

From: Mark McColloch <MSM@shanwil.com>
Sent: Thursday, January 12, 2017 3:34 PM
To: Ackerman, Jeffrey A - DNR
Subject: DB Oak - Sediment Sample Results and Update
Attachments: DB_Oak_Sed_Waste_Profile.pdf

Jeff,

I wanted to let you know that the sediment waste profile sample was collected in accordance with recommendation presented in the last annual report (lab report is attached).
We have also collected additional groundwater samples per those recommendations.

I was hoping that by now you would be reviewing a work plan for sediment removal/contained out determination. The project is currently on hold as the client is looking into filing a potential insurance claim.

I will let you know more when I know more.



Mark S. McColloch, P.G. | Senior Associate

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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: 10/13/16 Page 1 of 2

Client: Shannon & Wilson, Inc.
Attn: Mark McColloch, P.G.
6506 Schroeder Road, Suite 201
Madison, WI 53711

NLS Project: 266549

NLS Customer: 104721

Fax: 608 442 9013 Phone: 608 442 5223

PO # 42-1-37320-003

Project: DB Oak

Sed-1 Profile NLS ID: 942886

COC: 206146:1 Matrix: SO

Collected: 09/01/16 16:15 Received: 09/02/16

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Percent Acidity	ND	% DWB	1	17*	55*	10/12/16	AAG TST-62901	241249360
Percent Alkalinity	11	% DWB	1	3.0	11	10/12/16	SM2320B 1997	241249360
Percent Chlorine	ND	% DWB	1	0.017	0.052	09/14/16	EPA 8260C	157066030
Cyanide, reactive	ND	mg/Kg DWB	1	0.10	0.30	09/30/16	EPA 9014 & Chap 7	632021390
pH, lab (soil/sludge)	8.1	s.u. pHw	1		*	09/02/16	SW846 9045	721026460
Phenols (on solid)	[2.8]	mg/Kg DWB	1	1.6	5.3	09/06/16	5530 D-2005	721026460
Solids, total on solids	61.5	%	1	0.10*		09/07/16	SM 2540-G 20ed	721026460
Sulfide, reactive	110	mg/Kg DWB	1	18	58	09/30/16	EPA 9034 & Chap 7	632021390
Water, Free EPA 9095	5.0	mL/100g	1	1.0*		09/06/16	SW846 9095	721026460
TCLP Extraction	yes					09/13/16	SW846 1311	721026460
TCLP Zero Head Space Extraction	yes					09/13/16	SW846 1311	721026460
Flashpoint	>140.0	Deg. F	1		*	09/12/16	EPA 1010	157066030
PCBs (solid) by SW846 8082	see attached					09/29/16	SW846 8082	721026460
GRO (soil)	3.5	mg/Kg DWB	1	0.51	1.7	09/13/16	WI(95)GRO Sept 95	721026460
	spike-95%, duplicate-102%, surrogate-94%							
DRO (soil)	18	mg/Kg DWB	1	1.3*	4.4*	09/19/16	WI(95)DRO Sept 95	721026460
	spike-90%, duplicate-107%, surrogate-100%							
Organics Extraction (Soil) for PCBs	yes					09/15/16	SW846 3546	721026460
Organics Extraction (DRO SOIL)	yes					09/09/16	WI(95)DRO Sept 95	721026460

TCLP Sed-1 Profile NLS ID: 942887

COC: 206146 Matrix: EX

Collected: 09/14/16 08:30 Received: 09/14/16

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
Arsenic, tot. recoverable on extract as As by ICP	ND	ug/L	10	60*	190*	09/15/16	SW846 6010	721026460
Barium, tot. recoverable on extract as Ba by ICP	970	ug/L	10	25*	50*	09/15/16	SW846 6010	721026460
Cadmium, tot. recoverable on extract as Cd by ICP	42	ug/L	10	1.4	4.5	09/15/16	SW846 6010	721026460
Chromium, tot. recoverable on extract as Cr by ICP	88	ug/L	10	6.7	20	09/15/16	SW846 6010	721026460
Copper, tot. recoverable on extract as Cu by ICP	190	ug/L	10	13	40	09/15/16	SW846 6010	721026460
Lead, tot. recoverable on extract as Pb by ICP	540	ug/L	10	15	49	09/15/16	SW846 6010	721026460
Mercury by CVAA	ND	ug/L	1	0.47	1.5	09/23/16	EPA 245.1, Rev 3	721026460
Nickel, tot. recoverable on extract as Ni by ICP	1400	ug/L	10	11	34	09/15/16	SW846 6010	721026460
Selenium, tot. recoverable on extract as Se by ICP	ND	ug/L	10	85	270	09/15/16	SW846 6010	721026460
Silver, tot. recoverable on extract as Ag by ICP	ND	ug/L	10	3.7	12	09/15/16	SW846 6010	721026460
Zinc, tot. recoverable on extract as Zn by ICP	10000	ug/L	10	50	100	09/15/16	SW846 6010	721026460
Metals digestion - tot. recov. ICP	yes					09/14/16	SW846 3005M	721026460
TCLP VOC by EPA Method 8260B	see attached					09/20/16	SW846 8260	721026460
Acid/Base Extraction for GC/MS	yes					09/14/16	SW846 3510C	721026460
Semi-Volatiles TCLP by EPA Method 8270C	see attached					09/23/16	SW846 8270	721026460

MeOH Trip Blank NLS ID: 942888

COC: 206146 Matrix: TB

Collected: 09/01/16 00:00 Received: 09/02/16

Parameter	Result	Units	Dilution	LOD	LOQ	Analyzed	Method	Lab
GRO (soil)	ND	mg/Kg DWB	1	0.51	1.7	09/13/16	WI(95)GRO Sept 95	721026460
	spike-95%, duplicate-102%, surrogate-93%							

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ANALYTICAL REPORT

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

Printed: 10/13/16 Page 2 of 2

Client: Shannon & Wilson, Inc.
Attn: Mark McColloch, P.G.
6506 Schroeder Road, Suite 201
Madison, WI 53711

NLS Project: 266549

NLS Customer: 104721

Fax: 608 442 9013 Phone: 608 442 5223

PO # 42-1-37320-003

Project: DB Oak

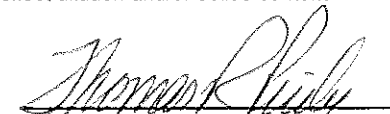
Values in brackets represent results greater than or equal to the LOD but less than the LOQ and are within a region of "Less-Certain Quantitation". Results greater than or equal to the LOQ are considered to be in the region of "Certain Quantitation". LOD and/or LOQ tagged with an asterisk(*) are considered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

ANALYTICAL RESULTS: PCBs by GC

Page 1 of 1

Customer: Shannon & Wilson, Inc. NLS Project: 266549 PO # 42-1-37320-003

Project Description: DB Oak

Project Title: Template: PCBS Printed: 10/13/2016 11:12

Sample: 942886 Sed-1 Profile Collected: 09/01/16 Analyzed: 09/29/16 - 61.5%Solids Analytes: 8

ANALYTE NAME	RESULT	UNITS DWB	DIL	LOD	LOQ	Note
PCB-1016	ND	ug/Kg	10	50	160	MS
PCB-1221	ND	ug/Kg	10	110	380	
PCB-1232	ND	ug/Kg	10	64	210	
PCB-1242	ND	ug/Kg	10	42	140	
PCB-1248	ND	ug/Kg	10	31	99	
PCB-1254	2500	ug/Kg	10	76	250	
PCB-1260	840	ug/Kg	10	61	200	MS
Total PCBs	3300	ug/Kg	10	61	200	
TCMX (SURR)	76%					S

NOTES APPLICABLE TO THIS ANALYSIS:

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

CL = The extract was subjected to florisil cleanup by SW846 Method 3620 and sulfur cleanup by SW846 Method 3660 before analysis.

IV = Initial extract is 2.04 grams.

MS = Matrix spike recovery was outside QC limits.

PCB-1016 recovered below QC limits.

PCB-1260 recovered below QC limits.

The matrix spike recovered below QC limits due to the sample matrix.

ANALYTICAL RESULTS: Semi-Volatile Organic TCLP Compounds by GC/MS

Page 1 of 1

Customer: Shannon & Wilson, Inc. NLS Project: 266549 PO # 42-1-37320-003

Project Description: DB Oak

Project Title: Template: SVTCLP Printed: 10/13/2016 11:12

Sample: 942887 TCLP Sed-1 Profile Collected: 09/14/16 Analyzed: 09/23/16 - Analytes: 12

Notes: HX

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Pyridine	ND	ug/L	5	2.5	8.4	
2-Methylphenol (o-Cresol)	ND	ug/L	5	4.6	17	
3 & 4-Methylphenol (m/p-Cresol)	ND	ug/L	5	7.8	26	
Nitrobenzene	ND	ug/L	5	3.0	10	
1,4-Dichlorobenzene	ND	ug/L	5	4.5	15	
2,4,6-Trichlorophenol	ND	ug/L	5	3.6	12	
2,4,5-Trichlorophenol	ND	ug/L	5	4.4	15	
2,4-Dinitrotoluene	ND	ug/L	5	4.8	16	
Hexachlorobutadiene	ND	ug/L	5	2.7	8.8	
Hexachloroethane	ND	ug/L	5	5.7	19	
Hexachlorobenzene	ND	ug/L	5	3.4	11	
Pentachlorophenol	ND	ug/L	5	5.8	19	
2-Fluorophenol (SURR)	40%					S
Phenol-d5 (SURR)	24%					S
Nitrobenzene-d5 (SURR)	66%					S
2-Fluorobiphenyl (SURR)	67%					S
2,4,6-Tribromophenol (SURR)	73%					S
Terphenyl-d14 (SURR)	51%					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 200 mL.

ANALYTICAL RESULTS: VOC's by P&T/GCMS - TCLP - (VarSat2000)

Page 1 of 1

Customer: Shannon & Wilson, Inc. NLS Project: 266549 PO # 42-1-37320-003

Project Description: DB Oak

Project Title: Template: SATTCLP Printed: 10/13/2016 11:12

Sample: 942887 TCLP Sed-1 Profile Collected: 09/14/16 Analyzed: 09/20/16 - Analytes: 11

ANALYTE NAME	RESULT	UNITS	DIL	LOD	LOQ	Note
Benzene	ND	ug/L	1	0.24	0.84	
Carbon Tetrachloride	ND	ug/L	1	0.16	0.55	
Chlorobenzene	ND	ug/L	1	0.25	0.87	
Chloroform	ND	ug/L	1	0.22	0.78	
1,4-Dichlorobenzene	ND	ug/L	1	0.27	0.95	
1,2-Dichloroethane	ND	ug/L	1	0.22	0.78	
1,1-Dichloroethene	ND	ug/L	1	0.20	0.69	
Tetrachloroethene	11	ug/L	1	0.22	0.78	
Trichloroethene	1.5	ug/L	1	0.32	1.1	
Vinyl chloride	[0.47]	ug/L	1	0.17	0.60	J
Methyl ethyl ketone	6.5	ug/L	1	0.57	2.0	
Dibromofluoromethane (SURR)	105%					S
Toluene-d8 (SURR)	122%					S
1-Bromo-4-Fluorobenzene (SURR)	101%					S

NOTES APPLICABLE TO THIS ANALYSIS:

J = Result enclosed in brackets is between LOD and LOQ, a region of less certain quantitation.

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

AMPLE COLLECTION AND CHAIN OF CUSTODY RECORD

NORTHERN LAKE SERVICE, INC.

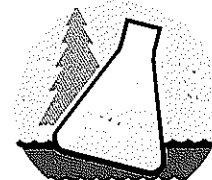
CLIENT <i>SHANNON & WILSON</i>		
ADDRESS <i>6506 Schroeder Road, Suite 201</i>		
CITY <i>Madison</i>	STATE <i>WI</i>	ZIP <i>53711</i>
PROJECT DESCRIPTION / NO. <i>DB OAK</i>		QUOTATION NO.
DNR FID #	DNR LICENSE #	
CONTACT <i>Mark McIlloch</i>		PHONE <i>608/442-5223</i>
PURCHASE ORDER NO. <i>42-1-37320-003</i>		FAX

Wisconsin DNR cert ID
721026460 (Cran) / 268533760 (Wauk)
Wisconsin DATCP ID
105-000330 (Cran) / 105-000479 (Wauk)

Analytical Laboratory and Environmental Services
400 North Lake Avenue • Crandon, WI 54520-1298
Tel: (715) 478-2777 • Fax: (715) 478-3060

MATRIX:
SW = surface water
WW = waste water
GW = groundwater
DW = drinking water
TIS = tissue
AIR = air
SOIL = soil
SED = sediment
PROD = product
SL = sludge
OTHER

ANALYZE PER ORDER OF ANALYSIS	USE BOXES BELOW: Indicate Y or N if GW Sample is field filtered. Indicate G or C if WW Sample is Grab or Composite.									
	NP	NP	NP	NP	NP	NP	NP	NP	NP	NP
1. 100ml amber glass										
1. 900ml amber glass										
2. 200ml plastic										
1. 25ml plastic										
60ml glass										
60ml glass										



NO. 206146

ITEM NO.	NLS LAB. NO.	SAMPLE ID	COLLECTION		MATRIX (See above)											COLLECTION REMARKS (i.e. DNR Well ID #)
			DATE	TIME												
1.	442886	SED-1 Profile	9/1/16	1615	SOIL	2	1	3	1	2	2					
2.	887															
3.	888															
4.																
5.																
6.																
7.																
8.																
9.																
10.																

COLLECTED BY (signature) <i>Mark McIlloch</i>	CUSTODY SEAL NO. (IF ANY)	DATE/TIME <i>09-01-16 1615</i>
RELINQUISHED BY (signature) <i>Mark McIlloch</i>	RECEIVED BY (signature) <i>UPS Driver</i>	DATE/TIME <i>09-01-16 1800</i>
DISPATCHED BY (signature)	METHOD OF TRANSPORT <i>TCLP metals, TCLP VOCs, and TCLP SVOCs (per 40 CFR 141) PCBs, GPO and DRO</i>	DATE/TIME

REPORT TO <i>Mark McIlloch</i> <i>Shannon & Wilson, Inc.</i> <i>6506 Schroeder Road, Suite 201</i> <i>Madison, WI 53711</i>

RECEIVED AT NLS BY (signature) <i>Timothy Hulse</i>	DATE/TIME <i>9-1-16 10:00</i>	CONDITION <i>OK</i>	TEMP.
REMARKS & OTHER INFORMATION			
COOLER #	WDNR FACILITY NUMBER	E-MAIL ADDRESS	

INVOICE TO <i>Same as above</i>

PRESERVATIVE:
NP = no preservative
S = sulfuric acid
N = nitric acid
Z = zinc acetate
M = methanol
OH = sodium hydroxide
HA = hydrochloric & ascorbic acid
H = hydrochloric acid

IMPORTANT:
1. TO MEET REGULATORY REQUIREMENTS, THIS FORM **MUST** BE COMPLETED IN DETAIL AND INCLUDED IN THE COOLER CONTAINING THE SAMPLES DESCRIBED.
2. PLEASE USE ONE LINE PER SAMPLE, **NOT** PER BOTTLE.
3. RETURN THIS FORM WITH SAMPLES - CLIENT MAY KEEP YELLOW COPY.
4. PARTIES COLLECTING SAMPLE, LISTED AS **REPORT TO** AND LISTED AS **INVOICE TO** AGREE TO STANDARD TERMS & CONDITIONS ON REVERSE.