

Phase II Subsurface Investigation

at

Perry Property
988 – 1020 Willard Dr.
Parcel VA-120-5
Ashwaubenon, Brown County, WI

for

Wisconsin Department of Natural Resources
2984 Shawano Ave.
Green Bay, WI 54313-6727

February 23, 2015

N2162B14

Don Brittnacher
OMNNI Associates
One Systems Dr.
Appleton, WI 54914

Ph.: 920/735-6900
Fax: 920/830-6100
Email: don.brittnacher@omnni.com

TABLE OF CONTENTS

	Page
Executive Summary	1
Introduction/Background	1
Geology and Hydrogeology	1
Field Activities	2
Field and Analytical Results	2
Conclusions	3
Standard of Care	3

LIST OF APPENDICES

	Appendix
Figures	1
Site Location Map	
Site Detail Map	
Table	2
Summary of Laboratory Analysis, Soil Samples	
DNR Forms	3
Soil Boring Log Information Forms 4400-122	
Well/Drillhole/Borehole Abandonment Forms 3300-5	
Handbook of Field Procedures	4
Laboratory Analysis Results and Chain of Custody Documentation	5

EXECUTIVE SUMMARY

OMNNI Associates has performed a Phase II subsurface investigation on the property at 988 – 1020 Willard Dr., Ashwaubenon, WI. The project was intended to determine soil PCB concentrations resulting from past disposal of fill materials on the property. Three 5.5-foot borings were installed. Upper and lower soil samples were tested from each boring.

Obvious fill materials were found in two of the borings, along with PCBs. In boring B3, placed in the center of the western half of the property, the concentrations of a number of arochlors exceeded their respective non-industrial direct-contact residual contaminant levels (RCLs). The concentrations in the 3 – 4 foot interval were an order of magnitude higher than in the 1 – 2 foot interval.

In both boring B3 and boring B1, placed in the southeastern corner of the property, the level of total PCBs exceeded the groundwater pathway RCL.

INTRODUCTION/BACKGROUND

The subject property is located at 988 – 1020 Willard Dr., Ashwaubenon, in the SE ¼ of the SE ¼ of section 4, T23N, R20E, Brown County, WI. (See Site Location Map, Appendix 1.) The property consists of tax parcel VA-120-5.

The subject property is part of a larger land parcel, which was initially a farm field. In the 1930's, the subject property and off-site land to the south were excavated as a borrow pit, and then later used by a paper mill as a waste disposal area. Elevated PCB levels have been found in the surface soils on the land to the south of the subject property.

The Wisconsin DNR has requested OMNNI to install three borings on the subject property to determine soil PCB concentrations.

The following are the primary contacts for the project:

Client: Wisconsin DNR, 2984 Shawano Ave., Green Bay, WI 54313-6727; (920) 662-5164. Contact: Bob Klauk.

Consultant: OMNNI Associates, One Systems Drive, Appleton, WI 54914; (920) 735-6900. Contact: Don Brittnacher.

Driller: Horizon Construction and Exploration, 1402 7th Avenue, Grafton, WI 53024-2330; (262) 377-2896.

Laboratory: Pace Analytical Services, 1241 Bellevue Street, Suite 9, Green Bay, WI 54302; (920) 469-2436.

GEOLOGY AND HYDROGEOLOGY

The geology and hydrogeology of the area were determined by studying existing geologic, topographic, hydrogeologic, and soil maps, and by obtaining information during the present investigation.

Based on maps and information included in "*Water Resources of Wisconsin – Fox-Wolf River Basin*" by P. G. Olcott (1968), the pre-development surface soils in the area are glacial lake deposits, consisting of clay, silt, and sand. The subject property was once farmed, and later was part of a larger borrow site, and subsequently a fill site. Significant filling has taken place on the property.

Dolomite bedrock is expected to be approximately 90 feet below the ground surface at the site.

The topography at the site is flat. (See Topographic Map, Appendix 1.) In the area, the topography slopes to the east-southeast towards the Fox River, located 1.4 miles from the subject property.

The depth to groundwater at the site is expected to be 4 – 8 feet below the ground surface. The shallow groundwater flow direction is assumed to be to the east towards the Fox River.

The pre-development soil at the site consisted of Kewaunee silt loam, which is a well-drained soil.

FIELD ACTIVITIES

On February 12, 2015, OMNNI coordinated the installation of three geoprobe soil borings (B1 – B3) on the subject property. (See Site Detail Map, Appendix 1.) Boring B1 was placed in the southeast corner of the parcel, on the east side of the garage. Boring B2 was installed between the two building complexes on the east end of the site. Boring B3 was placed west of the northwest corner of the site's north central parking lot.

The borings were installed to a depth of 5.5 feet. (See Soil Boring Log Information Forms, Appendix 3.) Groundwater was not encountered.

Soil samples were obtained from the 0.5 – 3 foot interval, and the 3 – 5.5 foot interval for field screening with a photoionization detector (PID). Representative portions were also collected for laboratory analysis of PCBs. (See Handbook of Field Procedures, Appendix 4.)

The boreholes were properly abandoned. (See Borehole Abandonment Forms, Appendix 3.)

FIELD AND ANALYTICAL RESULTS

The soil in boring B1 consisted of six inches of topsoil over 2.5 feet of fill material, which included silty clay, clay, and silty sand. Sand was present from 3 – 5.5 feet. No elevated headspace readings were detected in the boring. (See soil boring log for details, Appendix 3.)

The soil in boring B2 consisted of a one-foot layer of topsoil over red-brown clay to 5.5 feet. No elevated headspace readings were observed.

The soil in boring B3 consisted of one foot of topsoil over 1.5 feet of silty clay, sand, and gravel fill material, which was underlain by a foot of black fly ash. A greenish-gray silty clay layer was present from 3.5 – 5 feet, which was underlain by native clay. The discoloration in the 3.5 – 5 foot interval appeared to be contaminant-related. No elevated headspace readings were detected in the boring.

No petroleum odors were detected in any of the borings.

Based on laboratory analytical results, elevated PCB concentrations were found in borings B3 and B1. In boring B3, the concentrations of a number of arochlors exceeded their respective non-industrial direct-contact residual contaminant levels (RCLs). (See Table 1 – Summary of Laboratory Analysis, Soil Samples, Appendix 2, and Laboratory Analysis Results

and Chain of Custody Documentation, Appendix 5.) The concentrations in the 3 – 4 foot interval in this boring were an order of magnitude higher than the concentrations in the 1 – 2 foot interval.

In both borings B1 and B3, the total PCBs level exceeded the groundwater pathway RCL.

CONCLUSIONS

The Phase II environmental site investigation was intended to determine soil PCB concentrations on the subject property, resulting from past disposal of fill materials on the property. Three 5.5-foot borings were installed. Upper and lower soil samples were tested from each boring.

Obvious fill materials were found in two of the borings, and PCBs were also identified in these borings. In boring B3, placed in the center of the western half of the property, the concentrations of a number of arochlors exceeded their respective non-industrial direct-contact residual contaminant levels (RCLs). The concentrations in the 3 – 4 foot interval were an order of magnitude higher than in the 1 – 2 foot interval.

In boring B3, as well as in boring B1, placed in the southeastern corner of the property, the level of total PCBs exceeded the groundwater pathway RCL.

STANDARD OF CARE

The conclusions presented in this investigation were arrived at using generally accepted hydrogeologic and engineering practices. The conclusions presented herein represent our professional opinions, based on the data collected at the time of the investigation, at the specific boring and sampling locations discussed in this report. Conditions at other locations on the property may be different than described in this investigation. The scope of this report is limited to the specific project and location described herein.

Prepared By:

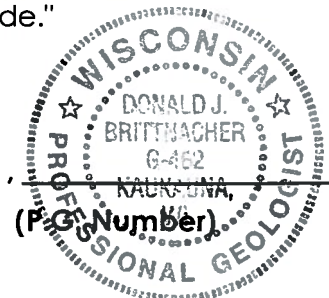
Don Brittnacher

Don Brittnacher, P.G., P.E.
Hydrogeologist, Engineer

"I, Don Brittnacher, hereby certify that I am a hydrogeologist as that term is defined in s. NR 712.03 (1), Wis. Adm. Code, and that, to the best of my knowledge, all of the information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

Don Brittnacher

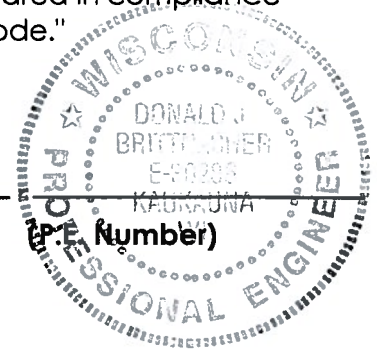
(Professional Geologist)



I, Don Brittnacher, certify that I am a registered professional engineer in the State of Wisconsin, registered in accordance with requirements of ch. A-E 4, Wis. Adm. Code; that this document has been prepared in accordance with the Rules of Professional Conduct in ch. A-E 8, Wis. Adm. Code; and that, to the best of my knowledge, all information contained in this document is correct and the document was prepared in compliance with all applicable requirements in chs. NR 700 to 726, Wis. Adm. Code."

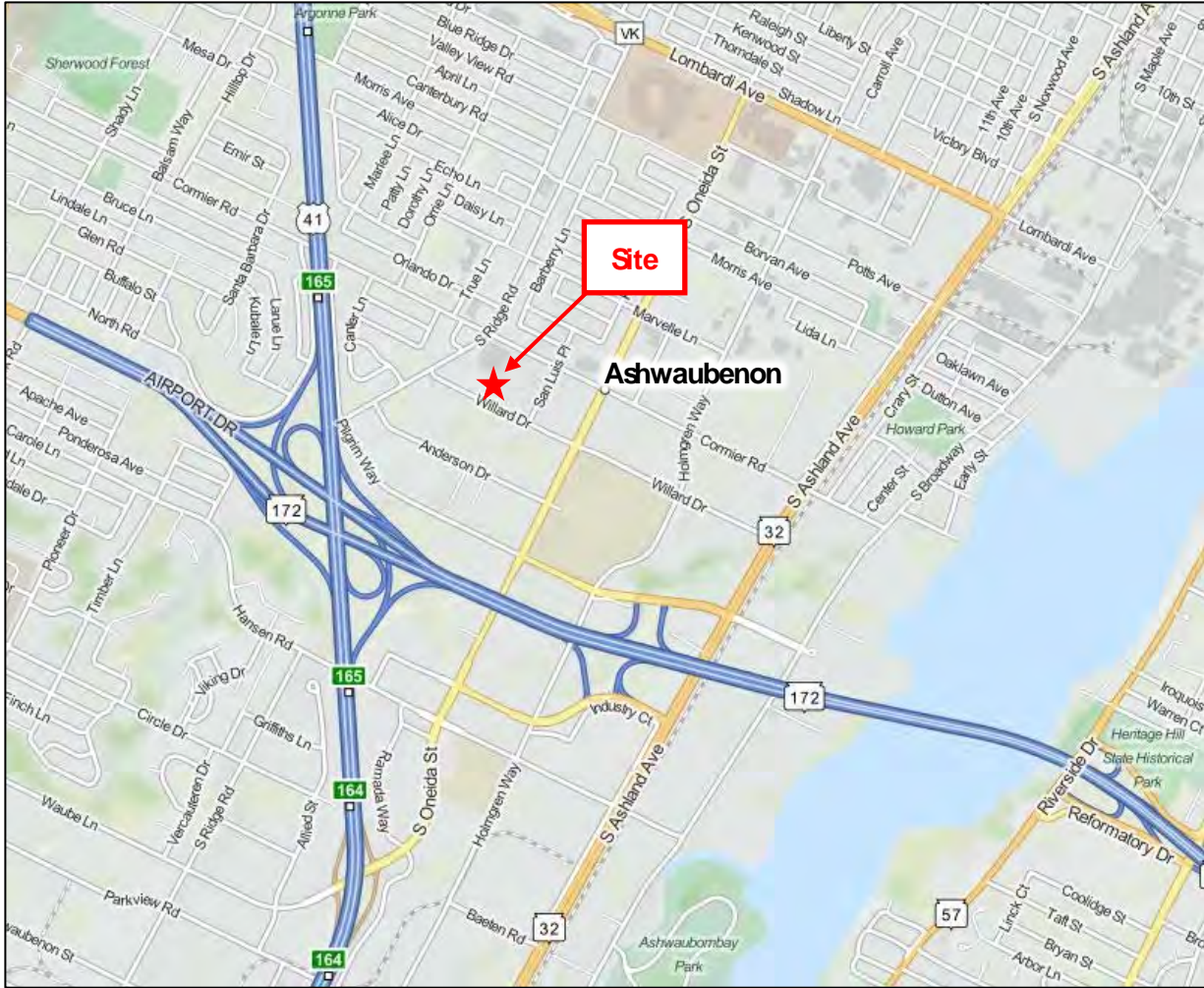
Don Brittnacher

(Professional Engineer)



APPENDIX 1

FIGURES



Source: Mapquest, reviewed 2/13/2015.



<h3>Site Location Map</h3>	
<p>Perry Property 988 – 1020 Willard Dr. Ashwaubenon, WI</p>	
	<p>Project Number: N2166A15</p>
	<p>Date: February 13, 2015</p>
<p>One Systems Drive, Appleton, Wisconsin 54914-1654 Phone: (920) 735-6900 Fax: (920) 830-6100</p>	



OMNI
ASSOCIATES

ONE SYSTEMS DRIVE PHONE (920) 735-6900
APPLETON, WI 54914 FAX (920) 830-6100



ASHWAUBENON INVESTIGATION
SITE DETAIL MAP

980 WILLARD DRIVE
VILLAGE OF ASHWAUBENON, BROWN COUNTY, WISCONSIN

Project Manager: BDW
Project Engineer: DJB
Drawn By: JCW
Checked By: DJB

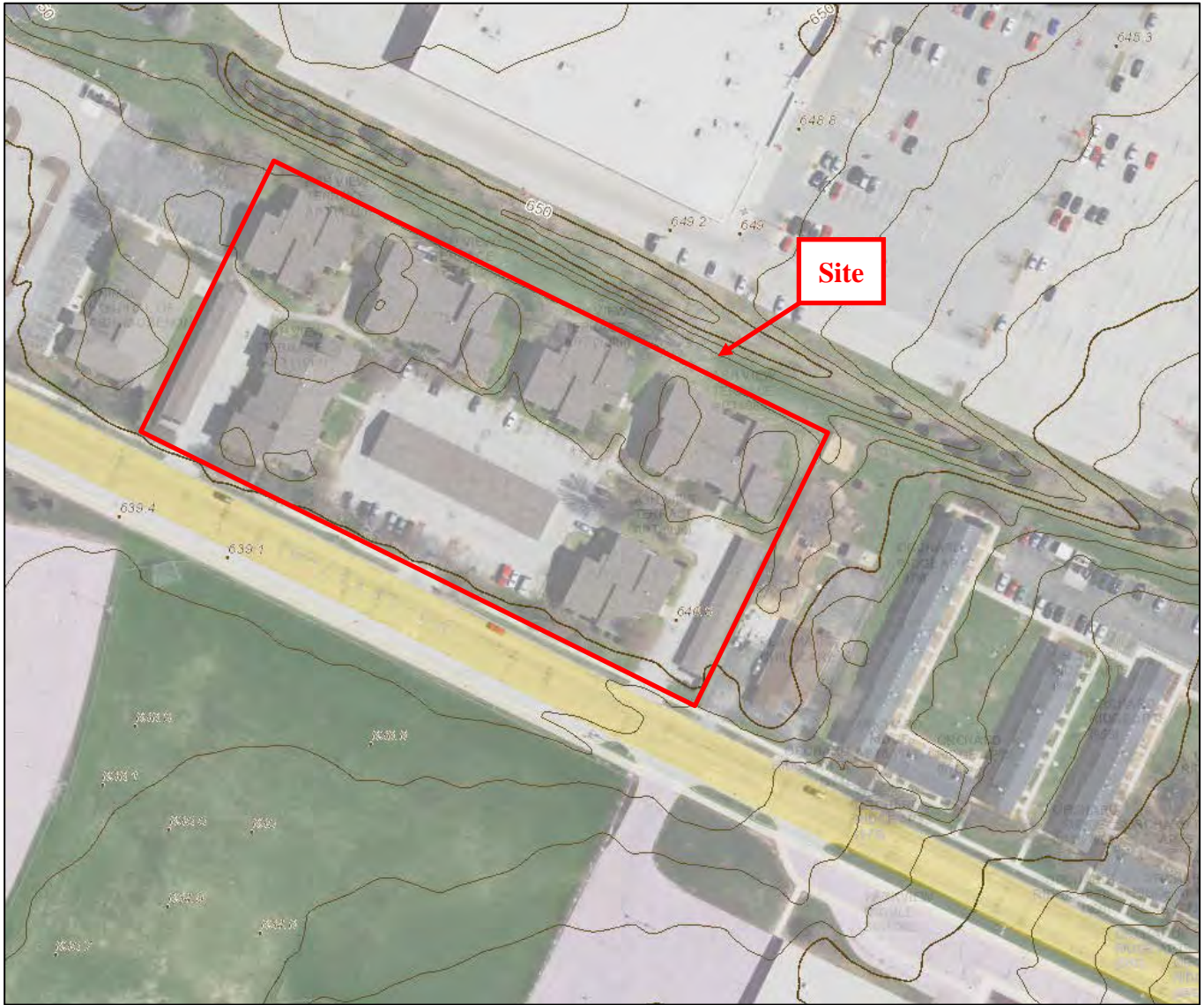
Date: 2/23/2015

SCALE:
1" = 100'

PROJECT NO.
N2166A14

FIGURE NO.
A-1

Topographic Map



Note: Contour interval is two feet.

APPENDIX 2

TABLE

TABLE 1
SUMMARY OF LABORATORY ANALYSIS
SOIL SAMPLES

Boring & Sample	Sample Date	Depth (feet)	PID (iui)	PCBs (ug/kg)							
				Arochlor 1016	Arochlor 1221	Arochlor 1232	Arochlor 1242	Arochlor 1248	Arochlor 1254	Arochlor 1260	PCBs, Total
Non-industrial RCL				3,930	159	159	221	221	221	221	-
Groundwater Pathway RCL				-	-	-	-	-	-	-	9.4
B1-1	2/12/15	1 - 2	0	< 32.7	< 32.7	< 32.7	< 32.7	< 32.7	199	126	325
B1-2		3 - 4	0	< 27.7	< 27.7	< 27.7	< 27.7	< 27.7	< 27.7	< 27.7	< 27.7
B2-1	2/12/15	1 - 2	0	< 30.4	< 30.4	< 30.4	< 30.4	< 30.4	< 30.4	< 30.4	< 30.4
B2-2		3.5 - 4.5	0	< 30.1	< 30.1	< 30.1	< 30.1	< 30.1	< 30.1	< 30.1	< 30.1
B3-1	2/12/15	1 - 2	0	< 28.9	< 28.9	< 28.9	< 28.9	227	224	136	587
B3-2		3 - 4	0	< 126	< 126	< 126	< 126	2,550	1,270	1,170	4,990

Notes: RCL = Residual contaminant level

BOLD entry indicates that concentration detected above non-industrial RCL

Italics entry indicates that concentration detected above groundwater pathway RCL

APPENDIX 3

DNR FORMS

Route To: Watershed/Wastewater Waste Management
Remediation/Revelopment Other

Page 1 of 1

Facility/Project Name <i>DNR - Willard Dr. Ashwaubenon</i>		License/Permit/Monitoring Number		Boring Number <i>B1</i>
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: _____ Last Name: _____		Date Drilling Started <i>2/12/2015</i>	Date Drilling Completed <i>2/12/2015</i>	Drilling Method <i>direct push</i>
WT Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level Feet MSL	Surface Elevation Feet MSL
Borehole Diameter <i>2 inches</i>				

Local Grid Origin (estimated:) or Boring Location
State Plane _____ N. _____ E S/C/N

SE 14 of SE 14 of Section 4, T 23 N, R 20 E

Local Grid Location
Lat _____ Long _____
Feet N S E W

Facility ID _____ County *Brown* County Code *5* Civil Town/City/ or Village *Ashwaubenon*

Sample Number and Type	Length At. & Recovered (in)	Blow Counts	Depth in Feet (Bottom ground surface)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD Comments	
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
<i>B1-1</i> <i>* 2:10</i>			1	<i>topsoil</i>											
			2	<i>gray-brown silty clay fill</i> <i>red-brown clay fill</i>				<i>0</i>	<i>q</i>						
<i>B1-2</i> <i>* 2:14</i>			3	<i>gray-brown silty sand fill</i>											
			4	<i>gray-brown sand</i> <i>red-brown sand</i>				<i>0</i>	<i>q</i>						
<i>B1-3</i>			6	<i>Eob</i>											
<i>B-4</i>			8												
<i>B-5</i>			11												

I hereby certify that the information on this form is true and correct to the best of my knowledge.
Signature *Don Brittnacher* Firm *OMNI Associates*

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater Waste Management
 Remediation/Revelopment Other

Page 1 of 1

Facility/Project Name <i>DNR - Willard Dr. Ashwaubenon</i>		License/Permit/Monitoring Number		Boring Number <i>B2</i>
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: _____ Last Name: _____		Date Drilling Started <i>2.12.2015</i>	Date Drilling Completed <i>2.12.2015</i>	Drilling Method <i>direct push</i>
WT Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level _____ Feet MSL	Surface Elevation _____ Feet MSL
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input type="checkbox"/>		Local Grid Location		
State Plane _____ N. _____ B S/C/N		Lat _____	<input type="checkbox"/> N <input type="checkbox"/> E	
SE 1/4 of SE 1/4 of Section 4, T 23 N, R 20 E		Long _____	Feet <input type="checkbox"/> S <input type="checkbox"/> W	

Facility ID	County <i>Brown</i>	County Code <i>5</i>	Civil Town/City/ or Village <i>Ashwaubenon</i>
-------------	------------------------	-------------------------	---

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth in Feet (Surface ground method)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					BQM Comments	
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
<i>B2-1</i> <i>* 2:30</i>			1	<i>topsoil</i>				0		<i>d</i>					
			2	<i>red-brown clay</i>											
<i>B2-2</i> <i>* 2:32</i>			3					0		<i>d</i>					
<i>B2-3</i>			4												
			5												
<i>B2-3</i>			6	<i>EOD</i>											
<i>B-4</i>			7												
			8												
<i>B-5</i>			9												
			10												
			11												
			12												

I hereby certify that the information on this form is true and correct to the best of my knowledge.

Signature *Don Brittnacher* Firm *OMNI Associates*

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Route To: Watershed/Wastewater Waste Management
 Remediation/Revelopment Other

Page 1 of 1

Facility/Project Name DNR - Willard Dr. Ashwaubenon		License/Permit/Monitoring Number		Boring Number B3	
Boring Drilled By: Name of crew chief (first, last) and Firm First Name: _____ Last Name: _____ Firm: Horizon		Date Drilling Started 2/12/2015	Date Drilling Completed 2/12/2015	Drilling Method direct push	
WT Unique Well No.	DNR Well ID No.	Well Name	Final Static Water Level _____ Feet MSL	Surface Elevation _____ Feet MSL	Borehole Diameter 2 inches
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input type="checkbox"/>		State Plane _____ N, _____ E S/C/N		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> Feet <input type="checkbox"/> S <input type="checkbox"/> Feet <input type="checkbox"/> W	
SE 1/4 of SE 1/4 of Section 4 , T 23 N, R 20 E		County Brown	County Code 5	Civil Town/City/ or Village Ashwaubenon	

Sample Number and Type	Length At. & Recovered (in)	Blow Counts	Depth in Feet (Surface ground method)	Soil/Rock Description And Geologic Origin For Each Major Unit	USCS	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD	Comments
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
B3-1 x (1-2)2:52			1	gray-brown topsoil											
			2	red-brown silty clay				0		d					
B _x -2 (3-4)2:54			3	gray sand & gravel fill black fly ash											
			4	greenish-gray silty clay				0		d					
B -3			5	red-brown clay											
			6	EOB at 5.5											
B -4			7												
			8												
B -5			9												
			10												
			11												
			12												

I hereby certify that the information on this form is true and correct to the best of my knowledge.
Signature: Don Brittnacher Firm: OMNNI Associates

This form is authorized by Chapters 281, 283, 289, 291, 292, 293, 295, and 299, Wis. Stats. Completion of this form is mandatory. Failure to file this form may result in forfeiture of between \$10 and \$25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. NOTE: See instructions for more information, including where the completed form should be sent.

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to:

Drinking Water Watershed/Wastewater Remediation/Redevelopment

Waste Management Other: _____

1. Well Location Information **2. Facility / Owner Information**

County Brown	WI Unique Well # of Removed Well _____	Hicap # Boring B1	Facility Name DNR- Willard Dr., Ashwaubenon		
Latitude / Longitude (Degrees and Minutes) ____ ° _____ ' N ____ ° _____ ' W		Method Code (see instructions) _____		Facility ID (FID or PWS) _____	
1/4 SE 1/4 SE	Section 4	Township 23 N	Range 20	<input checked="" type="checkbox"/> E <input type="checkbox"/> W	
Well Street Address 988-1020 Willard Dr.			License/Permit/Monitoring # _____		
Well City/Village/Town Ashwaubenon			Original Well Owner Charles & Marilyn Perry Living Trust		
Subdivision Name Ashview Terrace Apts.			Present Well Owner Charles & Marilyn Perry Living Trust		
Reason For Removal From Service no longer needed			Mailing Address of Present Owner 1360 Greenway Terrace		
Well ZIP Code 54304			City of Present Owner Elm Grove		State WI
Lot # _____			ZIP Code 53122-1607		

3. Well / Drillhole / Borehole Information **4. Pump, Liner, Screen, Casing & Sealing Material**

<input type="checkbox"/> Monitoring Well	Original Construction Date (mm/dd/yyyy) 02/12/2015	Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input type="checkbox"/> Water Well	If a Well Construction Report is available, please attach.	Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input checked="" type="checkbox"/> Borehole / Drillhole		Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Construction Type:		Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input type="checkbox"/> Drilled	<input type="checkbox"/> Driven (Sandpoint)	Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input checked="" type="checkbox"/> Other (specify): geoprobe	<input type="checkbox"/> Dug	Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Formation Type:		Did material settle after 24 hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			
<input checked="" type="checkbox"/> Unconsolidated Formation	<input type="checkbox"/> Bedrock	If yes, was hole retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Total Well Depth From Ground Surface (ft.) 5.5	Casing Diameter (in.) —	If bentonite chips were used, were they hydrated with water from a known safe source? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Lower Drillhole Diameter (in.) 2	Casing Depth (ft.) —	Required Method of Placing Sealing Material			
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown		<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped			
If yes, to what depth (feet)?	Depth to Water (feet) > 5.5	<input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain): gravity			
5. Material Used To Fill Well / Drillhole		Sealing Materials			
Bentonite		<input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.)			
		<input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite-Sand Slurry " "			
		<input type="checkbox"/> Concrete <input type="checkbox"/> Bentonite Chips			
		For Monitoring Wells and Monitoring Well Boreholes Only:			
		<input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout			
		<input checked="" type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry			

From (ft.)	To (ft.)	No. Yards (Sacks) Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	5.5	Y3	

6. Comments

7. Supervision of Work				DNR Use Only	
Name of Person or Firm Doing Filling & Sealing OMNI Associates		License #	Date of Filling & Sealing (mm/dd/yyyy) 02/12/2015	Date Received	Noted By
Street or Route One Systems Dr.			Telephone Number (920) 735-6900	Comments	
City Appleton	State WI	ZIP Code 54914	Signature of Person Doing Work Don Brittnacher	Date Signed 2/20/15	

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

<input type="checkbox"/> Verification Only of Fill and Seal	Route to: <input type="checkbox"/> Drinking Water <input type="checkbox"/> Watershed/Wastewater <input checked="" type="checkbox"/> Remediation/Redevelopment <input type="checkbox"/> Waste Management <input type="checkbox"/> Other: _____
--	--

1. Well Location Information				2. Facility / Owner Information			
County <i>Brown</i>		WI Unique Well # of Removed Well _____		Hicap # <i>Boring B2</i>		Facility Name <i>DNR- Willard Dr., Ashwaubenon</i>	
Latitude / Longitude (Degrees and Minutes) ____ ° ____ ' N ____ ° ____ ' W		Method Code (see instructions) _____		Facility ID (FID or PWS) _____		License/Permit/Monitoring # _____	
1/4 SE 1/4 SE or Gov't Lot #		Section <i>4</i>	Township <i>23 N</i>	Range <i>20</i>	<input checked="" type="checkbox"/> E <input type="checkbox"/> W		
Well Street Address <i>988-1020 Willard Dr.</i>				Original Well Owner <i>Charles & Marilyn Perry Living Trust</i>			
Well City/Village/Town <i>Ashwaubenon</i>				Well ZIP Code <i>54304</i>			
Subdivision Name <i>Ashview Terrace Apts.</i>				Lot # _____		Mailing Address of Present Owner <i>1360 Greenway Terrace</i>	
Reason For Removal From Service <i>no longer needed</i>				WI Unique Well # of Replacement Well _____		City of Present Owner <i>Elm Grove</i>	
				State <i>WI</i>		ZIP Code <i>53122-1607</i>	

3. Well / Drillhole / Borehole Information				4. Pump, Liner, Screen, Casing & Sealing Material			
<input type="checkbox"/> Monitoring Well <input type="checkbox"/> Water Well <input checked="" type="checkbox"/> Borehole / Drillhole		Original Construction Date (mm/dd/yyyy) <i>02/12/2015</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Pump and piping removed?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Liner(s) removed?	
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (specify): <i>geoprobe</i>		If a Well Construction Report is available, please attach. _____		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Screen removed?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Casing left in place?	
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock				<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Was casing cut off below surface?		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Did sealing material rise to surface?	
Total Well Depth From Ground Surface (ft.) <i>5.5</i>		Casing Diameter (in.) _____		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A Did material settle after 24 hours?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A If yes, was hole retopped?	
Lower Drillhole Diameter (in.) <i>2</i>		Casing Depth (ft.) _____		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A If bentonite chips were used, were they hydrated with water from a known safe source?		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Required Method of Placing Sealing Material	
Was well annular space grouted? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Unknown		Depth to Water (feet) <i>> 5.5</i>		<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input type="checkbox"/> Screened & Poured (Bentonite Chips) <input checked="" type="checkbox"/> Other (Explain): <i>gravity</i>		Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Clay-Sand Slurry (11 lb./gal. wt.) <input type="checkbox"/> Sand-Cement (Concrete) Grout <input type="checkbox"/> Bentonite-Sand Slurry " " <input type="checkbox"/> Concrete <input type="checkbox"/> Bentonite Chips	

5. Material Used To Fill Well / Drillhole				For Monitoring Wells and Monitoring Well Boreholes Only:			
Material <i>Bentonite</i>		From (ft.) <i>Surface</i>		To (ft.) <i>5.5</i>		No. Yards (Sacks) Sealant or Volume (circle one) <i>13</i>	
						<input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout <input checked="" type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry	
				Mix Ratio or Mud Weight _____			

6. Comments

7. Supervision of Work				DNR Use Only			
Name of Person or Firm Doing Filling & Sealing <i>OMNNI Associates</i>		License # _____		Date of Filling & Sealing (mm/dd/yyyy) <i>02/12/2015</i>		Date Received _____	
Street or Route <i>One Systems Dr.</i>		Telephone Number <i>(920) 735-6900</i>		Comments _____		Noted By _____	
City <i>Manitowish</i>		State <i>WI</i>		ZIP Code <i>54914</i>		Signature of Person Doing Work <i>D. R. H. ...</i>	
						Date Signed <i>2/20/15</i>	

Notice: Completion of this report is required by chs. 160, 281, 283, 289, 291-293, 295, and 299, Wis. Stats., and ch. NR 141, Wis. Adm. Code. In accordance with chs. 281, 289, 291-293, 295, and 299, Wis. Stats., failure to file this form may result in a forfeiture of between \$10-25,000, or imprisonment for up to one year, depending on the program and conduct involved. Personally identifiable information on this form is not intended to be used for any other purpose. Return form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to:

- Drinking Water Watershed/Wastewater Remediation/Redevelopment
 Waste Management Other: _____

1. Well Location Information

County: Brown WI Unique Well # of Removed Well: _____ Hicap #: Boring B3
 Latitude / Longitude (Degrees and Minutes): _____ 'N Method Code (see instructions): _____
 _____ 'W
 1/4 SE 1/4 SE Section: 4 Township: 23 N Range: 20 E W
 or Gov't Lot #
 Well Street Address: 988-1020 Willard Dr.
 Well City/Village/Town: Ashwaubenon Well ZIP Code: 54304
 Subdivision Name: Ashview Terrace Apts. Lot #: _____
 Reason For Removal From Service: no longer needed WI Unique Well # of Replacement Well: _____

2. Facility / Owner Information

Facility Name: DNR- Willard Dr., Ashwaubenon
 Facility ID (FID or PWS): _____
 License/Permit/Monitoring #: _____
 Original Well Owner: Charles & Marilyn Perry Living Trust
 Present Well Owner: Charles & Marilyn Perry Living Trust
 Mailing Address of Present Owner: 1360 Greenway Terrace
 City of Present Owner: Elm Grove State: WI ZIP Code: 53122-1607

3. Well / Drillhole / Borehole Information

Monitoring Well Original Construction Date (mm/dd/yyyy): 02/12/2015
 Water Well If a Well Construction Report is available, please attach.
 Borehole / Drillhole
 Construction Type:
 Drilled Driven (Sandpoint) Dug
 Other (specify): geoprobe
 Formation Type:
 Unconsolidated Formation Bedrock
 Total Well Depth From Ground Surface (ft.): 5.5 Casing Diameter (in.): _____
 Lower Drillhole Diameter (in.): 2 Casing Depth (ft.): _____
 Was well annular space grouted? Yes No Unknown
 If yes, to what depth (feet)? Depth to Water (feet): > 5.5

4. Pump, Liner, Screen, Casing & Sealing Material

Pump and piping removed? Yes No N/A
 Liner(s) removed? Yes No N/A
 Screen removed? Yes No N/A
 Casing left in place? Yes No N/A
 Was casing cut off below surface? Yes No N/A
 Did sealing material rise to surface? Yes No N/A
 Did material settle after 24 hours? Yes No N/A
 If yes, was hole retopped? Yes No N/A
 If bentonite chips were used, were they hydrated with water from a known safe source? Yes No N/A

Required Method of Placing Sealing Material:
 Conductor Pipe-Gravity Conductor Pipe-Pumped
 Screened & Poured (Bentonite Chips) Other (Explain): gravity

Sealing Materials:
 Neat Cement Grout Clay-Sand Slurry (11 lb./gal. wt.)
 Sand-Cement (Concrete) Grout Bentonite-Sand Slurry " "
 Concrete Bentonite Chips
 For Monitoring Wells and Monitoring Well Boreholes Only:
 Bentonite Chips Bentonite - Cement Grout
 Granular Bentonite Bentonite - Sand Slurry

5. Material Used To Fill Well / Drillhole

Material	From (ft.)	To (ft.)	No. Yards (Sacks) Sealant or Volume (Circle one)	Mix Ratio or Mud Weight
<u>Bentonite</u>	<u>Surface</u>	<u>5.5</u>	<u>1/3</u>	

6. Comments

7. Supervision of Work

Supervision of Work				DNR Use Only	
Name of Person or Firm Doing Filling & Sealing	License #	Date of Filling & Sealing (mm/dd/yyyy)	Date Received	Noted By	
<u>OMNNI Associates</u>		<u>02/12/2015</u>			
Street or Route	Telephone Number	Comments			
<u>One Systems Dr.</u>	<u>(920) 735-6900</u>				
City	State	ZIP Code	Signature of Person Doing Work	Date Signed	
<u>Manitowish</u>	<u>WI</u>	<u>54914</u>	<u>D. R. H. ...</u>	<u>2/20/15</u>	

APPENDIX 4

HANDBOOK OF FIELD PROCEDURES

HANDBOOK OF FIELD PROCEDURES

TABLE OF CONTENTS

Personnel Qualifications.....	1
Soil Boring Installation Procedures.....	2
Soil Sampling Procedures	2
Minimum Sample Headspace Equilibration Time	3
Instrument Specifications.....	3
Monitoring Well Installation and Development Procedures	4
Groundwater Sampling Procedures and Volatile Organic Compound (VOC) Sampling Notes	5
Decontamination Procedures	7
Drilling.....	7
Table 1 – Soil Sample Preparation Guide*	9
Table 2 – Soil Sample Analysis Guide for Petroleum Contamination.....	10
Table 3 – Groundwater Sample Preparation Guide*	11

PERSONNEL QUALIFICATIONS

Brian D. Wayner:	<p>Completed 40-hour hazardous waste training.</p> <p>Bachelors Degree in Electrical Engineering from University of Wisconsin-Milwaukee.</p> <p>Masters Degree in Environmental Engineering from University of New Haven.</p> <p>PECFA Consultant Registration #47551.</p> <p>Licensed Professional Engineer (no. 35304), State of Wisconsin</p>
Don Brittnacher:	<p>Completed 40-hour hazardous waste training.</p> <p>Bachelors Degree in Geology from University of Notre Dame.</p> <p>Masters Degree in Environmental Health Engineering from University of Notre Dame.</p> <p>Licensed Professional Geologist (no. 462), State of Wisconsin</p> <p>Licensed Professional Engineer (no. 30286), State of Wisconsin</p> <p>PECFA Consultant Registration/Certified Site Assessor-42127.</p>
Jason C. Weis:	<p>Completed 40-hour hazardous waste training.</p> <p>Bachelors Degree in Civil Engineering from University of Wisconsin-Platteville.</p> <p>Masters Degree in Environmental Engineering from University of Wyoming.</p> <p>Licensed Professional Engineer (no. 36681), State of Wisconsin</p>
Deanna L. Drum:	<p>Completed 40-hour hazardous waste training.</p> <p>Associate Degree in Mechanical Design, Fox Valley Technical College.</p>

SOIL BORING INSTALLATION PROCEDURES

A number of different drilling and Geoprobe® firms are used for environmental investigations. Borings intended to be converted to monitoring wells are advanced using 7 5/8" outside diameter (O.D.) x 4.5" inside diameter (I.D.) hollow stem augers or 6.25" O.D. solid stem augers powered by a truck-mounted drill rig. If bedrock drilling is required, borings are advanced using either air or mud-rotary drilling techniques. Soil borings not intended for monitoring wells are typically advanced using 4" O.D. solid stem augers. The Geoprobe® typically advances a 2" diameter hole. All soil borings that are not converted to permanent or temporary groundwater monitoring wells are properly abandoned per chapter NR 141, Wisconsin Administrative Code.

Samples are typically obtained from each boring at 2.5' intervals by split-spoon sampling according to American Society for Testing and Materials (ASTM) Standard D 1586. A portion of each sample is screened with a photoionization detector (PID). At each sampling interval, a representative portion of the soil is also collected for possible laboratory analysis. Soil samples are chosen from each boring for laboratory analysis based on headspace screening data, and visual and olfactory observations. In general, the sample from each boring that exhibits the highest PID reading is chosen for analysis. See the Soil Sampling Procedures below for further information pertaining to field headspace analysis and sample collection procedures.

SOIL SAMPLING PROCEDURES

All soil sampling is performed in accordance with the Wisconsin Department of Natural Resources (WDNR) publication PUBL-SW-127, Soil Sampling Requirements for LUST Site Investigations and Excavations and chapter COMM 10, Flammable and Combustible Liquids, Wis. Adm. Code. The soil samples are collected and analyzed in accordance with methods described in Table C-3 in Appendix C of WDNR PUBL-RR-614, Interim Guidance On Natural Attenuation For Petroleum Releases, 1999. Our standard instruments and sample collection procedures are as follows:

1. Soil samples are collected from a split-spoon sampler or a polyethylene tube during environmental drilling.
2. Sample collector wears new latex exam gloves when collecting samples to decrease the risk of personal exposure and cross contamination.
3. A portion of the sample is collected in a sampling syringe and placed in an appropriate container (see Table 1), immediately placed on ice, and later delivered to a WDNR-certified laboratory for analysis. This procedure is discussed in more detail later in this report.

4. The remaining portion of the sample is placed in a clean 4 oz. jar (approx. half-filled), and sealed with aluminum foil and a teflon-lined lid. The headspace sample is then agitated for a minimum of 30 seconds and allowed to equilibrate. Minimum equilibration time will correspond to the following specifications:

Minimum Sample Headspace Equilibration Time

Ambient Outside Air Temperature at the Time of Sample Collection:	Minimum Amount of Time Sample Must Equilibrate at 70° F or Greater Temperature:
< 40 °F	40 minutes
41 – 55 °F	20 minutes
56 – 69 °F	10 minutes
> 70 °F	5 minutes

Instrument Specifications

When the sample has completed equilibration, it is promptly field analyzed with a portable PID. OMNNI uses either a Photovac Inc. Microtip HL-200 or ML-1000 or a Thermo Environmental Instruments Model 580A organic vapor monitor (OVM), both equipped with an 11.2 ev lamp. A background reading is first taken. The PID probe is then inserted into the jar through a single hole in the aluminum foil. The instrument reading is measured at one-half the distance between the foil seal and the sample surface. The measured reading is then recorded.

Isobutylene at a concentration of 100 ppm is used for field calibration gas. The PID meter is field calibrated at the following times:

- At the beginning of each day
- After any significant change in temperature or humidity
- Every three hours
- After any repairs to the instrument are performed

All samples are returned to the laboratory as soon as possible, usually the day the sample was collected. All samples are returned to the laboratory under chain-of-custody protocol, using form #4400-151. Time of sample collection and sample PID reading are listed. Care is taken to ensure that the chain-of-custody form is properly and fully completed before submitting to the laboratory. The samples are sent to a laboratory certified by the WDNR.

Table 2 on page 9 outlines the required WDNR laboratory analysis for specific contaminants. Soil analyses, other than those in Table 2, will be conducted in accordance with methods approved by the WDNR.

MONITORING WELL INSTALLATION AND DEVELOPMENT PROCEDURES

The permanent monitoring wells are typically constructed of two-inch, schedule 40, flush-thread polyvinyl chloride (PVC) casings and slotted well screens. Temporary wells are constructed of one-inch diameter, schedule 40 PVC casings and slotted screens. Prior to use, well parts are individually wrapped in plastic.

Permanent wells are installed and developed according to chapter NR 141, Wis. Adm. Code. The monitoring wells are installed with five to fifteen-foot screens which are placed in the borings to intersect the water table. Piezometers are installed with five-foot screens sealed beneath the water table. Filter pack and annular space seal material are installed by gravity as the augers are withdrawn from the hole. Wells are cut to the required height using a PVC pipe cutter.

An as-constructed well and boring survey is performed by OMNNI once field work is complete. Elevations are either based on a local datum of 100 feet, or a United States Geological Survey (USGS) elevation, assigned to a mark on a reference point located at the site. Ground elevation is surveyed to the nearest 0.1 foot, and the top of the well casing to the nearest 0.01 foot.

A horizontal grid system is established at the site with the origin of the grid set on the reference point. Wells and borings are located with respect to this grid system.

To properly develop each permanent monitoring well, water is removed until a consistent water quality is obtained. This is done by removing 10 times the water volume in the well and filter pack, removing water until it is free of sediment, or removing the water until the well is purged dry. Water is removed from the wells by bailing the water with as little agitation as possible. If the water level is unaffected by bailing and large amounts of water are to be removed, the well is developed by using the surge and purge method with a centrifugal pump. No water is added to the well during development. Temporary wells may be developed by allowing the peristaltic pump to run until the water is as clear as possible.

The development water is drummed, pending the results of analytical testing. If the well is suspected to be clean and small volumes of water are to be removed, the water may be spread on pavement to volatilize any possible contaminants. If the water is contaminated, it is properly disposed.

GROUNDWATER SAMPLING PROCEDURES AND VOLATILE ORGANIC COMPOUND (VOC) SAMPLING NOTES

- A. Devices used to measure water elevation, purge wells and retrieve samples:
1. Groundwater levels are measured with a fiberglass reel tape with a weighted stainless steel "sounder" at the end.
 2. In wells that have free product on top of the water surface, depth to water and depth to product are measured with a fiberglass reel tape with an interface probe at the end.
 3. Wells are purged and samples are collected by one of the following methods:
 - a) Wells are purged with a disposable bailer.
 - b) Alternate purging and sampling equipment consisting of a peristaltic groundwater sampling pump.
- B. Procedures for calculating purge volumes, purging wells and sampling:
1. Wells are normally sampled starting from the upgradient area and progressing toward the downgradient area of the site. When the degree of contamination is known, least contaminated wells are sampled first, the more contaminated wells sampled last.
 2. All the wells are opened before the depth to groundwater is determined to allow groundwater to equilibrate.
 3. Wells are purged with a bailer by removing four water volumes within a casing or all the water until the well runs dry. When using a peristaltic pump, water is removed for 10 to 20 minutes.
 4. Once all the wells have been purged, the samples are drawn using equipment mentioned above. (See Table 3 - Water Sample Preparation Guide)
 5. Sample odor, turbidity, temperature, conductivity, dissolved oxygen (DO) and pH are determined on the unfiltered portions of the sample and recorded on the well specific field sheet.
 6. When the sample requires filtering, the sample is filtered with a hand pump or an in-line pump (as soon after collection as possible).
 7. Quality Assurance/Quality Control Samples

- a) Trip and field blanks each consist of three new 40 milliliter (ml) vials filled with deionized water. These are sent to the laboratory for petroleum volatile organic compound (PVOC) or VOC analysis.
 - b) One field blank should be analyzed for every 10 samples collected. At least one trip blank is taken per site visit. Trip blanks are poured, labeled, and sealed, then taken out in the field. Field blanks are poured, labeled, and sealed at the site. Trip blanks are kept with all samples collected until reaching the field. If there is a possibility for field cross-contamination of samples, field blanks may be taken at the sample collector's discretion.
 - c) One temperature blank may be collected per batch of samples.
 - d) One duplicate sample may be collected with every 10 samples.
8. Samples are refrigerated, then transported to a WDNR-certified laboratory for testing as soon as possible.
 9. A chain-of-custody form is filled out, listing all samples collected, requested laboratory analysis, date and time of collection, and the name of the sample collector. This document remains with the samples at all times and bears the names of all persons handling the samples until they are received at the laboratory.
- C. Procedures for cleaning equipment:
1. In the field, sampling equipment is rinsed with a 10% methanol solution and then flushed three times with deionized water between each well sampled.
 2. Equipment that is still contaminated after field cleaning will be rinsed with tap water, washed off with detergent, rinsed with a 10% methanol solution, and flushed three times with deionized water.
- D. Transporting samples to laboratory:
1. Filtered, preserved, labeled, and sealed samples are placed on ice and transported to the laboratory for analysis as soon as possible.
 2. The laboratory will be notified by the sample collector when courier service is required.
- E. The above procedures constitute normal groundwater sampling procedures for permanent groundwater monitoring wells. Modifications to each of the outlined items may be applicable for site specific conditions or special volatile organic sampling considerations. Methods used are consistent with WDNR's Groundwater

DECONTAMINATION PROCEDURES

Decontamination is the process of removing and/or neutralizing contaminants that may have accumulated on personnel protective equipment (PPE) and equipment. Proper decontamination is a critical element in the control of hazards which helps ensure the health and safety of workers. Proper decontamination also contains the contamination to the site, thus preventing further environmental problems.

Drilling

The following decontamination procedures should be used when completing borings, installing monitoring wells, and/or installing remediation systems.

- A. Between samples, the split spoon will be cleaned in a multiple rinse, surfactant solution (soap and water or Alconox solution.)
- B. The sample will be collected while wearing new latex exam gloves.
- C. The surface upon which the sample is collected is cleaned between samples.
- D. The latex exam gloves are changed between samples.
- E. Soil which has accumulated around the boring will either be stockpiled or drummed. If the soil is stockpiled, it will be placed on and covered with plastic. The stockpiled or drummed soil will later be disposed in compliance with the WDNR regulations.
- F. Upon completion of the boring, the augers will be decontaminated by drilling contractors before they are used again. The following procedures will be followed when decontaminating drilling equipment:
 1. A decontamination basin lined with plastic is set up near the work area.
 2. All contaminated equipment is placed in the decontamination basin.
 3. A pressurized steam cleaner is used to clean all contaminated equipment.
 4. Following steam cleaning, the auger is removed from the decontamination basin.
 5. Upon completion of the job, the accumulated water in the decontamination basin is pumped out and placed in a drum. Wash water used for cleaning the split spoons is also added to the drum. The drum will be disposed in

compliance with all regulatory agencies. The plastic used in the decontamination basin is disposed in compliance with all regulatory agencies.

TABLE 1 – SOIL SAMPLE PREPARATION GUIDE*

TEST	CONTAINER SIZE**	SAMPLE SIZE	PRESERVATIVE	HOLDING TIME
GRO Gasoline Range Organics	2 oz. wide mouth glass jar or 40 ml vial (2 per sample)	25 g – jar 13 g – vial	25 ml Methanol (purge & trap grade) – jar none required – vial	4 days
DRO Diesel Range Organics	2 oz. wide mouth glass jar or 40 ml vial (2 per sample)	25 g – jar 13 g – vial	None	4 days
Total Lead/ or all RCRA Metals	4 oz. wide mouth plastic jar (2 per sample)	4 oz.	None	6 months
VOC / PVOC Volatile Organic Compounds	2 oz. wide mouth glass jar or 40 ml vial (2 per sample)	25 g – jar 13 g – vial	25 ml Methanol (purge & trap grade) – jar none required – vial	4 days preserved , 48 hours non-preserved
PCB Polychlorinated Biphenyls	4 oz. wide mouth glass jar (2 per sample)	4 oz.	None	14 days
PAH Polynuclear Aromatic Hydrocarbons	4 oz. wide mouth glass jar (2 per sample)	4 oz.	None	14 days

* All samples will be sealed, labeled, and placed on ice immediately after collection.

** To ensure a proper seal between the sample container and the cap, no soil shall remain on the jar or cap threads. When samples are collected with the syringe, a 40 ml vial is used and the sample is preserved by the laboratory.

TABLE 2 – SOIL SAMPLE ANALYSIS GUIDE FOR PETROLEUM CONTAMINATION

PETROLEUM SUBSTANCE	CLOSURE ASSESSMENT	SOLID WASTE PRO./LANDFILLS	SITE INVESTIGATIONS
Gasoline Aviation Fuel	GRO	Free Liquids GRO Benzene Haz. Waste Det.	GRO PVOC/VOC Pb
Diesel Jet Fuel No.'s 1, 2, 4 Fuel Oil	DRO	Free Liquids GRO Benzene Haz. Waste Det.	DRO PVOC PAH
Crude Oil Lubricat. Oil No. 6 Fuel Oil	DRO	Free Liquids DRO Haz. Waste Det.	DRO PAH
Unknown Petroleum	GRO and DRO	Free Liquids GRO and DRO Pb, Cd, CN, S Haz Waste Det.	GRO and DRO VOC/PVOC PAH Pb, Cd
Waste Oil	DRO	Free Liquids DRO VOC Pb, Cd, CN, S Haz. Waste Det.	DRO VOC/PVOC PAH PCB Pb, Cd

TABLE 3 – GROUNDWATER SAMPLE PREPARATION GUIDE*

TEST	SAMPLE SIZE/ CONTAINER	PRESERVATIVE	HOLDING TIME
VOC / PVOC Volatile Organic Compounds	3 - 40 ml vials filled with no headspace	0.5 ml of 1:1 HCl	14 days
DRO Diesel Range Organics	1 - 1 liter amber glass bottles	5 ml of 1:1 HCl	7 days
GRO Gasoline Range Organics	3 - 40 ml vials filled with no headspace	0.5 ml of 1:1 HCl	14 days
PAH Polynuclear Aromatic Hydrocarbons	1 - 1 liter amber glass bottles	None	7 days
PCB Polychlorinated Biphenyls	1 - 1 liter amber glass bottle	None	7 days
LEAD / RCRA metals **	1 - 250 ml plastic bottle	2 ml of HNO ₃ or to a pH of < 2	6 months

* All samples will be sealed, labeled, and placed on ice immediately after collection.

** When testing for dissolved metals, the sample will be field filtered before preservation.

APPENDIX 5

LABORATORY ANALYSIS RESULTS AND CHAIN OF CUSTODY DOCUMENTATION

February 18, 2015

Don Brittnacher
OMNINI Associates
One Systems Drive
Appleton, WI 54914

RE: Project: N2166A15 DNR-ASHWAUBENON
Pace Project No.: 40110548

Dear Don Brittnacher:

Enclosed are the analytical results for sample(s) received by the laboratory on February 12, 2015. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,



Steven Mleczo
steve.mleczo@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

CERTIFICATIONS

Project: N2166A15 DNR-ASHWAUBENON

Pace Project No.: 40110548

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 11888

North Dakota Certification #: R-150

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

US Dept of Agriculture #: S-76505

Wisconsin Certification #: 405132750

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

SAMPLE SUMMARY

Project: N2166A15 DNR-ASHWAUBENON

Pace Project No.: 40110548

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40110548001	B1-1	Solid	02/12/15 14:10	02/12/15 15:40
40110548002	B1-2	Solid	02/12/15 14:14	02/12/15 15:40
40110548003	B2-1	Solid	02/12/15 14:30	02/12/15 15:40
40110548004	B2-2	Solid	02/12/15 14:32	02/12/15 15:40
40110548005	B3-1	Solid	02/12/15 14:52	02/12/15 15:40
40110548006	B3-2	Solid	02/12/15 14:54	02/12/15 15:40

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

SAMPLE ANALYTE COUNT

Project: N2166A15 DNR-ASHWAUBENON
Pace Project No.: 40110548

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40110548001	B1-1	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SDW	1	PASI-G
40110548002	B1-2	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SDW	1	PASI-G
40110548003	B2-1	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SDW	1	PASI-G
40110548004	B2-2	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40110548005	B3-1	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G
40110548006	B3-2	EPA 8082	BLM	10	PASI-G
		ASTM D2974-87	SKW	1	PASI-G

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: N2166A15 DNR-ASHWAUBENON
Pace Project No.: 40110548

Sample: B1-1 **Lab ID: 40110548001** Collected: 02/12/15 14:10 Received: 02/12/15 15:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB									
Analytical Method: EPA 8082 Preparation Method: EPA 3541									
PCB-1016 (Aroclor 1016)	<32.7	ug/kg	65.3	32.7	1	02/13/15 10:34	02/14/15 05:15	12674-11-2	
PCB-1221 (Aroclor 1221)	<32.7	ug/kg	65.3	32.7	1	02/13/15 10:34	02/14/15 05:15	11104-28-2	
PCB-1232 (Aroclor 1232)	<32.7	ug/kg	65.3	32.7	1	02/13/15 10:34	02/14/15 05:15	11141-16-5	
PCB-1242 (Aroclor 1242)	<32.7	ug/kg	65.3	32.7	1	02/13/15 10:34	02/14/15 05:15	53469-21-9	
PCB-1248 (Aroclor 1248)	<32.7	ug/kg	65.3	32.7	1	02/13/15 10:34	02/14/15 05:15	12672-29-6	
PCB-1254 (Aroclor 1254)	199	ug/kg	65.3	32.7	1	02/13/15 10:34	02/14/15 05:15	11097-69-1	
PCB-1260 (Aroclor 1260)	126	ug/kg	65.3	32.7	1	02/13/15 10:34	02/14/15 05:15	11096-82-5	
PCB, Total	325	ug/kg	65.3	32.7	1	02/13/15 10:34	02/14/15 05:15	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	83 %		50-130		1	02/13/15 10:34	02/14/15 05:15	877-09-8	
Decachlorobiphenyl (S)	88 %		18-134		1	02/13/15 10:34	02/14/15 05:15	2051-24-3	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	23.5 %		0.10	0.10	1		02/12/15 16:44		

Sample: B1-2 **Lab ID: 40110548002** Collected: 02/12/15 14:14 Received: 02/12/15 15:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB									
Analytical Method: EPA 8082 Preparation Method: EPA 3541									
PCB-1016 (Aroclor 1016)	<27.7	ug/kg	55.5	27.7	1	02/13/15 10:34	02/14/15 05:32	12674-11-2	
PCB-1221 (Aroclor 1221)	<27.7	ug/kg	55.5	27.7	1	02/13/15 10:34	02/14/15 05:32	11104-28-2	
PCB-1232 (Aroclor 1232)	<27.7	ug/kg	55.5	27.7	1	02/13/15 10:34	02/14/15 05:32	11141-16-5	
PCB-1242 (Aroclor 1242)	<27.7	ug/kg	55.5	27.7	1	02/13/15 10:34	02/14/15 05:32	53469-21-9	
PCB-1248 (Aroclor 1248)	<27.7	ug/kg	55.5	27.7	1	02/13/15 10:34	02/14/15 05:32	12672-29-6	
PCB-1254 (Aroclor 1254)	<27.7	ug/kg	55.5	27.7	1	02/13/15 10:34	02/14/15 05:32	11097-69-1	
PCB-1260 (Aroclor 1260)	<27.7	ug/kg	55.5	27.7	1	02/13/15 10:34	02/14/15 05:32	11096-82-5	
PCB, Total	<27.7	ug/kg	55.5	27.7	1	02/13/15 10:34	02/14/15 05:32	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	81 %		50-130		1	02/13/15 10:34	02/14/15 05:32	877-09-8	
Decachlorobiphenyl (S)	89 %		18-134		1	02/13/15 10:34	02/14/15 05:32	2051-24-3	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	9.9 %		0.10	0.10	1		02/12/15 16:45		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: N2166A15 DNR-ASHWAUBENON
Pace Project No.: 40110548

Sample: B2-1 Lab ID: 40110548003 Collected: 02/12/15 14:30 Received: 02/12/15 15:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB									
Analytical Method: EPA 8082 Preparation Method: EPA 3541									
PCB-1016 (Aroclor 1016)	<30.4	ug/kg	60.8	30.4	1	02/13/15 10:34	02/14/15 05:49	12674-11-2	
PCB-1221 (Aroclor 1221)	<30.4	ug/kg	60.8	30.4	1	02/13/15 10:34	02/14/15 05:49	11104-28-2	
PCB-1232 (Aroclor 1232)	<30.4	ug/kg	60.8	30.4	1	02/13/15 10:34	02/14/15 05:49	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.4	ug/kg	60.8	30.4	1	02/13/15 10:34	02/14/15 05:49	53469-21-9	
PCB-1248 (Aroclor 1248)	<30.4	ug/kg	60.8	30.4	1	02/13/15 10:34	02/14/15 05:49	12672-29-6	
PCB-1254 (Aroclor 1254)	<30.4	ug/kg	60.8	30.4	1	02/13/15 10:34	02/14/15 05:49	11097-69-1	
PCB-1260 (Aroclor 1260)	<30.4	ug/kg	60.8	30.4	1	02/13/15 10:34	02/14/15 05:49	11096-82-5	
PCB, Total	<30.4	ug/kg	60.8	30.4	1	02/13/15 10:34	02/14/15 05:49	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	80 %		50-130		1	02/13/15 10:34	02/14/15 05:49	877-09-8	
Decachlorobiphenyl (S)	88 %		18-134		1	02/13/15 10:34	02/14/15 05:49	2051-24-3	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	17.8 %		0.10	0.10	1		02/12/15 16:45		

Sample: B2-2 Lab ID: 40110548004 Collected: 02/12/15 14:32 Received: 02/12/15 15:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB									
Analytical Method: EPA 8082 Preparation Method: EPA 3541									
PCB-1016 (Aroclor 1016)	<30.1	ug/kg	60.2	30.1	1	02/13/15 10:34	02/14/15 06:07	12674-11-2	
PCB-1221 (Aroclor 1221)	<30.1	ug/kg	60.2	30.1	1	02/13/15 10:34	02/14/15 06:07	11104-28-2	
PCB-1232 (Aroclor 1232)	<30.1	ug/kg	60.2	30.1	1	02/13/15 10:34	02/14/15 06:07	11141-16-5	
PCB-1242 (Aroclor 1242)	<30.1	ug/kg	60.2	30.1	1	02/13/15 10:34	02/14/15 06:07	53469-21-9	
PCB-1248 (Aroclor 1248)	<30.1	ug/kg	60.2	30.1	1	02/13/15 10:34	02/14/15 06:07	12672-29-6	
PCB-1254 (Aroclor 1254)	<30.1	ug/kg	60.2	30.1	1	02/13/15 10:34	02/14/15 06:07	11097-69-1	
PCB-1260 (Aroclor 1260)	<30.1	ug/kg	60.2	30.1	1	02/13/15 10:34	02/14/15 06:07	11096-82-5	
PCB, Total	<30.1	ug/kg	60.2	30.1	1	02/13/15 10:34	02/14/15 06:07	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	81 %		50-130		1	02/13/15 10:34	02/14/15 06:07	877-09-8	
Decachlorobiphenyl (S)	88 %		18-134		1	02/13/15 10:34	02/14/15 06:07	2051-24-3	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	16.9 %		0.10	0.10	1		02/17/15 16:14		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: N2166A15 DNR-ASHWAUBENON
Pace Project No.: 40110548

Sample: B3-1 **Lab ID: 40110548005** Collected: 02/12/15 14:52 Received: 02/12/15 15:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB									
Analytical Method: EPA 8082 Preparation Method: EPA 3541									
PCB-1016 (Aroclor 1016)	<28.9	ug/kg	57.8	28.9	1	02/13/15 10:34	02/14/15 06:24	12674-11-2	
PCB-1221 (Aroclor 1221)	<28.9	ug/kg	57.8	28.9	1	02/13/15 10:34	02/14/15 06:24	11104-28-2	
PCB-1232 (Aroclor 1232)	<28.9	ug/kg	57.8	28.9	1	02/13/15 10:34	02/14/15 06:24	11141-16-5	
PCB-1242 (Aroclor 1242)	<28.9	ug/kg	57.8	28.9	1	02/13/15 10:34	02/14/15 06:24	53469-21-9	
PCB-1248 (Aroclor 1248)	227	ug/kg	57.8	28.9	1	02/13/15 10:34	02/14/15 06:24	12672-29-6	
PCB-1254 (Aroclor 1254)	224	ug/kg	57.8	28.9	1	02/13/15 10:34	02/14/15 06:24	11097-69-1	
PCB-1260 (Aroclor 1260)	136	ug/kg	57.8	28.9	1	02/13/15 10:34	02/14/15 06:24	11096-82-5	
PCB, Total	587	ug/kg	57.8	28.9	1	02/13/15 10:34	02/14/15 06:24	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	83 %		50-130		1	02/13/15 10:34	02/14/15 06:24	877-09-8	
Decachlorobiphenyl (S)	87 %		18-134		1	02/13/15 10:34	02/14/15 06:24	2051-24-3	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	13.4 %		0.10	0.10	1		02/17/15 16:14		

Sample: B3-2 **Lab ID: 40110548006** Collected: 02/12/15 14:54 Received: 02/12/15 15:40 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB									
Analytical Method: EPA 8082 Preparation Method: EPA 3541									
PCB-1016 (Aroclor 1016)	<126	ug/kg	251	126	4	02/13/15 10:34	02/14/15 06:42	12674-11-2	
PCB-1221 (Aroclor 1221)	<126	ug/kg	251	126	4	02/13/15 10:34	02/14/15 06:42	11104-28-2	
PCB-1232 (Aroclor 1232)	<126	ug/kg	251	126	4	02/13/15 10:34	02/14/15 06:42	11141-16-5	
PCB-1242 (Aroclor 1242)	<126	ug/kg	251	126	4	02/13/15 10:34	02/14/15 06:42	53469-21-9	
PCB-1248 (Aroclor 1248)	2550	ug/kg	251	126	4	02/13/15 10:34	02/14/15 06:42	12672-29-6	
PCB-1254 (Aroclor 1254)	1270	ug/kg	251	126	4	02/13/15 10:34	02/14/15 06:42	11097-69-1	
PCB-1260 (Aroclor 1260)	1170	ug/kg	251	126	4	02/13/15 10:34	02/14/15 06:42	11096-82-5	
PCB, Total	4990	ug/kg	251	126	4	02/13/15 10:34	02/14/15 06:42	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	76 %		50-130		4	02/13/15 10:34	02/14/15 06:42	877-09-8	
Decachlorobiphenyl (S)	83 %		18-134		4	02/13/15 10:34	02/14/15 06:42	2051-24-3	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Percent Moisture	20.4 %		0.10	0.10	1		02/17/15 16:14		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: N2166A15 DNR-ASHWAUBENON

Pace Project No.: 40110548

QC Batch: OEXT/25846

Analysis Method: EPA 8082

QC Batch Method: EPA 3541

Analysis Description: 8082 GCS PCB

Associated Lab Samples: 40110548001, 40110548002, 40110548003, 40110548004, 40110548005, 40110548006

METHOD BLANK: 1117585

Matrix: Solid

Associated Lab Samples: 40110548001, 40110548002, 40110548003, 40110548004, 40110548005, 40110548006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<25.0	50.0	02/14/15 00:19	
PCB-1221 (Aroclor 1221)	ug/kg	<25.0	50.0	02/14/15 00:19	
PCB-1232 (Aroclor 1232)	ug/kg	<25.0	50.0	02/14/15 00:19	
PCB-1242 (Aroclor 1242)	ug/kg	<25.0	50.0	02/14/15 00:19	
PCB-1248 (Aroclor 1248)	ug/kg	<25.0	50.0	02/14/15 00:19	
PCB-1254 (Aroclor 1254)	ug/kg	<25.0	50.0	02/14/15 00:19	
PCB-1260 (Aroclor 1260)	ug/kg	<25.0	50.0	02/14/15 00:19	
Decachlorobiphenyl (S)	%	93	18-134	02/14/15 00:19	
Tetrachloro-m-xylene (S)	%	80	50-130	02/14/15 00:19	

LABORATORY CONTROL SAMPLE: 1117586

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg		<25.0			
PCB-1221 (Aroclor 1221)	ug/kg		<25.0			
PCB-1232 (Aroclor 1232)	ug/kg		<25.0			
PCB-1242 (Aroclor 1242)	ug/kg		<25.0			
PCB-1248 (Aroclor 1248)	ug/kg		<25.0			
PCB-1254 (Aroclor 1254)	ug/kg		<25.0			
PCB-1260 (Aroclor 1260)	ug/kg	500	356	71	64-130	
Decachlorobiphenyl (S)	%			90	18-134	
Tetrachloro-m-xylene (S)	%			76	50-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1117587

1117588

Parameter	Units	40110459025		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	% Rec					
PCB-1016 (Aroclor 1016)	ug/kg	<27.9			<27.9	<27.9							50
PCB-1221 (Aroclor 1221)	ug/kg	<27.9			<27.9	<27.9							50
PCB-1232 (Aroclor 1232)	ug/kg	<27.9			<27.9	<27.9							50
PCB-1242 (Aroclor 1242)	ug/kg	<27.9			<27.9	<27.9							50
PCB-1248 (Aroclor 1248)	ug/kg	<27.9			<27.9	<27.9							50
PCB-1254 (Aroclor 1254)	ug/kg	<27.9			<27.9	<27.9							50
PCB-1260 (Aroclor 1260)	ug/kg	<27.9	559	559	416	426	74	76	28-130	2	50		
Decachlorobiphenyl (S)	%						92	94	18-134				
Tetrachloro-m-xylene (S)	%						85	87	50-130				

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: N2166A15 DNR-ASHWAUBENON
Pace Project No.: 40110548

QC Batch:	PMST/10893	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	40110548001, 40110548002, 40110548003		

SAMPLE DUPLICATE: 1117425

Parameter	Units	40110497002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	5.5	5.8	7	10	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: N2166A15 DNR-ASHWAUBENON

Pace Project No.: 40110548

QC Batch:	PMST/10901	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	40110548004, 40110548005, 40110548006		

SAMPLE DUPLICATE: 1118912

Parameter	Units	40110659002 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	6.8	6.7	2	10	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALIFIERS

Project: N2166A15 DNR-ASHWAUBENON

Pace Project No.: 40110548

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

LOD - Limit of Detection.

LOQ - Limit of Quantitation.

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: N2166A15 DNR-ASHWAUBENON

Pace Project No.: 40110548

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40110548001	B1-1	EPA 3541	OEXT/25846	EPA 8082	GCSV/12577
40110548002	B1-2	EPA 3541	OEXT/25846	EPA 8082	GCSV/12577
40110548003	B2-1	EPA 3541	OEXT/25846	EPA 8082	GCSV/12577
40110548004	B2-2	EPA 3541	OEXT/25846	EPA 8082	GCSV/12577
40110548005	B3-1	EPA 3541	OEXT/25846	EPA 8082	GCSV/12577
40110548006	B3-2	EPA 3541	OEXT/25846	EPA 8082	GCSV/12577
40110548001	B1-1	ASTM D2974-87	PMST/10893		
40110548002	B1-2	ASTM D2974-87	PMST/10893		
40110548003	B2-1	ASTM D2974-87	PMST/10893		
40110548004	B2-2	ASTM D2974-87	PMST/10901		
40110548005	B3-1	ASTM D2974-87	PMST/10901		
40110548006	B3-2	ASTM D2974-87	PMST/10901		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

(Please Print Clearly)

Company Name: **OMMNI Associates**
 Branch/Location: **Appleton**
 Project Contact: **Don Brittnacher**
 Phone: **735-6900**
 Project Number: **N2166A15**
 Project Name: **DNR - Ashwan benon**
 Project State: **Wisconsin**
 Sampled By (Print): **Don Brittnacher**
 Sampled By (Sign): *Don Brittnacher*
 PO #:

Data Package Options (billable)
 EPA Level III
 EPA Level IV

MMS/MSD (billable)
 On your sample
 NOT needed on your sample

Matrix Codes
 A = Air
 B = Bids
 C = Charcoal
 O = Oil
 S = Soil
 SI = Sludge
 W = Water
 DW = Drinking Water
 GW = Ground Water
 SW = Surface Water
 WW = Waste Water
 WP = Wipe

Regulatory Program:

Filtered? (YES/NO)
 PRESERVATION (CODE)*
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

CHAIN OF CUSTODY



www.pacestatus.com

UPPER MIDWEST REGION
 MN: 612-607-1700 WI: 920-469-2436

Page 1 of 14

Y/N	Pick Letter	Retention	Matrix	Analyses Requested
N	A	N		PCBs
N	A	N		dry wt.

PAGE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	B1-1	2/2/15	2:10	S
002	B1-2		2:14	S
003	B2-1		2:30	S
004	B2-2		2:32	S
005	B3-1		2:52	S
006	B3-2		2:54	S

Rush Turnaround Time Requested - Prelims
 (Rush TAT subject to approval/surcharge)
 Date Needed:

Transmit Prelim Rush Results by (complete what you want):
 Relinquished By: *Don Brittnacher* Date/Time: **2/12/15 3:40**
 Relinquished By: _____ Date/Time: _____
 Relinquished By: _____ Date/Time: _____
 Relinquished By: _____ Date/Time: _____
 Received By: *[Signature]* Date/Time: **2/12/15 1540**
 Received By: _____ Date/Time: _____
 Received By: _____ Date/Time: _____
 Received By: _____ Date/Time: _____

Quote #: _____
 Mail To Contact: **Don Brittnacher**
 Mail To Company: **OMMNI Associates**
 Mail To Address: **One Systems Dr. Appleton, WI 54914**
 Invoice To Contact: **- Same -**
 Invoice To Company: _____
 Invoice To Address: _____
 Invoice To Phone: **735-6900**
 CLIENT COMMENTS: **LAB COMMENTS (Lab Use Only)**
1-888cg A, 1-488cp A
40110548

PAGE Project No. **40110548**
 Receipt Temp = **R01** °C
 Sample Receipt pH **OK / Adjusted**
 Cooler Custody Seal **Present / Not Present**
 Intact / Not Intact

Client Name: OMNI Assoc.

Project #:

WO#: **40110548**

Courier: Fed Ex UPS Client Pace Other: _____
Tracking #: NA



40110548

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 NA

Type of Ice: Wet Blue Dry None

Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 20.1 / Corr: _____

Biological Tissue is Frozen: yes no

Temp Blank Present: yes no

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

Person examining contents:
Date: 2/12/15
Initials: RS

Comments:

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12) exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> 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: _____

Project Manager Review: _____

Date: 2/13/15