1	0.0	2.9	58.0	31.0	8.0

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	56	44	0.1948	0.1292	0.1033	0.0377	0.0129	0.0071	1.54	18.09

Material Description	USCS	AASHTO
○ Brown Organic Silty Sand	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSLBG002 **Depth:** 0-0.5 ft **Sample Number:** 157745

Remarks:

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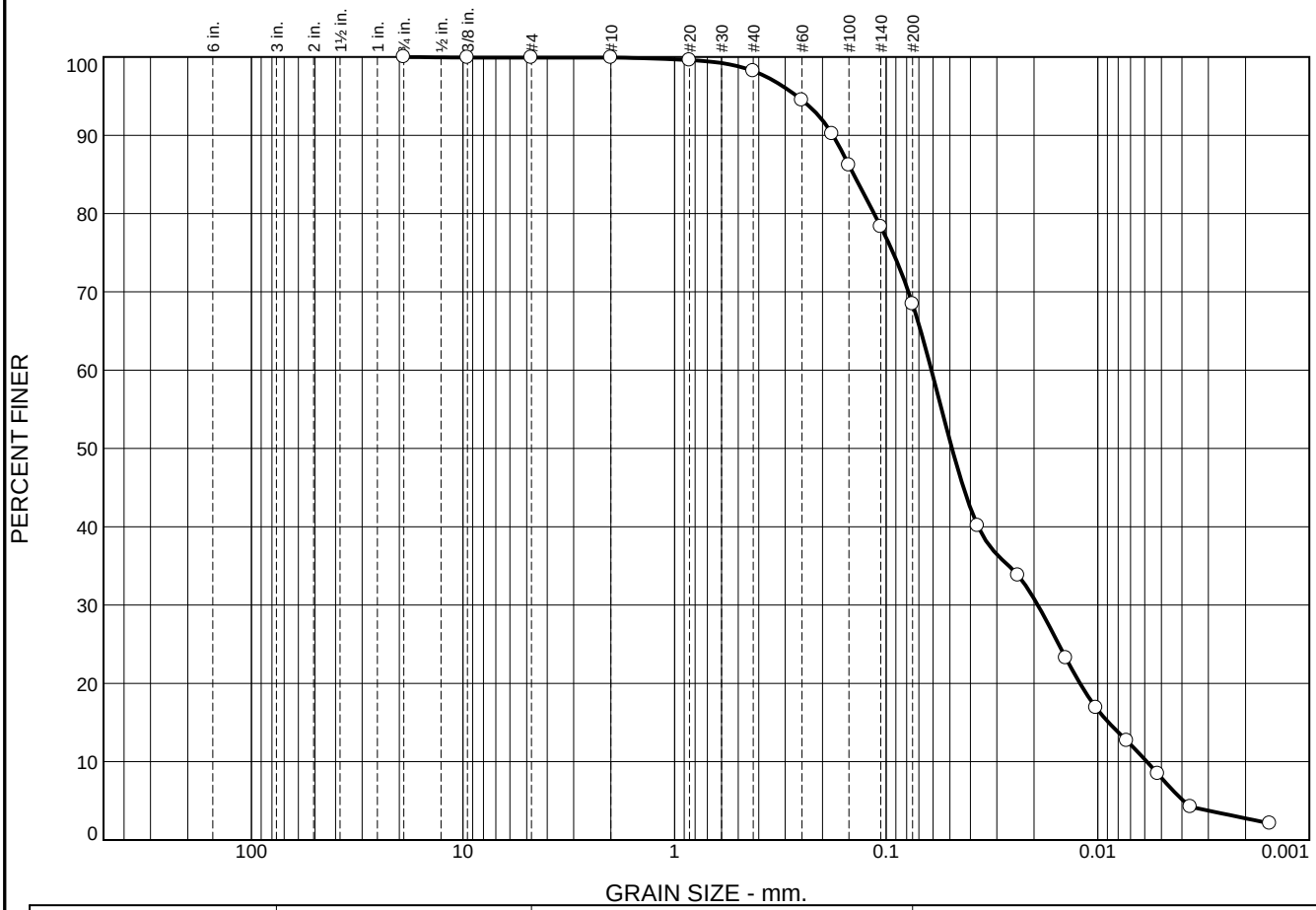
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.1	0.0	1.7	29.7	60.6	7.9

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	92	68	0.1425	0.0611	0.0488	0.0192	0.0089	0.0059	1.03	10.43

Material Description	USCS	AASHTO
○ Dark Brown Sandy Organic Silt	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSLBG003 **Depth:** 0-0.5 ft **Sample Number:** 157747

Remarks:

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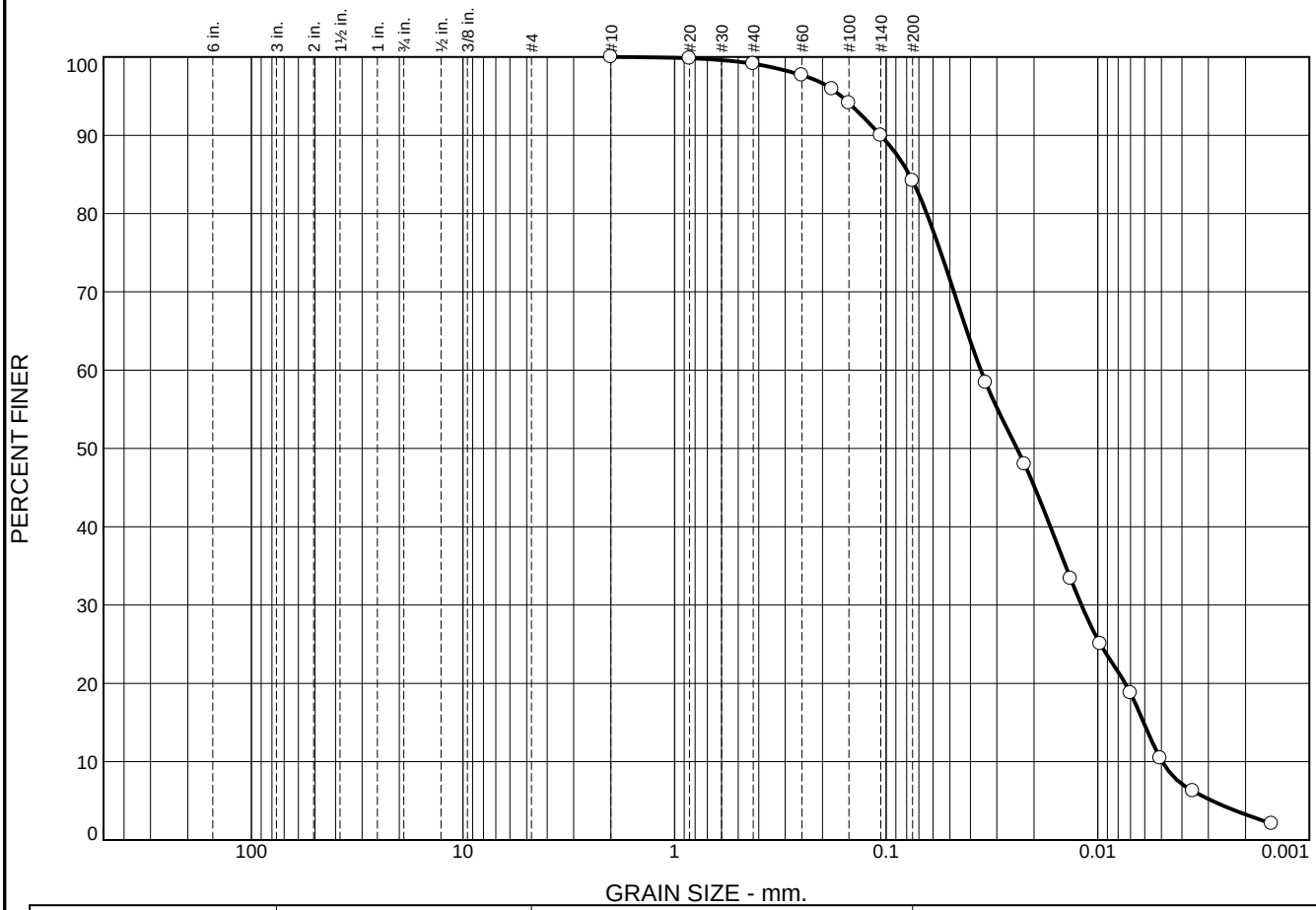
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.9	14.9	74.0	10.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	115	77	0.0777	0.0357	0.0241	0.0119	0.0061	0.0050	0.80	7.20

Material Description	USCS	AASHTO
○ Dark Brown Organic Silt with Sand	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSLBG004 **Depth:** 0-0.5 ft **Sample Number:** 157749

Remarks:

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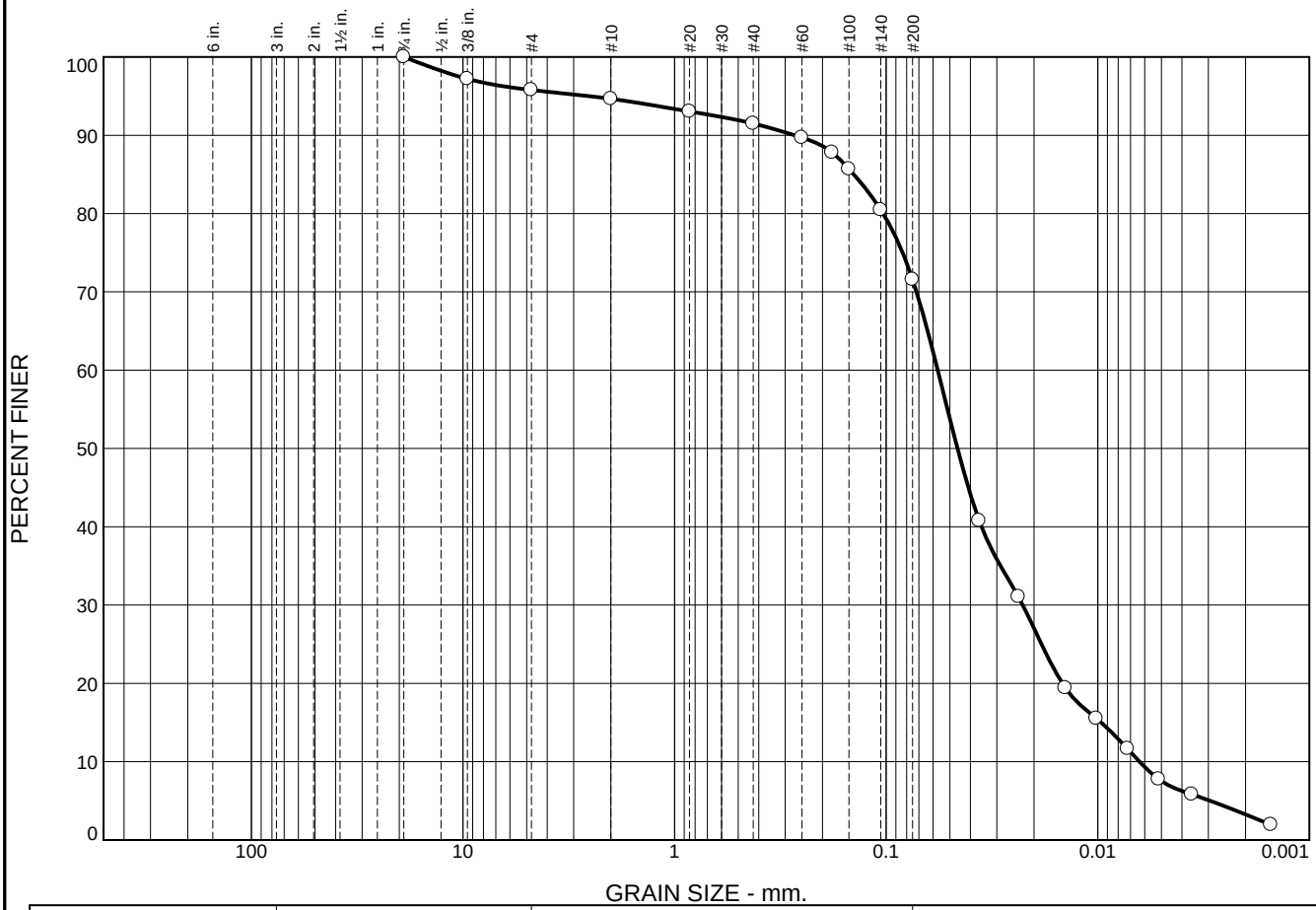
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	4.2	1.1	3.2	19.9	64.1	7.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	110	81	0.1424	0.0571	0.0460	0.0226	0.0096	0.0063	1.41	9.00

Material Description	USCS	AASHTO
○ Dark Brown Organic Silt with Sand	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSCCG005 **Depth:** 0-0.5 ft **Sample Number:** 157750

Remarks:

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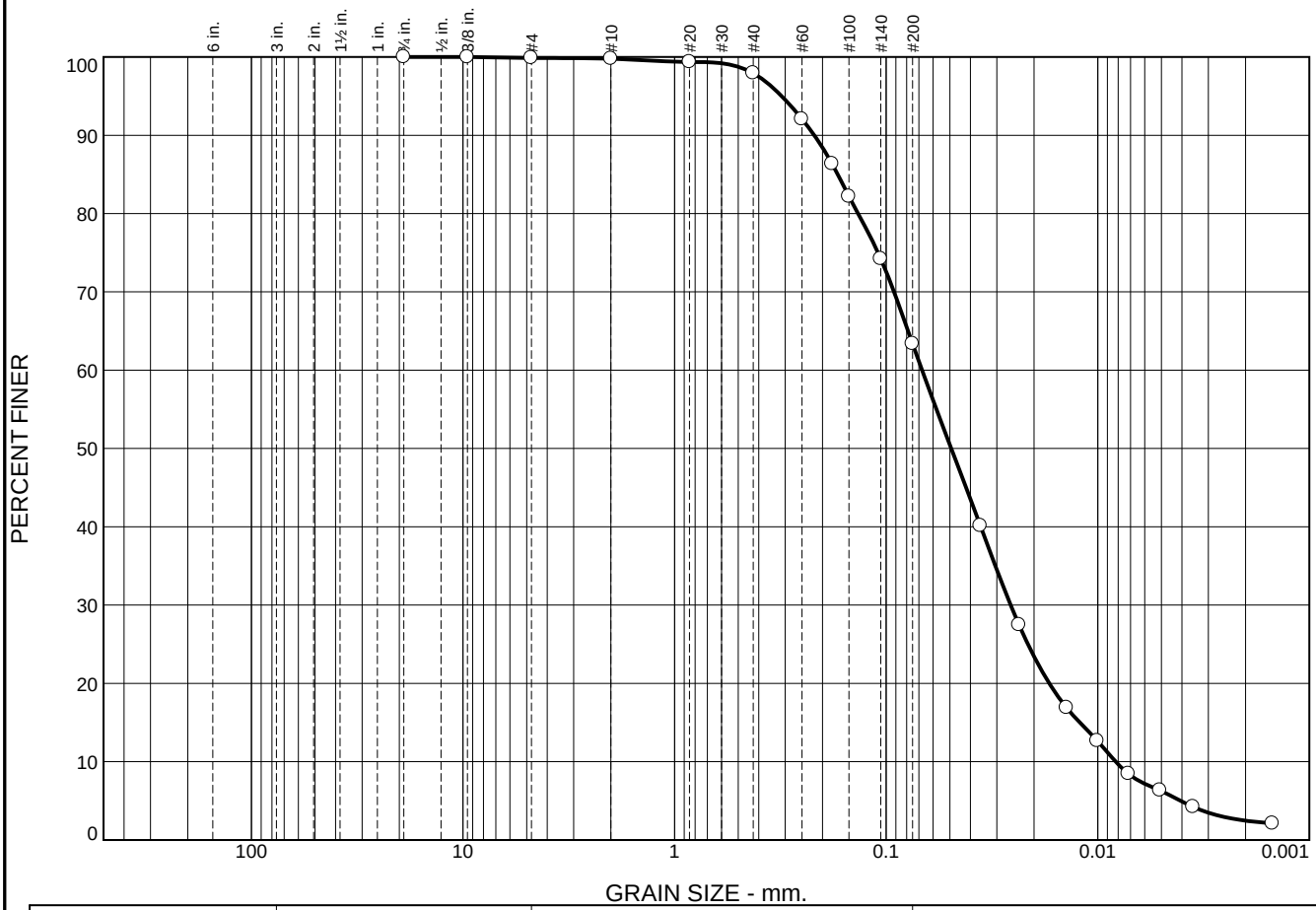
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.1	0.1	1.9	34.5	57.2	6.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○		NP	0.1694	0.0676	0.0492	0.0258	0.0122	0.0082	1.20	8.23

Material Description	USCS	AASHTO
○ Dark Brown Sandy Organic Silt	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSRBG006 **Depth:** 0-0.5 ft **Sample Number:** 157751

Remarks:

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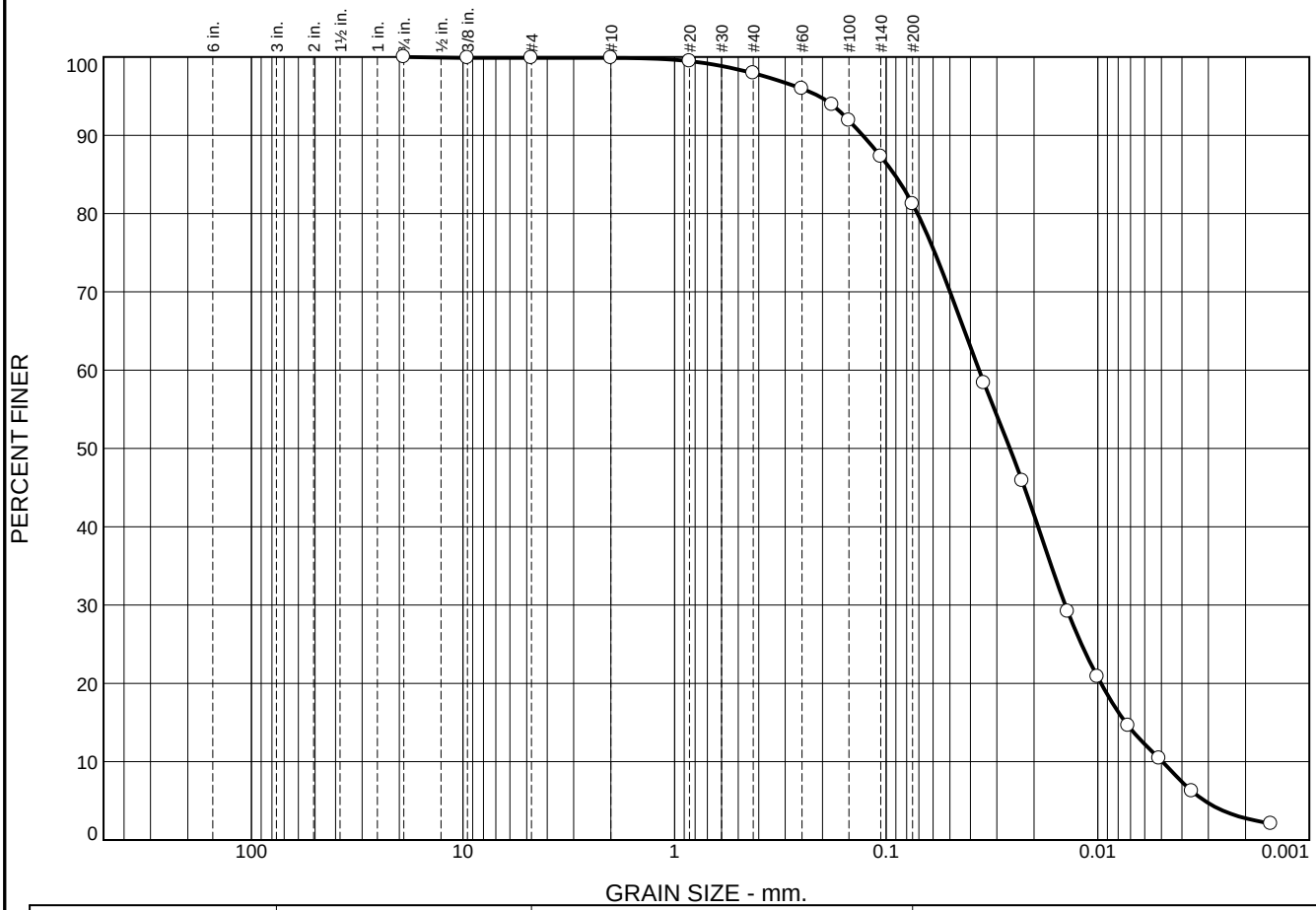
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.1	0.0	2.0	16.7	71.1	10.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	117	67	0.0914	0.0364	0.0260	0.0142	0.0074	0.0049	1.13	7.35

Material Description	USCS	AASHTO
○ Dark Brown Organic Silt with Sand	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSLBG007 **Depth:** 0-0.5 ft **Sample Number:** 157752

Remarks:

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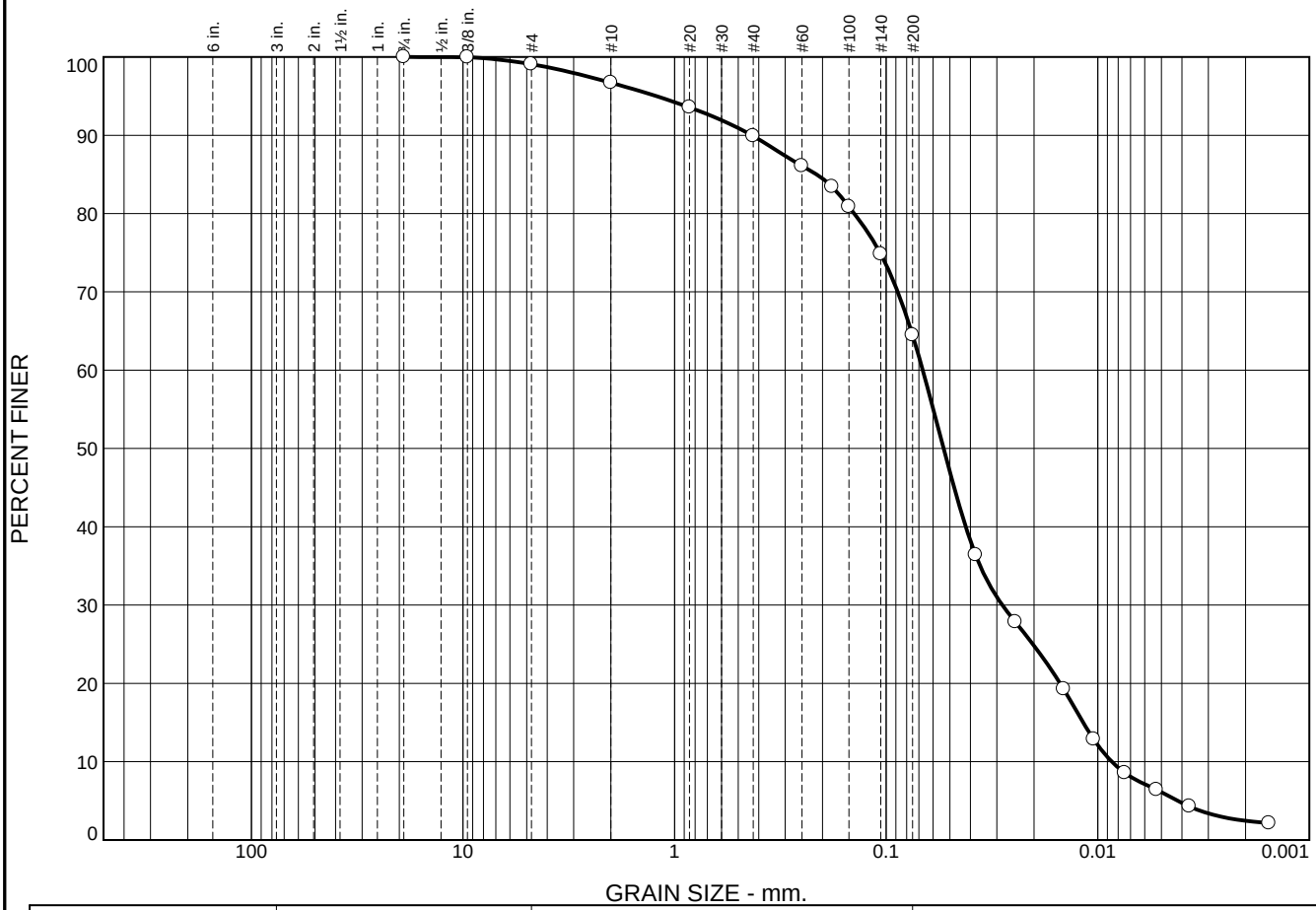
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.9	2.4	6.8	25.4	58.4	6.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	106	84	0.2133	0.0671	0.0535	0.0283	0.0117	0.0086	1.39	7.82

Material Description	USCS	AASHTO
○ Dark Brown Sandy Organic Silt	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSRBG008 **Depth:** 0-0.5 ft **Sample Number:** 157753

Remarks:

MATERIALS TESTING CONSULTANTS, INC.

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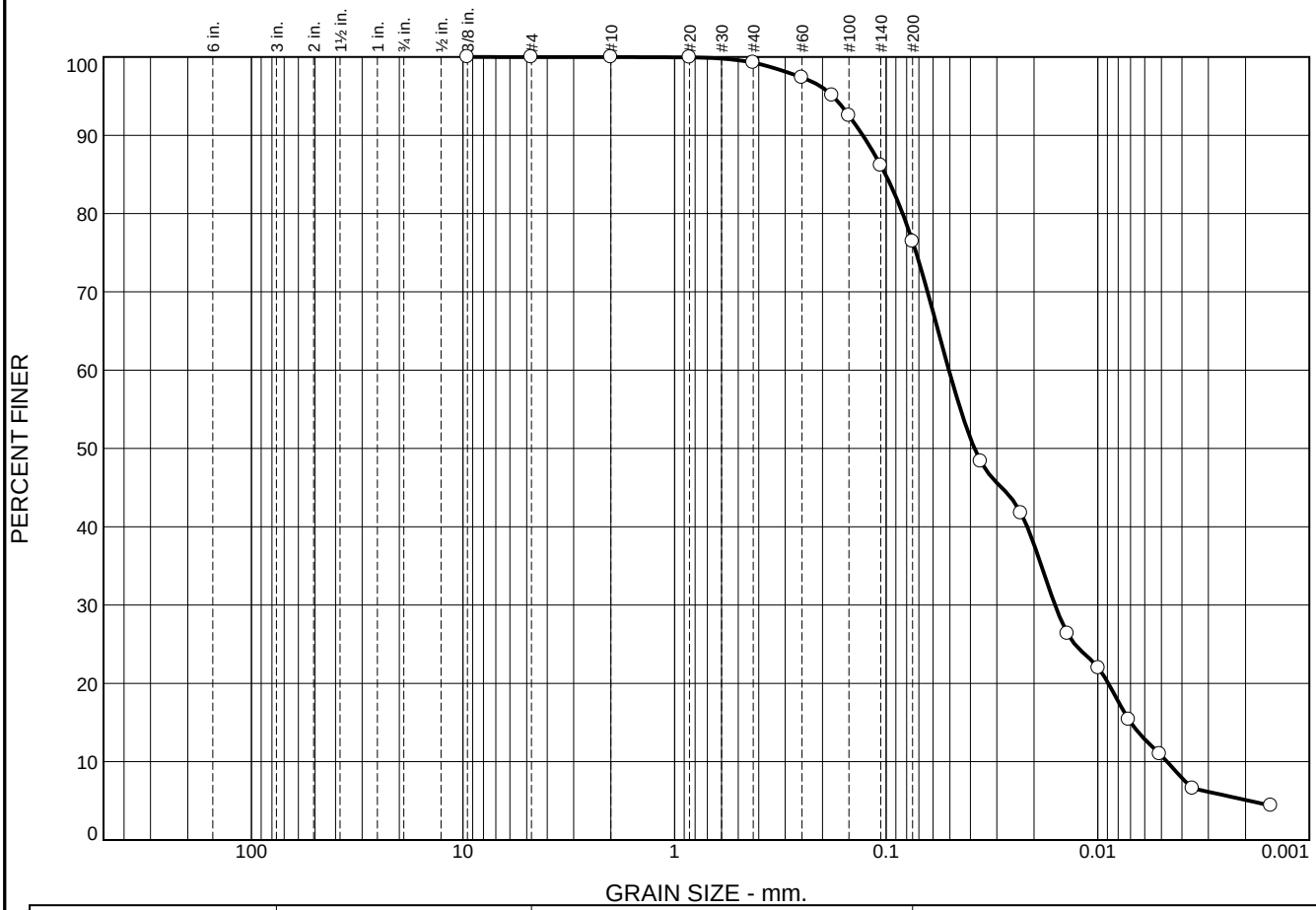
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	0.7	22.9	65.6	10.8

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	99	68	0.1007	0.0505	0.0382	0.0159	0.0070	0.0047	1.07	10.74

Material Description	USCS	AASHTO
○ Dark Brown Organic Silt with Sand	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSLBG009 **Depth:** 0-0.5 ft **Sample Number:** 157754

Remarks:

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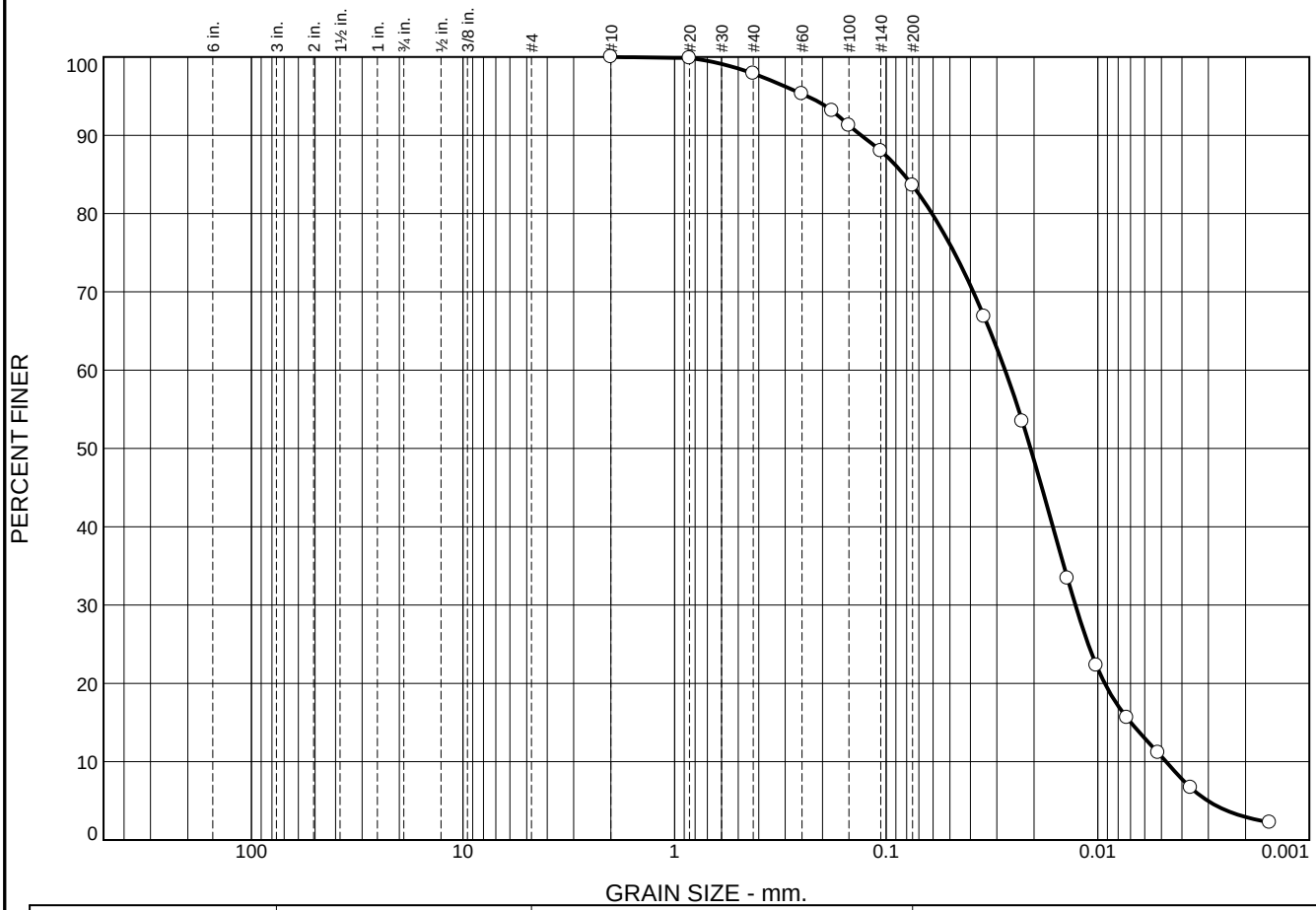
Figure

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	14.3	72.9	10.7

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	122	81	0.0826	0.0274	0.0208	0.0128	0.0070	0.0048	1.25	5.76

Material Description	USCS	AASHTO
○ Dark Brown Organic Silt with Sand	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSRBG010 **Depth:** 0-0.5 ft **Sample Number:** 157755

Remarks:

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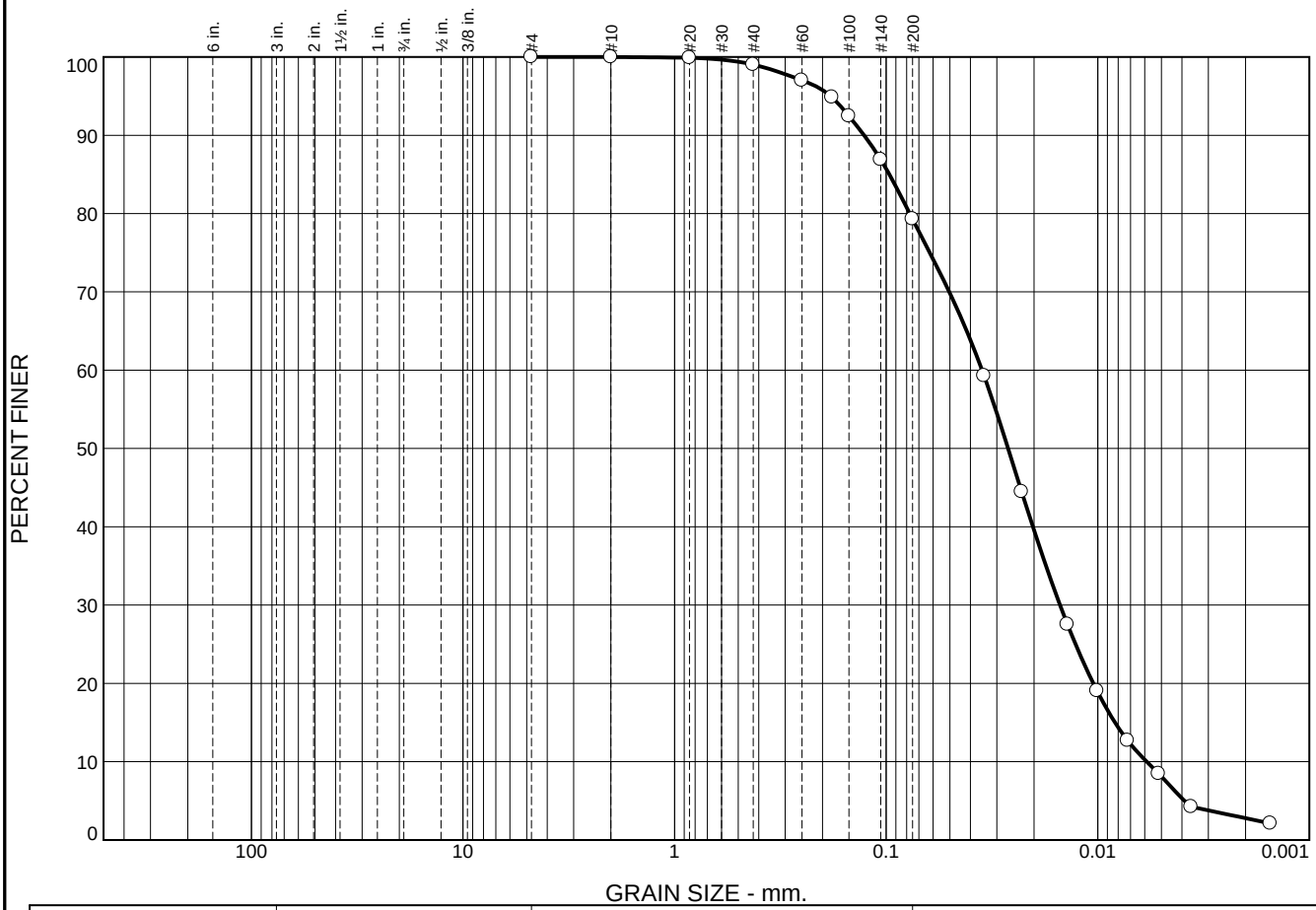
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.0	1.0	19.7	71.2	8.1

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	106	73	0.0966	0.0352	0.0265	0.0151	0.0083	0.0059	1.10	6.00

Material Description	USCS	AASHTO
○ Dark Brown Organic Silt with Sand	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSRBG011 **Depth:** 0-0.5 ft **Sample Number:** 157756

Remarks:

MATERIALS TESTING CONSULTANTS, INC.

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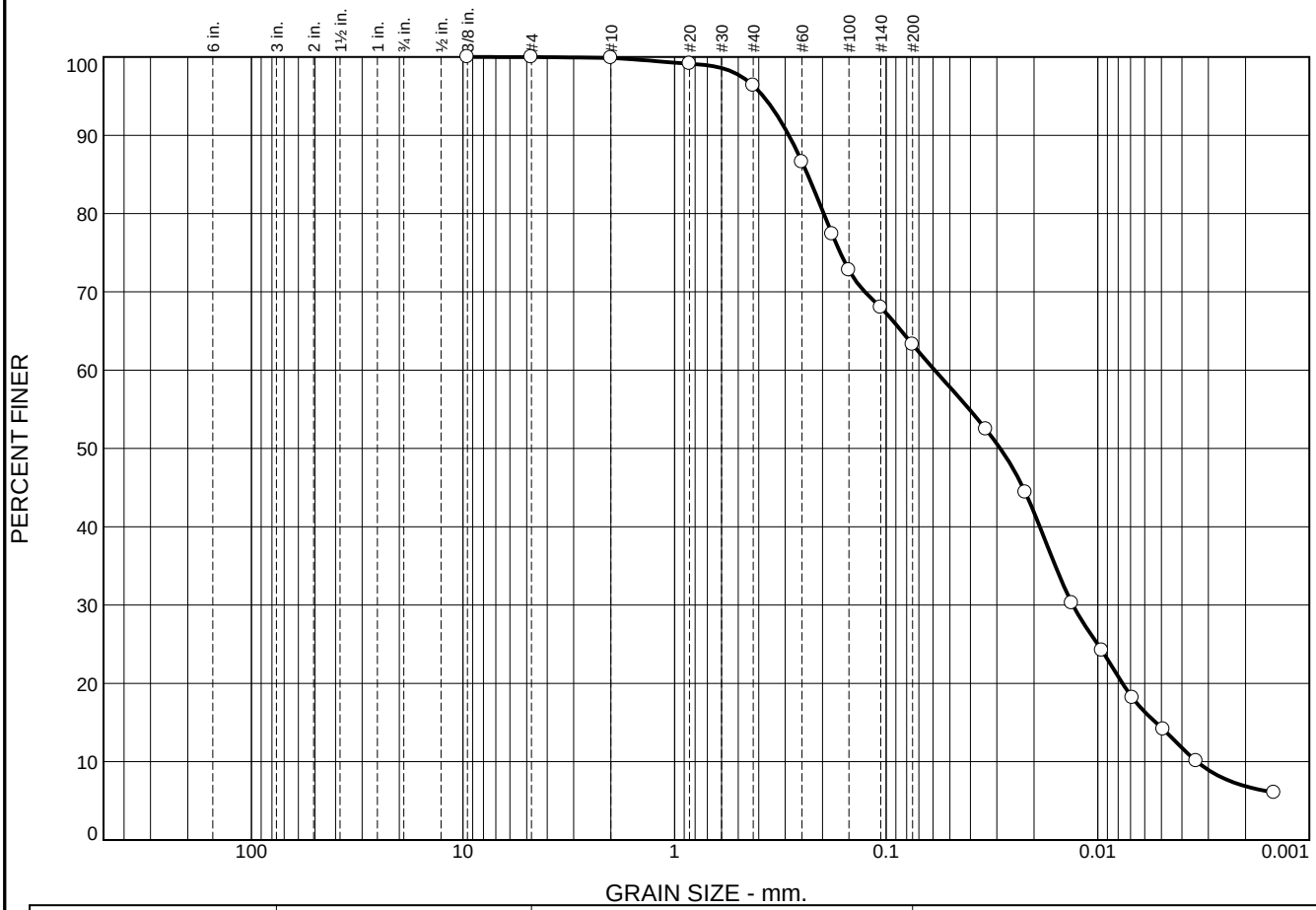
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	0.0	0.1	3.6	33.0	49.0	14.3

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	78	55	0.2354	0.0589	0.0289	0.0131	0.0053	0.0034	0.86	17.37

Material Description	USCS	AASHTO
○ Brown Sandy Organic Silt	OH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** USCCC004-GEO **Sample Number:** 157757

Remarks:

MATERIALS TESTING CONSULTANTS, INC.

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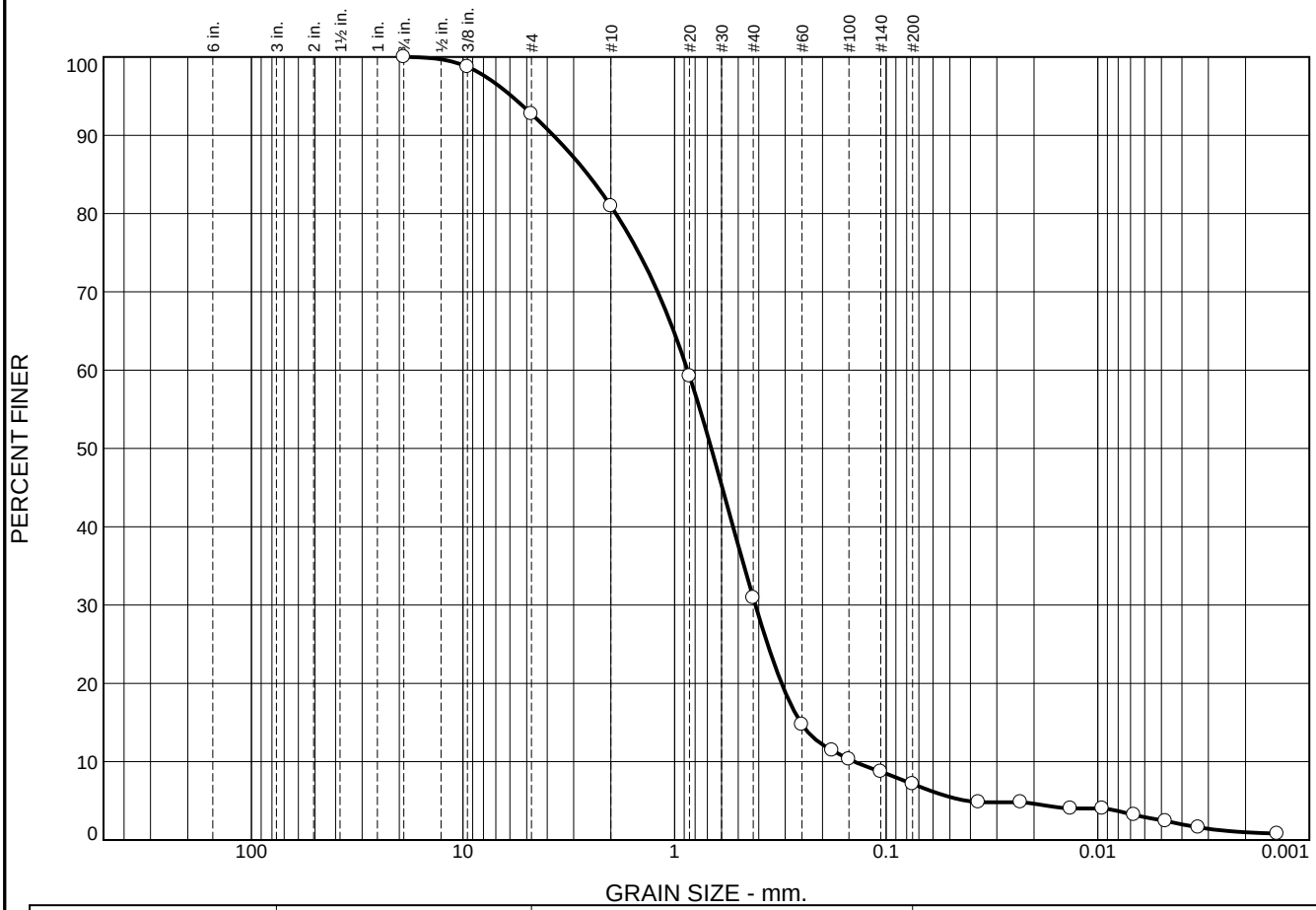
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	7.3	11.7	50.1	23.7	4.7	2.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○		NP	2.5704	0.8680	0.6704	0.4151	0.2535	0.1414	1.40	6.14

Material Description	USCS	AASHTO
○ Brown Poorly Graded Sand with Silt	SP-SM	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSLBC002-GEO **Sample Number:** 157758

Remarks:

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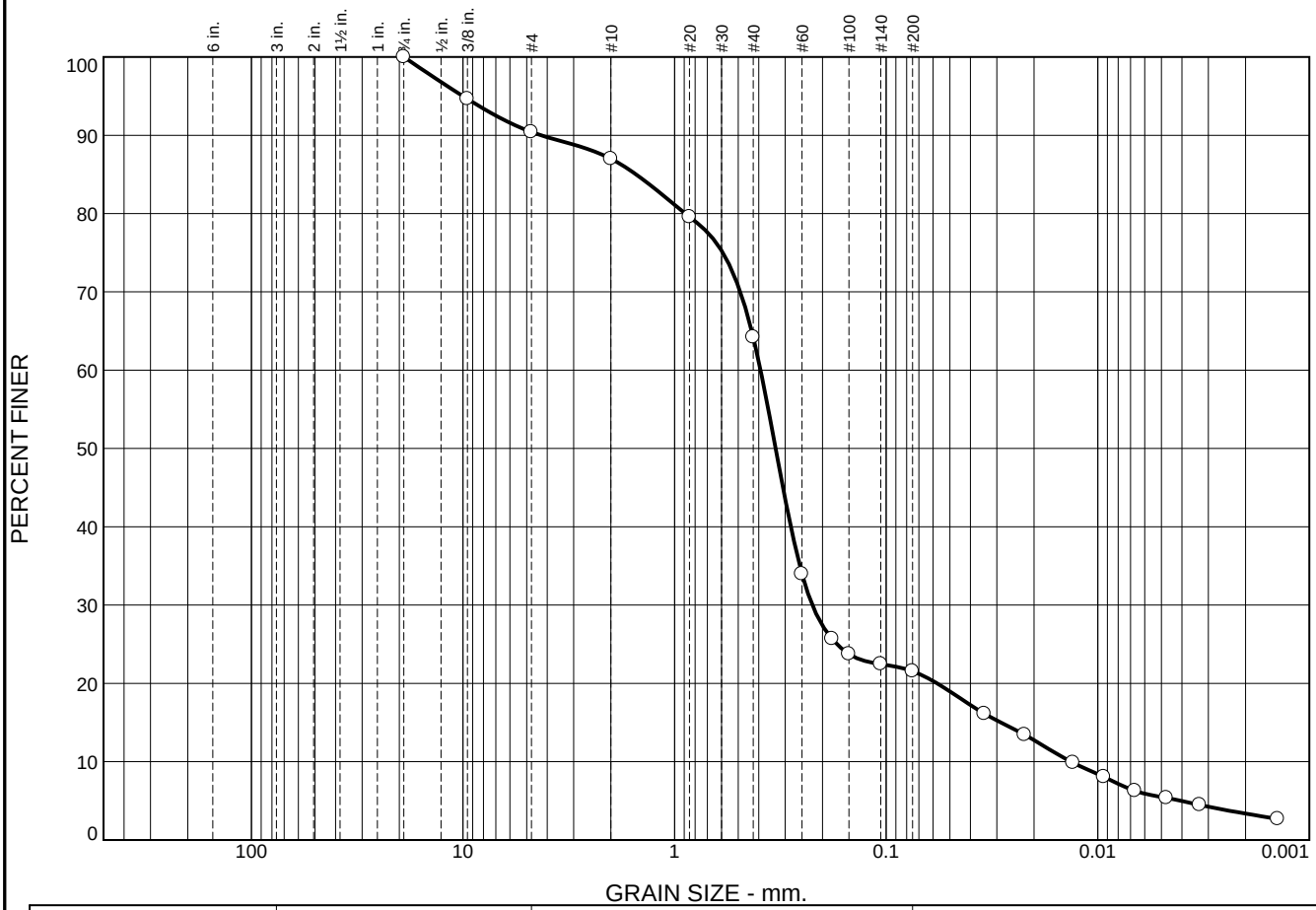
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	9.6	3.4	22.8	42.7	16.0	5.5

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○		NP	1.5220	0.3924	0.3329	0.2234	0.0287	0.0134	9.50	29.29

Material Description	USCS	AASHTO
○ Dark Brown Silty Sand	SM	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSLBC004-GEO **Sample Number:** 157759

Remarks:

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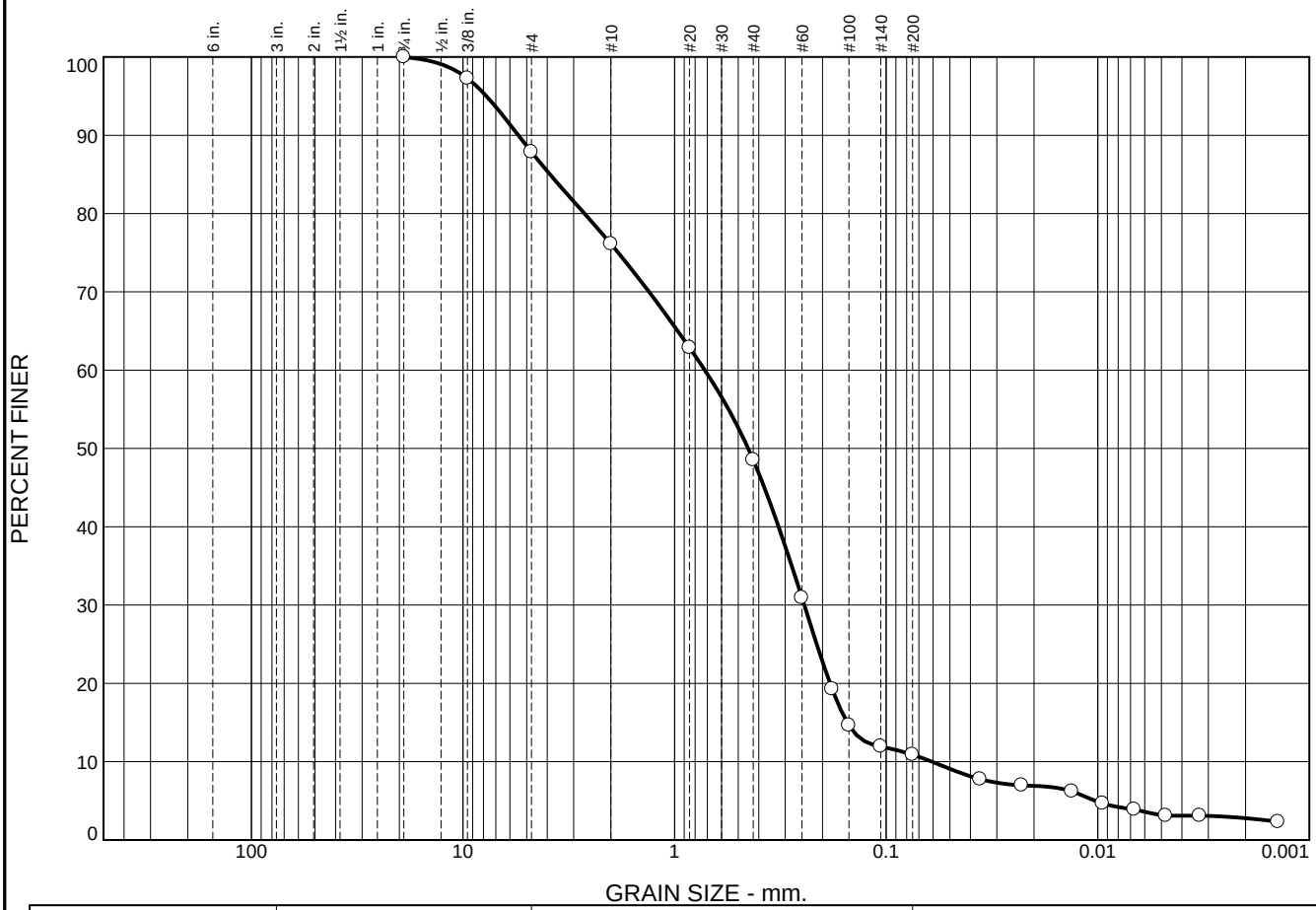
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	0.0	12.1	11.8	27.6	37.6	7.7	3.2

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○		NP	3.8784	0.7197	0.4489	0.2438	0.1529	0.0608	1.36	11.84

Material Description	USCS	AASHTO
○ Brown Silty Sand	SM	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSRBC008-GEO **Sample Number:** 157760

Remarks:

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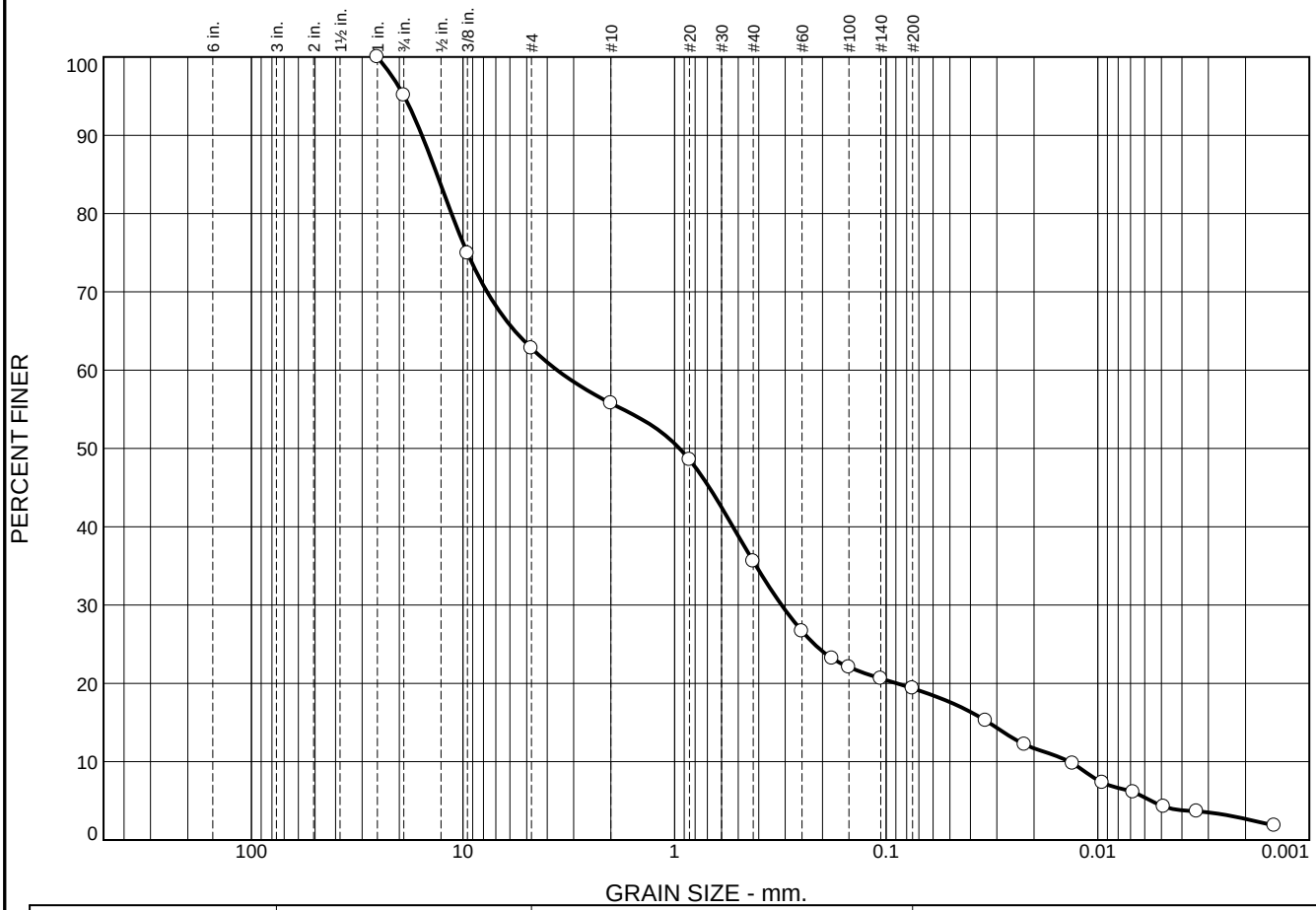
Figure

Particle Size Distribution Report



	% +3"	% Gravel		% Sand			% Fines	
		Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
○	0.0	4.9	32.3	7.0	20.2	16.2	15.0	4.4

	LL	PL	D_{85}	D_{60}	D_{50}	D_{30}	D_{15}	D_{10}	C_c	C_u
○	58	43	13.2815	3.5891	0.9471	0.3120	0.0328	0.0136	1.99	263.59

Material Description	USCS	AASHTO
○ Brown Sandy Elastic Silt with Gravel	MH	

Project No. 201553 **Client:** AECOM

Project: Morrow Dam Sediment Rem

○ **Location:** DSRBC001-GEO **Sample Number:** 157761

Remarks:

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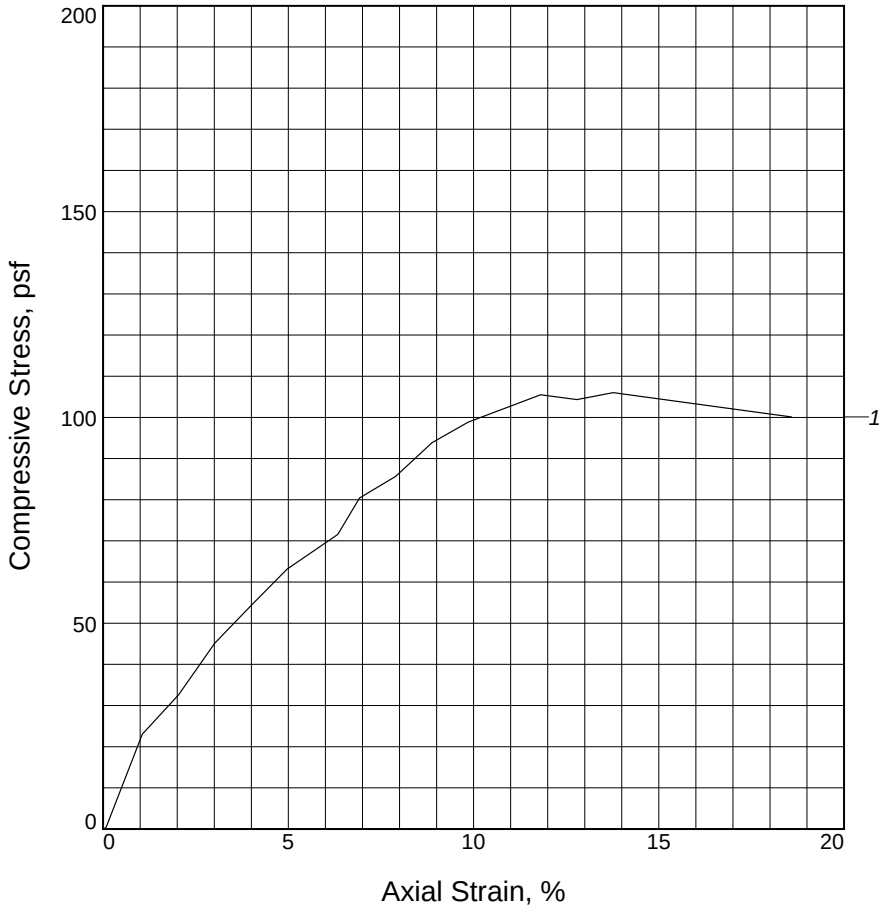
Figure

UNCONFINED COMPRESSION TEST



Sample No.	1			
Unconfined strength, psf	106			
Undrained shear strength, psf	53			
Failure strain, %	13.8			
Strain rate, in./min.	0.100			
Water content, %	280.3			
Wet density, pcf	79.1			
Dry density, pcf	20.8			
Saturation, %	108.3			
Void ratio	6.2537			
Specimen diameter, in.	2.35			
Specimen height, in.	5.11			
Height/diameter ratio	2.18			

Description: Dark Brown Organic Silt with Sand

LL =	**PL =**	**PI =**	**Assumed GS=** 2.417	**Type:** Composite

Project No.: 201553

Date Sampled:

Remarks:
Paint Filter Test - Material contains no free liquids

Figure _____

Client: AECOM

Project: Morrow Dam Sediment Rem

Location: WCSCA1CS-GEO

Sample Number: 157738

UNCONFINED COMPRESSION TEST

MATERIALS TESTING CONSULTANTS, INC.
Grand Rapids, MI

Appendix D
EGLE Memo

Appendix E
EPA Memo