

Lauridsen, Keld B - DNR

From: Lauridsen, Keld B - DNR
Sent: Monday, November 25, 2019 12:50 PM
To: 'Maletzke, Jeff'
Cc: Mrotek, Melissa (GBY); 'POMERVILLE, JACQUELYN'; Cole, Albert; Romback-Bartels, Jean - DNR
Subject: RE: GP Continuing investigation results and plan

Jeff,

I have reviewed the available analytical results for the GP Broadway Mill Expansion site (BRRTS # 02-05-583452) and concur with your approach of complete removal via excavation of PCB contaminated soil.

Let me know if we need to discuss anything further.

Thanks,

-Keld

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Keld B. Lauridsen

Phone: (920) 662-5420

Keld.Lauridsen@wisconsin.gov

From: Maletzke, Jeff <Jeff.Maletzke@aecom.com>
Sent: Wednesday, November 13, 2019 9:11 AM
To: Lauridsen, Keld B - DNR <Keld.Lauridsen@wisconsin.gov>
Cc: Mrotek, Melissa (GBY) <MELISSA.MROTEK@GAPAC.com>; 'POMERVILLE, JACQUELYN' <JACQUELYN.POMERVILLE@GAPAC.COM>; Cole, Albert <Albert.Cole@aecom.com>
Subject: GP Continuing investigation results and plan

Keld:

Please see attached a summary memo with the results from the most recent PCB sampling at the Broadway Mill. We have also included our proposed plan for excavating the impacted area. Please provide your concurrence or any questions/comments at your earliest convenience. GP would like to move forward with the excavation and disposal before the end of the year if possible. Thank you.

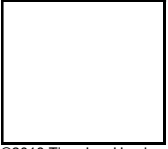
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**Georgia-Pacific
Consumer Operations LLC**

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Green Bay, WI 54307-9130
(920) 435-8821
www.gp.com

November 12, 2019

SUBMITTED VIA EMAIL

Mr. Keld Lauridsen
Hydrogeologist
Wisconsin Department of Natural Resources
2984 Shawano Avenue
Green Bay, WI 54313-6727

**Subject: Continuing Investigation Sampling Results and Planned Excavation/Removal Activities
Georgia-Pacific Consumer Operations LLC – Green Bay Broadway Mill
DNR BRRTS Activity # 02-05-583452**

Dear Mr. Lauridsen:

Georgia-Pacific Consumer Operations LLC (GP) is providing the Wisconsin Department of Natural Resources (WDNR) with this summary of findings based on additional confirmation sampling completed to further delineate the horizontal extent of PCB impacts near B-101 at the GP Broadway Mill, located at 1919 South Broadway Street, in the City of Green Bay, Wisconsin. This letter also includes a brief summary of previous sampling results, as well as a description of proposed soil excavation/removal in support of a request for No Further Action (NFA).

Previous Sampling Results

Table 1 provides a summary of the analytical data and the regulatory standards for confirmation samples collected on June 17, 2019. A summary of detected compounds is also shown on Figure 1. Total PCBs were detected in soil samples from 3 to 4 ft bgs at B-101B, C, and D at concentrations ranging between 55 and 270 µg/Kg. Each of the detected concentrations are below the Industrial Direct Contact RCL of 967 µg/Kg, however, all exceed the Groundwater Pathway RCL of 9.4 µg/Kg. The occurrence of PCBs near B-101 is limited to surficial fill above coal and/or native clay as PCBs were not detected in deeper samples (8.5 to 9.5 ft bgs) collected within the native clay. Thus, the vertical extent of PCBs has been defined in this area. In addition, the absence of PCBs in boring B-101A has established the lateral extent to the north.

Additional Confirmation Sampling

Acknowledging the distribution of the surficial fill in the vicinity of B-101, and based on the detections of PCBs in the initial confirmation sampling, additional soil samples were collected on September 13, 2019 to further delineate the extent of PCBs (relative to the Groundwater Pathway RCL). A total of 5 borings (B-101E through B-101I) were completed at the locations shown on Figure 1. Direct push technology using a double-cased boring (dual tube) was utilized to collect one soil (non-coal) sample at each location from a depth of 3 to 4 ft bgs. A duplicate sample was collected from B-101I.

All soil samples were collected in sample containers provided by Northern Lakes Services located in Crandon, Wisconsin and submitted for laboratory analysis of total PCBs and PCB isomers consistent with the initial confirmation sampling completed on June 17, 2019. The samples were placed immediately on ice after collection. The samples were kept and shipped on ice and trip blanks were used. After soil sampling was complete, each soil boring was abandoned with 3/8-inch bentonite pellets.

Additional Confirmation Sampling Results

As shown in Table 1 and on Figure 1, no PCBs were detected in any of the additional confirmation samples. The analytical reports are enclosed as Attachment A. Based on these results, the lateral extent of PCBs in the B-101 area has been defined by the "circle" through sample locations B-101E through B-101I as shown on Figure 1. As previously mentioned, the vertical limits of PCB impacts are limited to surficial fill above coal and/or native clay as PCBs were not detected in deeper samples (8.5 to 9.5 ft bgs).

Proposed Soil Excavation/Removal

Based on the data discussed above, GP proposes to excavate the surficial fill and coal within the area defined by the "circle" through sample locations B-101E through B-101I. The bottom of the coal in this area is approximately 7.5 feet bgs. Therefore, the excavation will extend to a depth of eight feet bgs. An estimated 582 cubic yards of material will be excavated and placed inside a licensed landfill. After excavation, this area will be backfilled to original grade with clean fill. Field oversight and photo-documentation will occur during excavation and backfilling as well as confirmation of the actual volume removed and a final survey of excavation limits and final grades of the reconstructed area. The excavation and disposal documentation and supporting analytical data (contained herein) will be compiled and submitted to the WDNR as a request for No Further Action.

Please contact me at (920) 438-2233 or melissa.mrotek@gapac.com if you have any questions.

Sincerely,



Melissa Mrotek
Environmental Program Manager
Georgia-Pacific Consumer Operations LLC
Broadway Mill

Enclosures: Figure 1 – Confirmation Sampling Locations
Table 1 - Summary of Analytical Results
Attachment A - Analytical Report from Northern Lake Service, Inc.

Soil Analytical Data Summary - September 2019

Project Pace Mill Expansion

Georgia Pacific Broadway Mill - Green Bay, Wisconsin

Project No. 60594990

Parameter	Unit	Sample	B-101A	B-101A	B-101B	B-101B	B-101C	B-101C	B-101D	B-101D DUP	B-101D	B-101E	B-101F	B-101G	B-101H	B-101I	B-103A	B-103A	B-103B	B-103B	B-103C
		Depth (ft/bgs)	3-4	8.5-9.5	3-4	8.5-9.5	3-4	8.5-9.5	3-4	3-4	8.5-9.5	3-4	3-4	3-4	3-4	3-4	5.5-6.5	7-8	5.5-6.5	7-8	5.5-6.5
Cadmium, Total	mg/kg																				
PCB-1016	ug/Kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					
PCB-1221	ug/Kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					
PCB-1232	ug/Kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					
PCB-1242	ug/Kg		ND	ND	[55]J	ND	250	ND	ND	94	ND	ND	ND	ND	ND	ND					
PCB-1248	ug/Kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					
PCB-1254	ug/Kg		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND					
PCB-1260	ug/Kg		ND	ND	ND	ND	[19]J	ND	ND	ND	ND	ND	ND	ND	ND	ND					
Total PCBs	ug/Kg		ND	ND	[55]J	ND	270	ND	ND	94	ND	ND	ND	ND	ND	ND					
Benzene	ug/Kg																				

Soil Analytical Data Summary - September 2019

Project Pace Mill Expansion

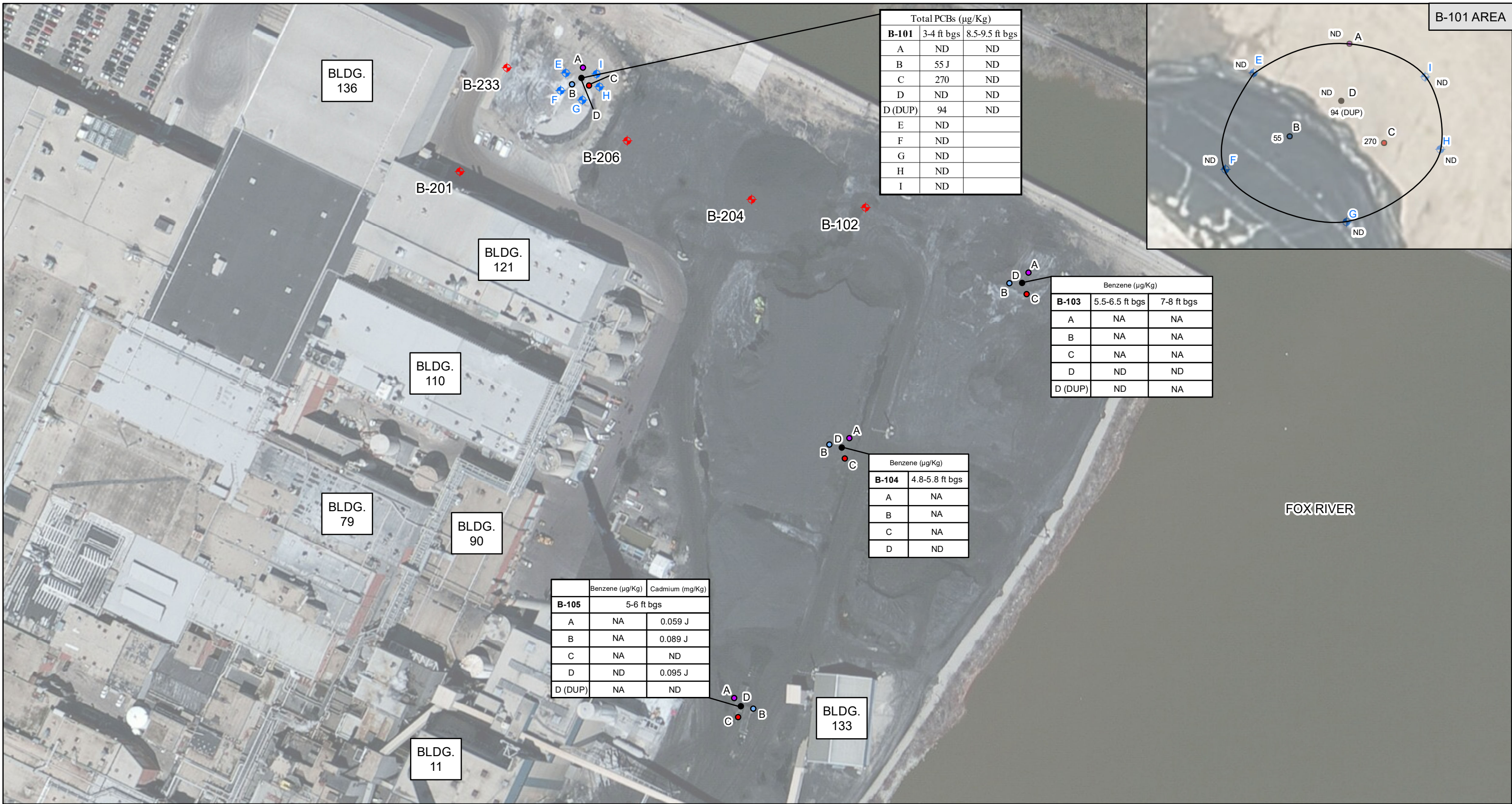
Georgia Pacific Broadway Mill - Green Bay, Wisconsin

Project No. 60594990

Parameter	Unit	Sample Depth (ft/bgs)														Residual Soil Contaminant Levels (ch NR 720 Wis. Adm Code)			
			B-103C	B-103D	B-103D DUP	B-103D	B-104A	B-104B	B-104C	B-104D	B-105A	B-105B	B-105C	B-105D	B-105D DUP	Industrial Direct Contact	Non-Industrial Direct Contact	Protection of Groundwater Quality (DF = 2)	
			7-8	5.5-6.5	5.5-6.5	7-8	4.8-5.8	4.8-5.8	4.8-5.8	4.8-5.8	5-6	5-6	5-6	5-6	5-6				
Cadmium, Total	mg/kg											[0.059]	[0.089]	ND	[0.095]	ND	985	71.1	0.752
PCB-1016	ug/Kg																28,000	4,110	--
PCB-1221	ug/Kg																883	213	--
PCB-1232	ug/Kg																792	190	--
PCB-1242	ug/Kg																972	235	--
PCB-1248	ug/Kg																975	236	--
PCB-1254	ug/Kg																988	239	--
PCB-1260	ug/Kg																1,000	243	--
Total PCBs	ug/Kg																967	234	9.4
Benzene	ug/Kg			ND	ND	ND				ND				ND			7,070	1,600	5.1

Notes:

1. Values in brackets represent results greater than or equal to the Limit of Detection (LOD), but less than the Limit of Quantitation (LOQ), and are within a region of "less certain quantitation."
 2. Only parameters with detections are shown.
 3. DF = Dilution Factor
- = Not Analyzed per Release Confirmation Sampling Plan submitted to WDNR May 9, 2019 and WDNR recommendation in e-mail correspondence dated May 10, 2019.
 ND = Not Detected
 J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.
 -- = No RCL listed



Total PCBs (µg/Kg)		
B-101	3-4 ft bgs	8.5-9.5 ft bgs
A	ND	ND
B	55 J	ND
C	270	ND
D	ND	ND
D (DUP)	94	ND
E	ND	
F	ND	
G	ND	
H	ND	
I	ND	

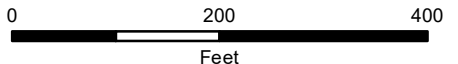
Benzene (µg/Kg)		
B-103	5.5-6.5 ft bgs	7-8 ft bgs
A	NA	NA
B	NA	NA
C	NA	NA
D	ND	ND
D (DUP)	ND	NA

Benzene (µg/Kg)	
B-104	4.8-5.8 ft bgs
A	NA
B	NA
C	NA
D	ND

	Benzene (µg/Kg)	Cadmium (mg/Kg)
B-105	5-6 ft bgs	
A	NA	0.059 J
B	NA	0.089 J
C	NA	ND
D	ND	0.095 J
D (DUP)	NA	ND

Confirmation Sampling Locations
 ● A (Approximately 15 feet from initial Geotechnical Boring)
 ● B (Approximately 15 feet from initial Geotechnical Boring)
 ● C (Approximately 15 feet from initial Geotechnical Boring)
 ● D (Confirmation sample location coincident with geotechnical boring completed January 2019)
 ♦ Location of Geotechnical Soil Borings
 + Proposed additional confirmation sampling location at 3-4 ft bgs

ND = Not Detected
 J = Result is between Limit of Detection and Limit of Quantification
 NA = Not Analyzed per Release Confirmation Sampling Plan submitted to WDNR May 9, 2019 and WDNR recommendation via email May 10, 2019.



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 2985 SOUTH RIDGE ROAD, SUITE B
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NO.	DATE	BY	REVISION
A	07/22/19	MTP	ISSUED FOR WORK PLAN

Consumer Products
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PROJECT:		Pace PM02			
MACH NAME:		Balance of Plant			
DET NAME:		CONFIRMATION SAMPLE LOCATIONS			
DR.	MTP	CH.	JM	DATE:	8/20/19
-	-	-	-	AECOM #:	2.01
JOB #:		60601464			
FIGURE 1		DWG #:		CONFIRMATION SAMPLE LOCATIONS	
					REV A

ANALYTICAL RESULTS: PCBs by GC

Page 1 of 2

Customer: AECOM (GB) NLS Project: 330586 PO # 114136

Project Description: PCB - Soil

Project Title: Template: PCBS Printed: 10/11/2019 09:52

Sample: 1147810 B-101E Collected: 09/13/19 Analyzed: 10/10/19 - 84.4%Solids Analytes: 8

Notes: HX

ANALYTE NAME	RESULT	UNITS DWB	DIL	LOD	LOQ	Note
PCB-1016	ND	ug/Kg	5	20	67	
PCB-1221	ND	ug/Kg	5	42	140	
PCB-1232	ND	ug/Kg	5	21	69	
PCB-1242	ND	ug/Kg	5	19	63	
PCB-1248	ND	ug/Kg	5	9.5	32	
PCB-1254	ND	ug/Kg	5	15	49	
PCB-1260	ND	ug/Kg	5	19	63	
Total PCBs	ND	ug/Kg	5	20	67	
TCMX (SURR)	98%		5			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

HX = A dilution was required due to complex sample matrix.

CL = The extract was subjected to florisil cleanup by SW846 Method 3620 before analysis.

IV = Initial extract is 2.05 grams.

Sample: 1147811 B-101F Collected: 09/13/19 Analyzed: 10/08/19 - 85.1%Solids Analytes: 8

Notes: HX

ANALYTE NAME	RESULT	UNITS DWB	DIL	LOD	LOQ	Note
PCB-1016	ND	ug/Kg	5	20	67	
PCB-1221	ND	ug/Kg	5	42	140	
PCB-1232	ND	ug/Kg	5	21	69	
PCB-1242	ND	ug/Kg	5	19	63	
PCB-1248	ND	ug/Kg	5	9.5	32	
PCB-1254	ND	ug/Kg	5	15	49	
PCB-1260	ND	ug/Kg	5	19	63	
Total PCBs	ND	ug/Kg	5	20	67	
TCMX (SURR)	79%		5			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

HX = A dilution was required due to complex sample matrix.

IV = Initial extract is 2.13 grams.

Sample: 1147812 B-101G Collected: 09/13/19 Analyzed: 10/08/19 - 81.8%Solids Analytes: 8

Notes: HX

ANALYTE NAME	RESULT	UNITS DWB	DIL	LOD	LOQ	Note
PCB-1016	ND	ug/Kg	5	20	67	
PCB-1221	ND	ug/Kg	5	42	140	
PCB-1232	ND	ug/Kg	5	21	69	
PCB-1242	ND	ug/Kg	5	19	63	
PCB-1248	ND	ug/Kg	5	9.5	32	
PCB-1254	ND	ug/Kg	5	15	49	
PCB-1260	ND	ug/Kg	5	19	63	
Total PCBs	ND	ug/Kg	5	20	67	
TCMX (SURR)	81%		5			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

HX = A dilution was required due to complex sample matrix.

IV = Initial extract is 2.02 grams.

ANALYTICAL RESULTS: PCBs by GC

Page 2 of 2

Customer: AECOM (GB) NLS Project: 330586 PO # 114136

Project Description: PCB - Soil

Project Title: Template: PCBs Printed: 10/11/2019 09:52

Sample: 1147813 B-101H Collected: 09/13/19 Analyzed: 10/08/19 - 83%Solids Analytes: 8

Notes: HX

ANALYTE NAME	RESULT	UNITS DWB	DIL	LOD	LOQ	Note
PCB-1016	ND	ug/Kg	5	20	67	
PCB-1221	ND	ug/Kg	5	42	140	
PCB-1232	ND	ug/Kg	5	21	69	
PCB-1242	ND	ug/Kg	5	19	63	
PCB-1248	ND	ug/Kg	5	9.5	32	
PCB-1254	ND	ug/Kg	5	15	49	
PCB-1260	ND	ug/Kg	5	19	63	
Total PCBs	ND	ug/Kg	5	20	67	
TCMX (SURR)	76%		5			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

HX = A dilution was required due to complex sample matrix.

IV = Initial extract is 2.04 grams.

Sample: 1147814 B-101I Collected: 09/13/19 Analyzed: 10/08/19 - 83.5%Solids Analytes: 8

Notes: HX

ANALYTE NAME	RESULT	UNITS DWB	DIL	LOD	LOQ	Note
PCB-1016	ND	ug/Kg	5	20	67	
PCB-1221	ND	ug/Kg	5	42	140	
PCB-1232	ND	ug/Kg	5	21	69	
PCB-1242	ND	ug/Kg	5	19	63	
PCB-1248	ND	ug/Kg	5	9.5	32	
PCB-1254	ND	ug/Kg	5	15	49	
PCB-1260	ND	ug/Kg	5	19	63	
Total PCBs	ND	ug/Kg	5	20	67	
TCMX (SURR)	76%		5			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

HX = A dilution was required due to complex sample matrix.

IV = Initial extract is 2.02 grams.

Sample: 1147815 Dup Collected: 09/13/19 Analyzed: 10/08/19 - 83.3%Solids Analytes: 8

Notes: HX

ANALYTE NAME	RESULT	UNITS DWB	DIL	LOD	LOQ	Note
PCB-1016	ND	ug/Kg	5	20	67	
PCB-1221	ND	ug/Kg	5	42	140	
PCB-1232	ND	ug/Kg	5	21	69	
PCB-1242	ND	ug/Kg	5	19	63	
PCB-1248	ND	ug/Kg	5	9.5	32	
PCB-1254	ND	ug/Kg	5	15	49	
PCB-1260	ND	ug/Kg	5	19	63	
Total PCBs	ND	ug/Kg	5	20	67	
TCMX (SURR)	74%		5			S

NOTES APPLICABLE TO THIS ANALYSIS:

S = This compound is a surrogate used to evaluate the quality control of a method.

HX = A dilution was required due to complex sample matrix.

IV = Initial extract is 2.13 grams.

NORTHERN LAKE SERVICE, INC.
 Analytical Laboratory and Environmental Services
 400 North Lake Avenue - Crandon, WI 54520
 Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
 WDATCP Laboratory Certification No. 105-330
 EPA Laboratory ID No. WI00034

Printed: 10/11/19 Page 1 of 2

Client: AECOM (GB)
 Attn: Jeffrey Maletzke, PG
 2985 South Ridge Road, Suite B
 Green Bay, WI 54304

NLS Project: 330586

NLS Customer: 50040

Fax: 920 468 3312 Phone: 920 468 1978

PO # 114136

Project: PCB - Soil

B-101E NLS ID: 1147810

COC: 234100:1 Matrix: SO

Collected: 09/13/19 09:10 Received: 09/13/19

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Solids, total on solids	84.4	%	1	0.10*		09/17/19	SM 2540-G 20ed	721026460
PCBs (solid) by SW846 8082	see attached					10/10/19	SW846 8082	721026460
Organics Extraction (Soil) for PCBs	yes					10/08/19	SW846 3550C	721026460

B-101F NLS ID: 1147811

COC: 234100:2 Matrix: SO

Collected: 09/13/19 09:25 Received: 09/13/19

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Solids, total on solids	85.1	%	1	0.10*		09/17/19	SM 2540-G 20ed	721026460
PCBs (solid) by SW846 8082	see attached					10/08/19	SW846 8082	721026460
Organics Extraction (Soil) for PCBs	yes					09/27/19	SW846 3550C	721026460

B-101G NLS ID: 1147812

COC: 234100:3 Matrix: SO

Collected: 09/13/19 09:42 Received: 09/13/19

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Solids, total on solids	81.8	%	1	0.10*		09/17/19	SM 2540-G 20ed	721026460
PCBs (solid) by SW846 8082	see attached					10/08/19	SW846 8082	721026460
Organics Extraction (Soil) for PCBs	yes					09/27/19	SW846 3550C	721026460

B-101H NLS ID: 1147813

COC: 234100:4 Matrix: SO

Collected: 09/13/19 09:56 Received: 09/13/19

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Solids, total on solids	83.0	%	1	0.10*		09/17/19	SM 2540-G 20ed	721026460
PCBs (solid) by SW846 8082	see attached					10/08/19	SW846 8082	721026460
Organics Extraction (Soil) for PCBs	yes					09/27/19	SW846 3550C	721026460

B-101I NLS ID: 1147814

COC: 234100:5 Matrix: SO

Collected: 09/13/19 10:11 Received: 09/13/19

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Solids, total on solids	83.5	%	1	0.10*		09/17/19	SM 2540-G 20ed	721026460
PCBs (solid) by SW846 8082	see attached					10/08/19	SW846 8082	721026460
Organics Extraction (Soil) for PCBs	yes					09/27/19	SW846 3550C	721026460

Dup NLS ID: 1147815

COC: 234100:6 Matrix: SO

Collected: 09/13/19 10:11 Received: 09/13/19

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Solids, total on solids	83.3	%	1	0.10*		09/17/19	SM 2540-G 20ed	721026460
PCBs (solid) by SW846 8082	see attached					10/08/19	SW846 8082	721026460
Organics Extraction (Soil) for PCBs	yes					09/27/19	SW846 3550C	721026460

NORTHERN LAKE SERVICE, INC.
Analytical Laboratory and Environmental Services
400 North Lake Avenue - Crandon, WI 54520
Ph: (715)-478-2777 Fax: (715)-478-3060

ANALYTICAL REPORT

WDNR Laboratory ID No. 721026460
WDATCP Laboratory Certification No. 105-330
EPA Laboratory ID No. WI00034

Printed: 10/11/19 Page 2 of 2

Client: AECOM (GB)
Attn: Jeffrey Maletzke, PG
2985 South Ridge Road, Suite B
Green Bay, WI 54304

NLS Project: 330586

NLS Customer: 50040

Fax: 920 468 3312 Phone: 920 468 1978

PO # 114136

Project: PCB - Soil

Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered Reporting Limits. All LOD/LOQs adjusted to reflect dilution and/or solids content.

ND = Not Detected (< LOD) LOD = Limit of Detection LOQ = Limit of Quantitation NA = Not Applicable

DWB = Dry Weight Basis %DWB = (mg/kg DWB) / 10000 1000 ug/L = 1 mg/L

MCL = Maximum Contaminant Levels for Drinking Water Samples. Shaded results indicate >MCL.

Reviewed by:



Authorized by:
R. T. Krueger
President