

**From:** Timm P. Speerschneider <tps@dewittllp.com>  
**Sent:** Tuesday, August 6, 2019 2:06 PM  
**To:** Schmoller, Michael R - DNR  
**Subject:** RE: Hartmeyer Property- Recent soil sampling for lease obligations  
**Attachments:** REH Env Assessment Report\_Hartmeyer-Madison WI\_Final.pdf; 0582\_001.pdf; 0584\_001.pdf; 0585\_001.pdf; All\_Attachments().pdf(4)

**Follow Up Flag:** Follow up  
**Flag Status:** Completed

Here is the complete report—I have also attached the 2008 closure letters and a key map showing the areas where DRO exceeded 1000ppm(note that these areas are delineated in green on the Ramboll maps) from the closure request—it is not entirely clear as to the precise area to which the 2008 closure applies—I would note that it appears that there remain areas above industrial direct contact standards for the DRO constituents benzene and benzo-pyrene and benzo anthracene—I would also note the exceedances in the former coal storage area—I understand that these appear to be in areas that are not subject to the current closure request – I will give you a call to discuss-thanks, timm

**Timm P. Speerschneider**

Ph: 608.252.9319  
[tps@dewittllp.com](mailto:tps@dewittllp.com)

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**From:** Schmoller, Michael R - DNR <[Michael.Schmoller@wisconsin.gov](mailto:Michael.Schmoller@wisconsin.gov)>  
**Sent:** Tuesday, August 06, 2019 10:09 AM  
**To:** Timm P. Speerschneider <[tps@dewittllp.com](mailto:tps@dewittllp.com)>  
**Subject:** FW: Hartmeyer Property- Recent soil sampling for lease obligations

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**R. Michael Schmoller**

Phone: 608-275-3303  
[Michael.schmoller@wisconsin.gov](mailto:Michael.schmoller@wisconsin.gov)

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**From:** Adam Streiffer <[ASTREIFFER@ramboll.com](mailto:ASTREIFFER@ramboll.com)>  
**Sent:** Monday, June 17, 2019 8:52 AM  
**To:** Schmoller, Michael R - DNR <[Michael.Schmoller@wisconsin.gov](mailto:Michael.Schmoller@wisconsin.gov)>  
**Cc:** Adam Streiffer <[ASTREIFFER@ramboll.com](mailto:ASTREIFFER@ramboll.com)>; Susan Petrofske <[SPETROFSKE@ramboll.com](mailto:SPETROFSKE@ramboll.com)>; Erin Veder <[ebantz@ramboll.com](mailto:ebantz@ramboll.com)>; Jennifer Nijman <[jn@nijmanfranzetti.com](mailto:jn@nijmanfranzetti.com)>  
**Subject:** Hartmeyer Property- Recent soil sampling for lease obligations

Hi Mike,

In follow up to your recent email correspondence with Lynn Bradley with GEC, attached is the data from the recent soil sampling performed by Ramboll at the Hartmeyer site in April 2019. Also attached is a figure showing the boring locations. The sampling was conducted to satisfy terms of the lease between the John Hartmeyer Estate and Kraft Heinz. As such, the data in the attached table is only compared to applicable soil standards (i.e., industrial) based on zoning and land use during the lease term.

Two areas were assessed: the area of the 2008 AST closure (BRRTS #03-13-000053), and a previously unassessed area to the north and northwest that may have been historically filled and possibly associated with former coal storage. We did not further assess the area of the open AST case (BRRTS #02-13-580328) given the recent characterization work.

The April 2019 results appear to be generally consistent with soil data associated with the 2008 case closure and the open AST case. The compounds and concentrations appear to be generally consistent, and it does not appear that they are the result of a new release. Borings B-6 and B-7 are located a few hundred feet away from the nearest historic boring locations. However, these data also appear generally consistent with historic data, and may be attributed to the historic fill at the site. If deemed appropriate, Kraft Heinz would like to incorporate this data into one of the two existing BRRTS cases.

Please let us know if you have any questions or require any additional information at this time.

Thank you,  
**Adam Streiffer**

Senior Consultant 2

D 1-262-901-3506  
M 1-504-723-0980  
[astreiffer@ramboll.com](mailto:astreiffer@ramboll.com)

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State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor  
Matthew J. Frank, Secretary  
Lloyd L. Eagan, Regional Director

South Central Region Headquarters  
3911 Fish Hatchery Road  
Fitchburg, Wisconsin 53711-5397  
Telephone 608-275-3266  
FAX 608-275-3338  
TTY Access via relay - 711

January 23, 2008

File Ref: 03-13-00053

Mr. Robert Sherman  
Kraft Global - Oscar Mayer Foods  
910 Mayer Avenue  
Madison, WI 53704-4287

Subject: Closure, Oscar Mayer - Hartmeyer Aboveground Storage Tank (AST),  
2007 Roth Street & 1900 Commercial Street, Madison, WI

Dear Mr. Sherman:

On September 24, 2007, the South Central Region Closure Committee reviewed your request for closure of the case described above. The South Central Region Closure Committee reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. On October 4, 2007, you were notified that the Closure Committee had granted conditional closure to this case.

On December 3, 2007, the Department received correspondence indicating that you have complied with the requirements of closure. The groundwater monitoring wells (24) have been properly abandoned and the soil cuttings (8 drums) have been properly disposed of.

Based on the correspondence and data provided, it appears that your case meets the requirements of ch. NR 726, Wisconsin Administrative Code. The Department considers this case closed and no further investigation or remediation is required at this time.

Please be aware that this case may be reopened pursuant to s. NR 726.09, Wisconsin Administrative Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety or welfare, or the environment.

GIS Registry

The conditions of case closure set out below in this letter require that your site be listed on the Remediation and Redevelopment Program's GIS Registry. The specific reasons are summarized below:

- Residual soil contamination exists that must be properly managed should it be excavated or removed.
- Groundwater contamination is present above Chapter NR 140 enforcement standards.

Information that was submitted with your closure request application will be included on the GIS Registry. To review the sites on the GIS Registry web page, visit the RR Sites Map page at: <http://dnr.wi.gov/org/aw/rr/gis/index.htm>. If your property is listed on the GIS Registry because of remaining contamination and you intend to construct or reconstruct a well, you will need prior Department approval in accordance with s. NR 812.09(4)(w), Wis. Adm. Code. To obtain approval, Form 3300-254 needs to be completed and submitted to the DNR Drinking and Groundwater program's regional water supply specialist. This form can be obtained on-line <http://dnr.wi.gov/org/water/dwg/3300254.pdf> or at the web address listed above for the GIS Registry.

#### Remaining Residual Groundwater Contamination

Groundwater impacted by petroleum contamination greater than enforcement standards set forth in ch. NR140, Wis. Adm. Code, is present both on the contaminated property and off the contaminated property. Off-property owners have been notified of the presence of groundwater contamination. For more detailed information regarding the locations where groundwater samples have been collected (i.e., monitoring well locations) and the associated contaminant concentrations, refer to the Remediation and Redevelopment Program's GIS Registry at <http://dnr.wi.gov/org/aw/rr/gis/index.htm>.

The Department appreciates your efforts to restore the environment at this site. If you have any questions regarding this closure decision or anything outlined in this letter, please contact me at telephone number shown below.

Sincerely,



Dino Tsoris, P.G.  
Hydrogeologist  
Remediation & Redevelopment Program  
South Central Region  
Wisconsin Department of Natural Resources  
Telephone: (608) 275-3299

cc: Mr. John Tweddale, BT2, Inc., 2830 Dairy Drive, Madison, WI 53718-6751  
Ms. Andrea H. Johns, P.O. 833374, Richardson, TX 75083  
John Hartmeyer Estate, C/O John Pike and J.R. Pike Corporation,  
433 Woodward Drive, Madison, WI 53704-1529  
Mr. Timm P. Spoerschneider, DeWitt Ross & Stevens, Two East Mifflin Street,  
Suite 600, Madison, WI 53703-2865  
Mr. William M. Tuttle, Canadian Pacific Railway, 501 Marquette Avenue S.,  
Minneapolis, MN 55402



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor  
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Lloyd L. Eagan, Regional Director

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3911 Fish Hatchery Road  
Fitchburg, Wisconsin 53711-5397  
Telephone 608-275-3266  
FAX 608-275-3338  
TTY Access via relay - 711

October 4, 2007

File Ref: 03-13-000053

Mr. Robert Sherman  
Kraft Global Oscar Mayer Foods, Inc.  
910 Mayer Avenue  
Madison, WI 54704-4287

Subject: Conditional Closure Decision with Requirements to Achieve Final Closure,  
Oscar Mayer - Hartmeyer Aboveground Storage Tank Area,  
2007 Roth Street & 1900 Commercial Street, Madison, WI

Dear Mr. Sherman:

On September 24, 2007, the South Central Region Closure Committee reviewed your request for closure of the case described above. The South Central Region Closure Committee reviews environmental remediation cases for compliance with state rules and statutes to maintain consistency in the closure of these cases. After careful review of the closure request, the Closure Committee has determined that the residual fuel oil petroleum contamination originating from the distribution lines associated with the aboveground storage tank area located on the Hartmeyer property appears to have been investigated and remediated to the extent practicable under site conditions. Your case has been remediated to Department standards in accordance with s. NR 726.05, Wis. Adm. Code and will be closed if the following conditions are satisfied:

**MONITORING WELL ABANDONMENT**

The monitoring wells and temporary wells at the site must be properly abandoned in compliance with ch. NR 141, Wis. Adm. Code. Documentation of well abandonment must be submitted to Dino Tsois on Form 3300-5B found at [www.dnr.state.wi.us/org/water/dwg/gw/](http://www.dnr.state.wi.us/org/water/dwg/gw/) or provided by the Department of Natural Resources.

**PURGE WATER, WASTE AND SOIL PILE REMOVAL**

Any remaining purge water, waste and/or soil piles generated as part of site investigation or remediation activities must be removed from the site and disposed of or treated in accordance with Department of Natural Resources' rules. Once that work is completed, please send appropriate documentation regarding the treatment or disposal of the remaining purge water, waste and/or soil piles.

**RIGHT-OF-WAY SOIL AND/OR GROUNDWATER CONTAMINATION**

There is residual soil and/or groundwater contamination exists on the Hartmeyer property and the Canadian Pacific Railroad right-of-way at this site. Section NR 726.05(2)(a)4, Wis. Adm. Code, requires you to provide written notification of the presence of residual soil and

groundwater contamination to the Canadian Pacific Railroad where the right-of-way is located. Section NR 726.05(2)(b)4, Wis. Adm. Code, requires you to also provide written notice of the presence of residual groundwater contamination to the owner of any properties that you do not own within this site that do not have soil contamination if they are affected by groundwater contamination. These notifications were sent in October 2006. The affected property owners are advised that excavation of potentially contaminated soil or groundwater may pose inhalation or other direct contact hazards and will require soil and groundwater sampling and analysis, as well as proper storage, treatment, or disposal of any excavated materials, based upon the results of the analysis.

When the above conditions have been satisfied, please submit the appropriate documentation (for example, well abandonment forms, disposal receipts, copies of correspondence, etc.) to verify that applicable conditions have been met, and your case will be closed. Your site will be listed on the DNR Remediation and Redevelopment GIS Registry of Closed Remediation Sites. Information that was submitted with your closure request application will be included on the GIS Registry. To review the site on the GIS Registry web page, visit <http://maps.dnr.state.wi.us/brrts>.

Please be aware that the case may be reopened pursuant to s. NR 726.09, Wis. Adm. Code, if additional information regarding site conditions indicates that contamination on or from the site poses a threat to public health, safety, or welfare or to the environment.

We appreciate your efforts to restore the environment at this site. If you have any questions regarding this letter, please contact me at the telephone number shown below.

Sincerely,



Dino Tsoris, P.G.  
Hydrogeologist  
Remediation & Redevelopment Program  
South Central Region  
Wisconsin Department of Natural Resources  
Telephone: (608) 275-3299

CC: Mr. John Tweddale, BT2, Inc., 2830 Dairy Drive, Madison, WI 53718-6751  
Ms. Andrea H. Johns, P.O. 833374, Richardson, TX 75083  
John Hartmeyer Estate, C/O John Pike and J.R. Pike Corporation,  
433 Woodward Drive, Madison, WI 53704-1529  
Mr. Timm P. Speerschneider, DeWitt Ross & Stevens, Two East Mifflin Street,  
Suite 600, Madison, WI 53703-2865  
Mr. William M. Tuttle, Canadian Pacific Railway, 501 Marquette Avenue S.,  
Minneapolis, MN 55402

**PARCEL IDENTIFICATION NUMBERS**

**Hartmeyer – Aboveground Storage Tank Area  
2007 Roth Street, Madison, Wisconsin**

Hartmeyer Estate Property – 0810-313-0099-0

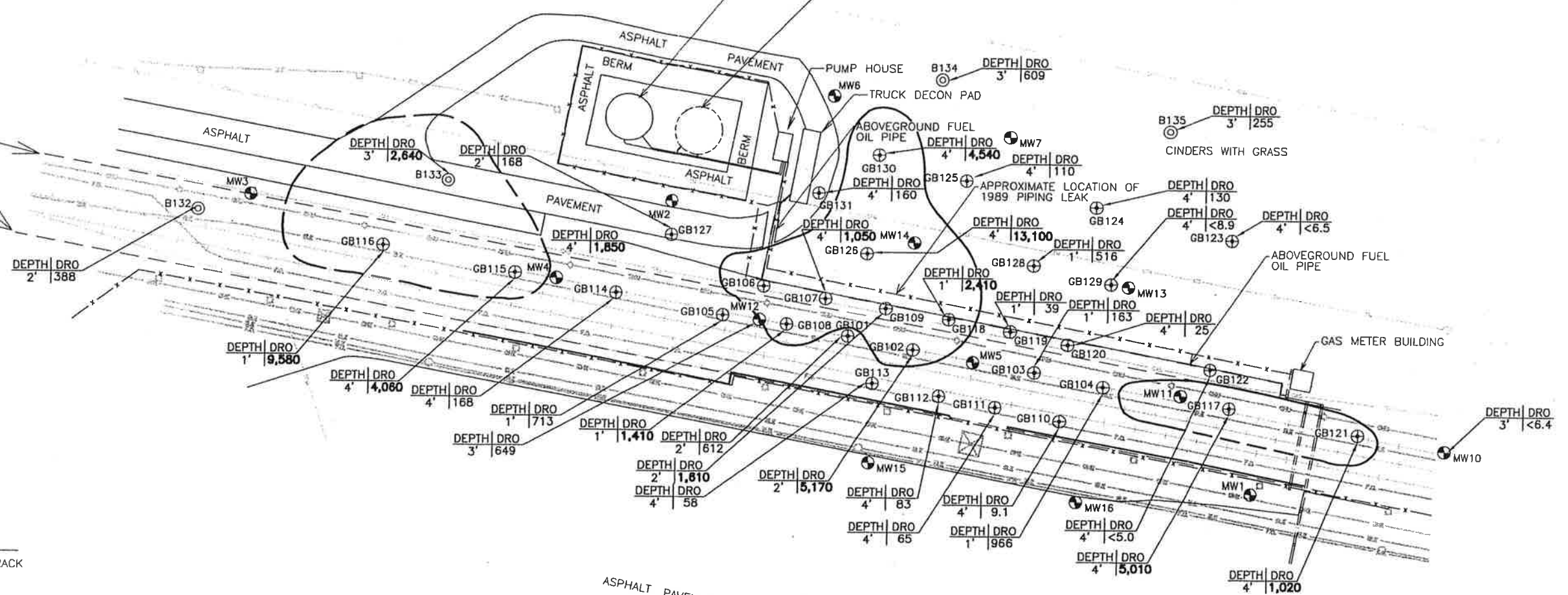
Canadian Pacific Railways Property (right-of-way) – 0810-313-0081-7

CANADIAN PACIFIC  
RAILROAD RIGHT-OF-WAY

HARTMEYER PROPERTY

ABOVEGROUND FUEL OIL STORAGE TANK

FORMER ABOVEGROUND FUEL OIL STORAGE TANK (REMOVED 2001)



LEGEND

- +---+--- CENTERLINE OF RAILROAD TRACK
- x--- FENCE
- E--- BURIED ELECTRIC
- F.O.--- BURIED FIBER OPTIC
- G.M.--- GAS MAIN
- T.E.--- BURIED TELEPHONE
- O.E.--- OVERHEAD ELECTRIC
- O.U.--- OVERHEAD UTILITY
- S.S.--- SANITARY SEWER
- S.W.--- STORM SEWER
- LIGHT POLE WITH CONCRETE BASE
- POWER POLE
- MANHOLE OR CATCH BASIN
- ⊠ ELECTRIC TRANSMISSION TOWER
- RAILROAD PROPERTY LINE
- MONITORING WELL
- ⊕ GEOPROBE BORING
- ⊙ SOIL BORING
- DRO DIESEL RANGE ORGANIC COMPOUNDS (UNITS IN MG/KG)
- DRO** WHERE CONCENTRATIONS EXCEED 1,000 MG/KG

OSCAR MAYER FOODS PROPERTY

- NOTES:
1. MAP ADAPTED FROM SITE SURVEY MAP BY NOTBOHM SURVEYING, OCTOBER, 2000.
  2. FUEL RELEASE LOCATION OBTAINED FROM DAMES AND MOORE PRELIMINARY SITE ASSESSMENT REPORT DATED MAY, 1989.
  3. DAMES AND MOORE INSTALLED MW1-MW5 DURING 1989 AND MW6-MW7 DURING 1992.
  4. GEOPROBE BORINGS INSTALLED BY BT2, INC. DURING JUNE 12-15, 2001.
  5. SOIL BORINGS B132-B135 AND MONITORING WELLS MW10-MW16 INSTALLED BY BT2 INC. DURING AUGUST 13-14, 2001.

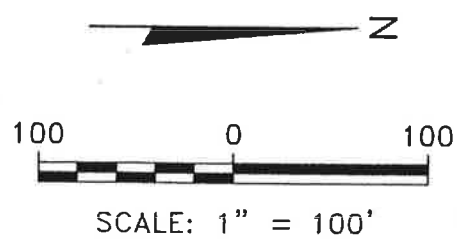



FIGURE C-4  
 AREAS WHERE DRO CONCENTRATIONS IN SHALLOW SOIL (<4')  
 EXCEED 1,000 MG/KG  
 HARTMEYER AST AREA  
 2007 ROTH STREET  
 MADISON, WISCONSIN

PROJECT NO. 1624
DRAWN BY: FS/CS/WK
CHECKED BY: JM
DRAWN: 02/08/01
REVISED: 08/29/06

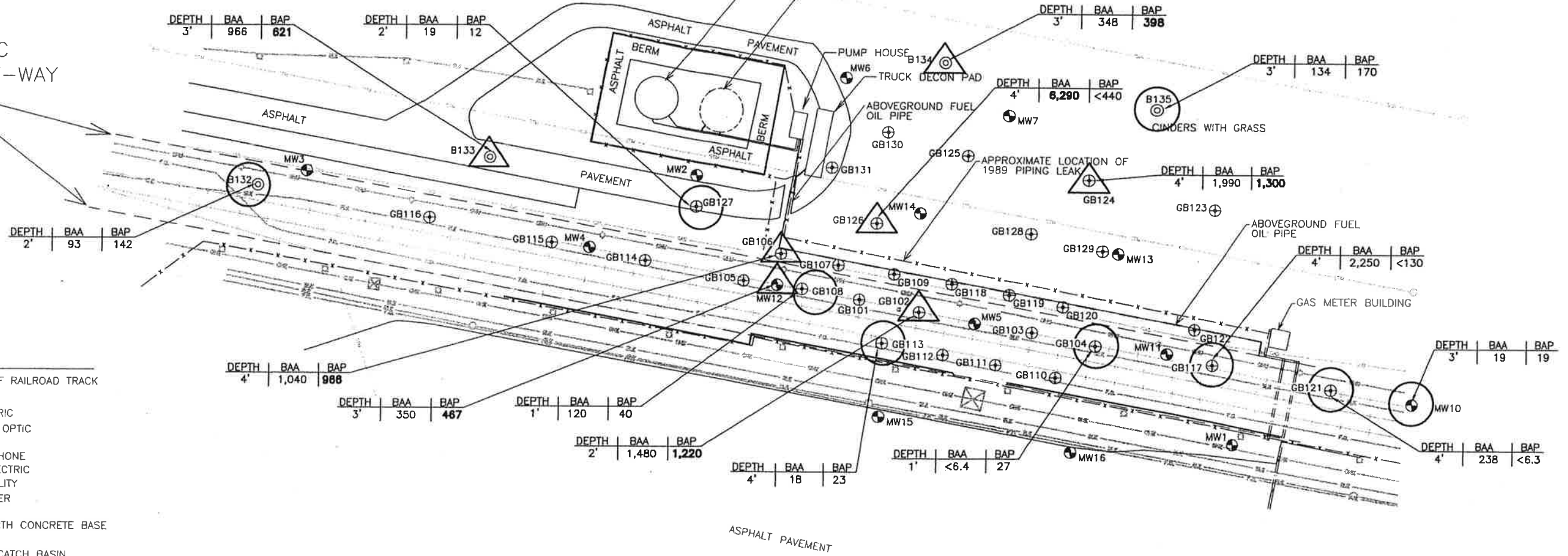




CANADIAN PACIFIC  
RAILROAD RIGHT-OF-WAY

HARTMEYER PROPERTY

ABOVEGROUND FUEL OIL STORAGE TANK  
FORMER ABOVEGROUND FUEL OIL STORAGE TANK (REMOVED 2001)



LEGEND

- CENTERLINE OF RAILROAD TRACK
- x- FENCE
- BURIED ELECTRIC
- BURIED FIBER OPTIC
- GAS MAIN
- BURIED TELEPHONE
- OVERHEAD ELECTRIC
- OVERHEAD UTILITY
- SANITARY SEWER
- STORM SEWER
- LIGHT POLE WITH CONCRETE BASE
- ◇ POWER POLE
- MANHOLE OR CATCH BASIN
- ⊠ ELECTRIC TRANSMISSION TOWER
- RAILROAD PROPERTY LINE
- ⊙ MONITORING WELL
- ⊕ GEOPROBE BORING
- ⊙ SOIL BORING
- BAA BENZO(A)ANTHRACENE (UNITS IN UG/KG)
- BAP BENZO(A)PYRENE (UNITS IN UG/KG)

○ BAP AND BAA VALUES IN SHALLOW SOIL (<4') DO NOT EXCEED GENERIC RESIDUAL CONTAMINANT LEVELS FOR THE DIRECT CONTACT PATHWAY FOR INDUSTRIAL SITES.

△ BAP OR BAA VALUE IN SHALLOW SOIL (<4') EXCEEDS GENERIC RESIDUAL CONTAMINANT LEVELS FOR THE DIRECT CONTACT PATHWAY FOR INDUSTRIAL SITES.

**BOLD** WHERE VALUE EXCEEDS GENERIC RESIDUAL CONTAMINANT LEVELS FOR THE DIRECT CONTACT PATHWAY FOR INDUSTRIAL SITES.

OSCAR MAYER FOODS PROPERTY

NOTES:

1. MAP ADAPTED FROM SITE SURVEY MAP BY NOTBOHM SURVEYING, OCTOBER, 2000.
2. FUEL RELEASE LOCATION OBTAINED FROM DAMES AND MOORE PRELIMINARY SITE ASSESSMENT REPORT DATED MAY, 1989.
3. DAMES AND MOORE INSTALLED MW1-MW5 DURING 1989 AND MW6-MW7 DURING 1992.
4. GEOPROBE BORINGS INSTALLED BY BT2, INC. DURING JUNE 12-15, 2001.
5. SOIL BORINGS B132-B135 AND MONITORING WELLS MW10-MW16 INSTALLED BY BT2 INC. DURING AUGUST 13-14, 2001.

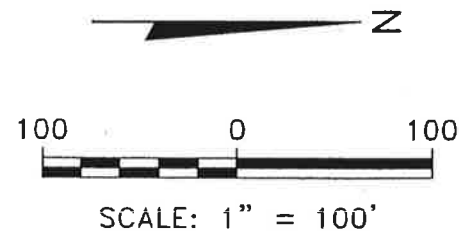


FIGURE C-5  
BENZO(A)ANTHRACENE AND BENZO(A)PYRENE  
CONCENTRATIONS IN SHALLOW SOIL ( $\leq 4'$ )  
HARTMEYER AST AREA  
2007 ROTH STREET  
MADISON, WISCONSIN

PROJECT NO. 1624

DRAWN BY: FS/CS/WK

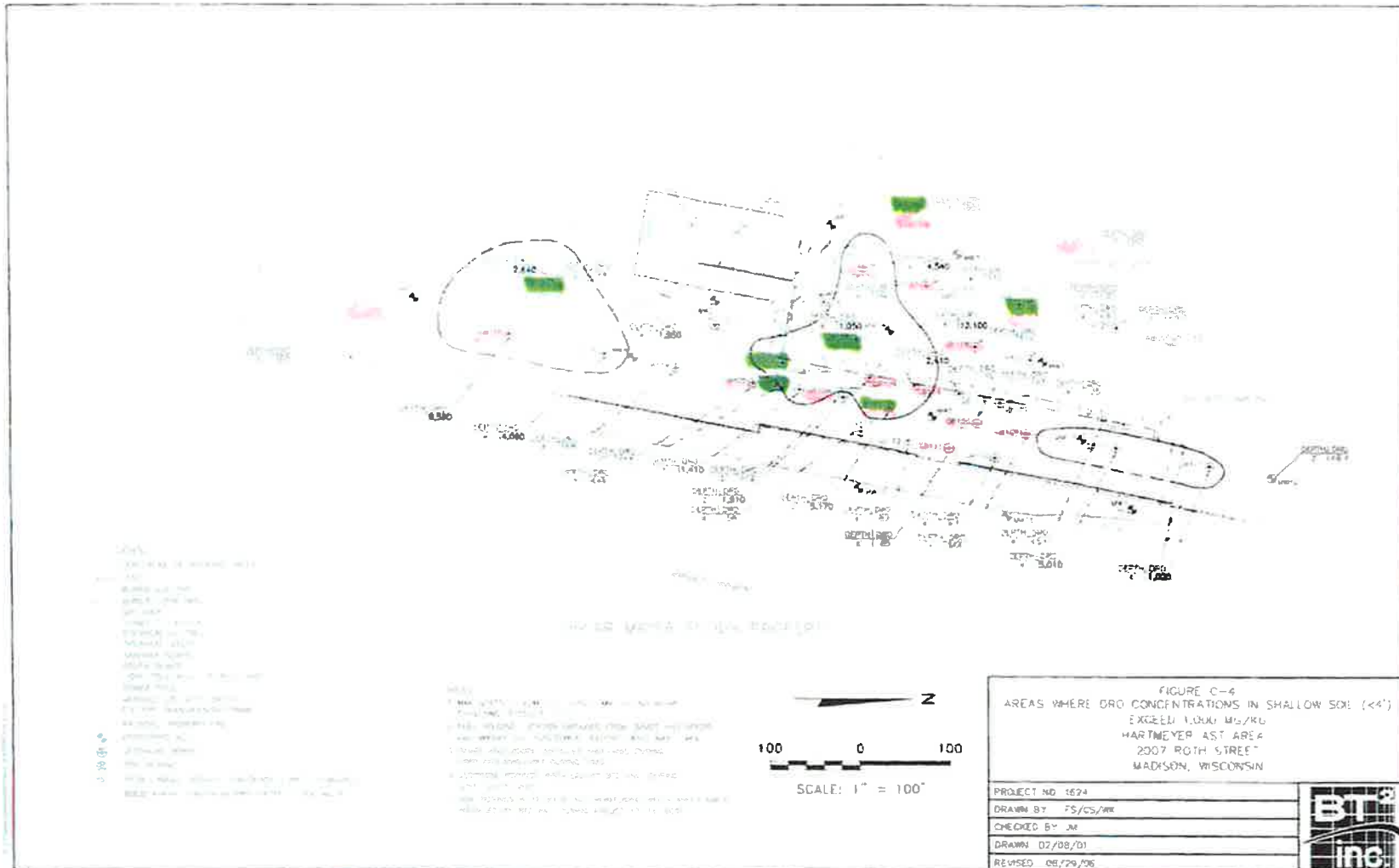
CHECKED BY: JM

DRAWN: 02/08/01

REVISED: 09/15/06



BENZENE > IND STD  
 B(a)P (Σ B(a)A) > IND STD(a)







**Table C-1 (Continued)**  
**DRO, GRO, and PVOC Concentrations in Soil**

Sample	Date	Depth (feet)	PID	Lab Notes	DRO (mg/kg)	GRO (mg/kg)	Benzene	Ethylbenzene	Toluene	Xylenes	1,2,4-TMB	1,3,5-TMB	MTBE
GB124 S2	6/14/01	4	10	(1)	130	NA	292	358	45	186	212	33	<33
GB124 S4	6/14/01	8	0.8	--	<5.9	NA	NA	NA	NA	NA	NA	NA	NA
GB125 S2	6/14/01	4	0.8	--	110	NA	65	285	298	570	130	<32	<32
GB125 S4	6/14/01	8	0	--	86	NA	NA	NA	NA	NA	NA	NA	NA
GB126 S2	6/14/04	4	120	(2)	13,100	NA	<594	1,190	<594	<1,780	903	<594	<594
GB126 S4	6/14/01	8	78	--	12,900	NA	NA	NA	NA	NA	NA	NA	NA
GB127 S1	6/14/01	2	0	(1)	68	NA	<32	<32	<32	<96	<32	<32	<32
GB127 S4	6/14/01	7.5	0	--	79	NA	NA	NA	NA	NA	NA	NA	NA
GB128 S1	6/15/01	1	1.3	(5)	516	NA	70	251	212	357	265	66	<33
GB128 S4	6/15/01	8	1.3	(6)	<5.9	NA	NA	NA	NA	NA	NA	NA	NA
GB129 S2	6/15/01	4	2.2	(6)	<8.9	NA	<45	<45	<45	<130	<45	<45	<45
GB129 S4	6/15/01	8	2.2	(6)	<6.1	NA	NA	NA	NA	NA	NA	NA	NA
GB130 S2	6/15/01	4	2.2	(7)	4,540	NA	58	71	57	100	45	<32	<32
GB130 S4	6/15/01	8	1.3	(6)	12	NA	NA	NA	NA	NA	NA	NA	NA
GB131 S2	6/15/01	4	0.8	7	160	NA	<29	110	33	94	50	<29	<29
GB131 S4	6/15/01	8	2.2	(6)	58	NA	NA	NA	NA	NA	NA	NA	NA
B132 S1	8/13/01	2	0.6	--	388	6.7	52	110	<32	155	100	41	44
B133 S1	8/13/01	3	8	(4)	2,640	7.4	<29	39	32	161	97	<29	<29
B134 S1	8/13/01	3	14	(8)	609	67	60	<31	35	634	<31	186	<31
B135 S1	8/13/01	3	327	(1)	255	267	911	729	960	1,460	583	<304	<304
MW10 S1	8/13/01	3	0.6	--	<6.4	<6.4	<32	<32	<32	<96	<32	<32	<32
MW12 S1	8/13/01	3	15	--	649	169	<32	43	<32	<97	480	<52	<32
MW15 S3	8/14/01	8	0.6	--	<7.9	<7.9	<39	<39	<39	<120	<39	<39	<39

**Table C-1 (Continued)**  
**DRO, GRO, and PVOC Concentrations in Soil**

Sample	Date	Depth (feet)	PID	Lab Notes	DRO (mg/kg)	GRO (mg/kg)	Benzene	Ethylbenzene	Toluene	Xylenes	1,2,4-TMB	1,3,5-TMB	MTBE
MW16 S3	8/14/01	8	0.6	--	<6.8	<6.8	<34	<34	<34	<100	<34	<34	<34
MeOH Blank	6/12/01	--	--	--	NA	NA	<25	<25	<25	<75	<25	<25	<25
	6/14/01	--	--	--	NA	NA	<25	<25	<25	<75	<25	<25	<25
	6/15/01	--	--	--	NA	NA	<25	<25	<25	<75	<25	<25	<25
	8/13/01	--	--	--	NA	<5.0	<25	<25	<25	<75	<25	<25	<25
	8/14/01	--	--	--	NA	<5.0	<25	<25	<25	<75	<25	<25	<25
	8/14/01	--	--	--	NA	<5.0	<25	<25	<25	<75	<25	<25	<25
NR 720 Generic Soil Cleanup Standards					100	100	5.5	2,900	1,500	4,100	NE	NE	NE
NR 746 Table 1 - Indicators of residual petroleum product in soil pores					NE	NE	8,500	4,600	38,000	42,000	83,000	11,000	NE
NR 746 Table 2 - Protection of human health from direct contact with contaminated soil					NE	NE	1,100	NE	NE	NE	NE	NE	NE

**ABBREVIATIONS:**

AST = Aboveground Storage Tank  
TMB = Trimethylbenzene

PID = Photo-ionization Detector  
MTBE = Methyl-tert-butyl ether

DRO = Diesel Range Organics  
NA = Not Analyzed

GRO = Gasoline Range Organics  
NE = No Standard Established

**NOTE:**

Bold values exceed NR 720 generic soil cleanup standards.

**LABORATORY NOTES:**

- (1) DRO analysis - Late eluting hydrocarbons present.
- (2) PVOCs analysis - Late eluting hydrocarbons present.
- (3) DRO analysis - Improperly handled sample.
- (4) PVOCs and DRO analyses - Late eluting hydrocarbons present.
- (5) DRO and GRO analyses - Late eluting hydrocarbons present. DRO analysis - Received past hold time; this sample was extracted more than three days after sample collection. WDNR has extended the hold time for extraction to 10 days, but this has not yet been Codified.
- (6) DRO analysis - Received past hold time; this sample was extracted more than three days after sample collection. WDNR has extended the hold time for extraction to 10 days, but this has not yet been Codified.
- (7) PVOCs analysis - Late eluting hydrocarbons present. DRO analysis - Received past hold time; this sample was extracted more than three days after sample collection. WDNR has extended the hold time for extraction to 10 days, but this has not yet been Codified.
- (8) PVOCs analysis - Late eluting hydrocarbons present and does not match typical pattern.

By: LH Date: 7/12/01

Rev. By: LH Date: 8/31/01

Checked: JM Date: 7/16/01

I:\1624\Tables-General\Tables.wpd



**Via E-Mail: [jn@nijmanfranzetti.com](mailto:jn@nijmanfranzetti.com)**

**Privileged and  
Confidential**

Ms. Jennifer T. Nijman  
Nijman Franzetti LLP  
10 S. LaSalle Street, Suite 3600  
Chicago, IL 60603

**Prepared at the  
Request of Counsel**

**ENVIRONMENTAL ASSESSMENT REPORT HARTMEYER PROPERTY  
MADISON, WISCONSIN**

Dear Ms. Nijman:

Ramboll US Corporation (Ramboll), on behalf of the Kraft Heinz Food Company (Kraft Heinz or the "Client"), conducted an environmental assessment, as specified in the Ground Lease by and between John Hartmeyer Estate ("Landlord") and Oscar Mayer Foods Corp., dated June 1, 1994, as amended ("Lease") at the Hartmeyer property located at 2007 Roth Street in Madison, Wisconsin (herein referred to as the "property" or "site"). The site location is depicted on Figure 1. The following provides a summary of the site background, subsurface assessment activities, investigation results, conclusions, and recommendations.

July 29, 2019

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[www.ramboll.com](http://www.ramboll.com)

**BACKGROUND**

The Lease between Kraft Heinz and the Landlord requires that an environmental assessment be conducted to determine if any applicable State of Wisconsin soil clean-up standard is exceeded due to Kraft Heinz's use of the property. As such, in anticipation of the Lease termination on May 31, 2019, which was subsequently extended until November 30, 2019, Ramboll was asked to develop a scope of work as required in the Lease to "determine if any applicable State of Wisconsin soil clean-up standard is exceeded" due directly and solely to tenant's use of the property. The property is zoned M1/M2 (light manufacturing/heavy manufacturing). Thus, applicable soil clean-up standards are for industrial property. In preparing the sampling work plan, Ramboll conducted a review of available historical records and site investigation documents to identify potential areas of concern relating to tenant's use; the summary of which is provided below.

Ref. 1690012791

**Site History**

The site was marshland with railroad tracks present along the east and west property boundaries and a roadway traversing the property by 1892. By 1906, a farmstead with a farmhouse was present on the western portion of the property. There is no readily available information on the use of the site between the 1900s and early 1940s. Marshland is not apparent at the site on the aerial photograph from 1937 suggesting that the site was filled. By 1942, the northeastern portion of the property was in use as a slaughterhouse and feed warehouse. By 1962, the former slaughterhouse had been removed. According to the current Lease agreement, Oscar Mayer began leasing a portion of the site in 1954 and the remaining portion of the site in 1966.

Coal storage activities appear to have occurred in the location of the former slaughterhouse in the 1960s and may have continued in some form until approximately the 1980s or 1990s. By 1974, two fuel oil aboveground storage tanks (ASTs) were located on the southeast portion of the property; based on available information, the ASTs provided fuel oil for the adjacent Oscar Mayer facility. The western and central portions of the property were used as a park and baseball fields from the 1960s to the 1990s, and the northeastern portion of the property was used as a parking lot starting in the late 1960s. The fuel oil ASTs were removed in 2001 and 2016, respectively.

### Prior Site Investigation and Assessment Activities

Based on the information provided to Ramboll, several site assessment, investigation, and remedial activities have been conducted on site, as discussed below.

- **Bureau for Remediation and Redevelopment Tracking System (BRRTS) No. 03-13-000053 - Closed Leaking Underground Storage Tank (LUST):** In February 1989, Oscar Mayer notified the Wisconsin Department of Natural Resources (WDNR) of a release of approximately 14,000 gallons of fuel oil from underground piping that serviced the ASTs located on the leased Hartmeyer property. Initial spill response activities included the recovery of approximately 8,000 gallons of fuel oil from the ground surface and trenches. A report describing the removal efforts was submitted to the WDNR in 1989 by Dames and Moore. A subsequent investigation was conducted to evaluate the extent of soil and groundwater contamination associated with releases of fuel from the AST piping.

Additional soil sampling and monitoring well installation was performed in 2001, including the advancement of 35 soil borings and 7 monitoring wells. These additional investigations were focused on evaluation of shallow soil impacts and delineation of the extent of free product. The primary indicator of impacts was determined to be total petroleum hydrocarbons-diesel range organics (TPH-DRO), which ranged from non-detect to 13,100 milligrams per kilogram (mg/kg). Some polycyclic aromatic hydrocarbons (PAHs) were also detected in this area, but because they did not correlate well with the TPH-DRO impacts, BT<sup>2</sup>, Inc. (the consultant at the time) concluded that the PAH impacts were related to historical use of the property for coal storage and a railway. The 250,000-gallon fuel oil AST in this area was removed in 2001.

The most recent soil data (from June 2001) identified DRO, benzene, and ethylbenzene in soil above Wisconsin Administrative Code (WAC) NR 720 Generic Soil Cleanup Standards in place at the time. In addition, PAHs benzo(a)anthracene and benzo(a)pyrene were detected in soil above the interim generic industrial direct contact Residual Contaminant Level (RCLs), and PAHs 1-methylnaphthalene, 2-methylnaphthalene, naphthalene, phenanthrene, and pyrene exceeded the groundwater pathway RCL at the time.

Groundwater monitoring of 14 wells and removal of free product from MW-5 took place from 2000 to 2006. During that time, WAC NR 140 Enforcement Standards (ES) exceedances were only observed in MW-5. Based on the results of the groundwater monitoring and the closure of the production wells (on the adjacent Oscar Mayer property), Oscar Mayer requested closure in October 2006. In response to the closure request, the WDNR requested additional delineation. After performing additional monitoring and delineation, the WDNR approved final closure on January 23, 2008, with certain restrictions/conditions placed on the property, including listing in the WDNR GIS registry, proper management of any contaminated soil that is excavated or removed, and requirement for WDNR's approval prior to installing any wells at the property.



- **BRRTS No. 02-13-580328 - Open Environmental Repair Program (ERP) Site:** A Site Investigation was performed by General Engineering Company (GEC) at the site due to a release from the AST system discovered during the removal of the remaining (southern) AST and the associated pump house (formerly located beyond the northern portion of the berm area) in September 2016. Investigation activities to delineate the horizontal and vertical extent of affected soil and groundwater contamination were conducted in 2016 and 2017 and included the advancement of twenty test pits and six soil borings, four of which were converted to groundwater monitoring wells.

Eight test pits (TP-1 through TP-8) were installed at the site in September 2016. Soil samples were collected from each test pit and analyzed for petroleum-related volatile organic compounds (PVOCs) and naphthalene. Results indicated that benzene and naphthalene were present in several samples above the WAC NR 720 groundwater pathway RCLs. A remedial excavation was subsequently completed in October 2016 within the area of the former pump house and extended to the north and west. Approximately 464 tons of petroleum-contaminated soils were removed and sent for off-site disposal. Ten soil samples were collected from the sidewalls and bottom of the excavation and submitted for laboratory analysis of PVOCs and naphthalene. Results indicated concentrations of benzene, 1,2,4-trimethylbenzene and/or naphthalene exceeded the WAC NR 720 groundwater pathway RCLs in several samples.

Subsequently, in April and June 2017, six soil borings (B-1 to B-6) were advanced at the site, four of which were converted to monitoring wells (MW-1 to MW-4) and twelve additional test pits were installed (TP-1A to TP-12A). Soil and groundwater samples were collected from the borings, test pits, and wells, and a selection were submitted for laboratory analysis for PVOCs and naphthalene. Soil samples from three borings (B-3, B-4, and B-5) contained PVOCs and naphthalene at concentrations exceeding their respective WAC NR 720 groundwater pathway RCLs. The highest concentrations were detected in B-4 at a depth of 4 to 5 feet; namely benzene (1,260 micrograms per kilogram [ $\mu\text{g}/\text{kg}$ ]), ethylbenzene (4,100  $\mu\text{g}/\text{kg}$ ), naphthalene (17,600  $\mu\text{g}/\text{kg}$ ), 1,2,4 trimethylbenzene (7,200  $\mu\text{g}/\text{kg}$ ), and 1,3,5 trimethylbenzene (1,800  $\mu\text{g}/\text{kg}$ ), which exceeded their respective WAC NR 720 groundwater pathway RCLs. Test pit samples collected from TP-1A at a depth of 5 to 6 feet, TP-7A at a depth of 4 to 5 feet and TP-12A at a depth of 4 to 5 feet contained benzene and/or naphthalene above their groundwater pathway RCLs.

Groundwater was encountered in the monitoring wells at depths between 2.45 to 4.12 feet below ground surface (bgs), and groundwater flow in the vicinity of the former ASTs was determined to be toward the south/southeast.

Site investigation results were submitted to the WDNR in a report dated December 5, 2017. The report concludes that the extent of the impacts have been adequately defined based on the site investigation work performed to date, and the source has been removed. None of the confirmation samples collected from the upper 4 feet of soil contained PVOCs or naphthalene at concentrations exceeding the WAC NR 720 direct contact RCLs, and observed concentrations in groundwater did not exceed WAC NR 140 ESs.

Based on these results, Kraft Heinz is seeking regulatory closure for this former release. A closure request packet for this matter was submitted to the WDNR in May 2019, with proposed continuing obligations for the residual contamination.

In addition, two additional BRRTS cases are listed as associated with the property and appear to be related to Case No. 02-13-580328. Case No. 04-13-578986 is listed in BRRTS as a spill with closed status and was

opened in September 2016 and closed in March 2017. Case No. 02-13-579045 is listed in BRRTS as an ERP with open status related to a March 2017 notification of diesel fuel soil contamination.

### Known and Potential Environmental Issues Associated with Lease Requirements

Based on the review of historical records and prior site investigation reports, the following known and potential areas of concern potentially associated with Kraft Heinz's Lease of the site were identified:

- **Historical Coal Storage:** Historical coal storage appears to have occurred on the eastern portion of the property from approximately the early 1960s until to the 1980s or 1990s. In 2002, fill containing cinders, coal, and fly ash was identified in soil borings advanced in the former AST area. Certain PAHs were detected in soil near the former AST area at concentrations above the criteria applicable at that time and were attributed to possible coal storage and the adjacent railway. The constituents in the railway area may not be related to Kraft Heinz's use of the property. Given the long-term use of this property, it is possible that coal storage activities took place prior to Kraft Heinz's use of the property.
- **Areas of Known Soil Contamination as Part of Historical Closure Activities:** As discussed above, TPH-DRO and PVOCs above then applicable WAC NR 720 Generic Soil Cleanup Standards and PAHs above the then applicable interim generic industrial direct contact RCLs and groundwater pathway RCLs were left in place following approval and closure from the WDNR in 2008. In addition, naphthalene and PVOCs remain in soil (below 4 feet depth) above the WAC NR 720 groundwater pathway RCLs associated with the 2016 incident. Residual soil contamination located in the railroad right-of-way are not related to Kraft Heinz and not of concern for this Environmental Assessment. Ramboll performed an updated assessment of the soil conditions from the 2008 closure to determine whether the contamination above current regulatory criteria remains present in these areas. Given the recent characterization of soils associated with the 2016 incident, additional assessment of this area was not required.

### SUBSURFACE INVESTIGATION ACTIVITIES

Ramboll conducted a subsurface investigation in April 2019 to evaluate soil conditions in the 2008 historical closure area and the area of former coal storage activities.

The subsurface investigation activities consisted of advancing a total of eight soil borings (B-1 through B-8) and collecting soil samples for laboratory analysis. Soil borings B-1 through B-4 were advanced in the areas of known soil contamination that were granted regulatory closure by the WDNR in 2008 (i.e., the "2008 closure areas"). Soil borings B-5 through B-8 were advanced in the former coal storage area, as determined from historical sources. The soil boring locations are depicted on Figure 2.

### Soil Boring Advancement

Soil borings B-1 through B-8 were advanced on April 16, 2019, utilizing direct push technology (DPT) with a Geoprobe® drill rig with a 2-inch diameter drive rod to depths of approximately 5 feet bgs. Soil samples were continuously collected from each soil boring and divided for field screening, laboratory analysis, and in-field classification (noting soil types, moisture, and staining or odors, if any). The soil samples were field screened for organic vapors using a calibrated photoionization detector (PID) equipped with a 10.6 electron volt (eV) lamp. The PID was calibrated according to manufacturer's instructions, using 100 parts per million (ppm) isobutylene span gas and air (zero gas) and checked between each screening event for proper response. Up to two soil samples were collected from each soil boring for laboratory analysis. One soil sample was collected from each boring at the interval with the highest PID reading. If the highest PID

reading was measured at a depth at or just below the water table, a second (unsaturated) soil sample was collected from above the water table (within the direct contact zone of 0 to 4 feet bgs).

Soil descriptions and PID readings are presented on the soil boring logs, which are included as Attachment A. Following soil sample collection activities, each boring location was appropriately abandoned by backfilling with hydrated bentonite. Borehole abandonment forms are also included in Attachment A.

### **Soil Sampling and Analysis**

Up to two soil samples were collected from each soil boring for laboratory analysis. All soil samples collected during the investigation were submitted following standard chain of custody procedures to Pace Analytical Services, Inc. (Pace), a Wisconsin certified laboratory, in Green Bay, Wisconsin, for laboratory analysis. Soil samples collected from the 2008 closure areas (B-1 through B-4) were analyzed for PVOCs using United States Environmental Protection Agency (USEPA) Method 8260 and PAHs using USEPA Method 8270. Soil samples collected from the former coal storage area (B-5 through B-8) were analyzed for PVOCs, PAHs, and 8 Resource Conservation and Recovery Act (RCRA) metals via USEPA Methods 6010/7471.

## **INVESTIGATION RESULTS**

### **Geology and Hydrogeology**

The site investigation area was underlain by approximately 2 to 4.5 feet of brown/black sand and gravely sand fill with a black, fine grained flat stone resembling shale intermixed in this layer at B-6 and B-7. This fill layer was underlain by brown/black silt and clayey silt fill with varying amounts of sand, gravel and organics to the terminal depth of each soil boring (approximately 5 feet bgs).

Areas of black soils and mild petroleum odors were observed in the black silty fill layer at depths of approximately 3 to 5 feet bgs in soil borings B-1, B-2, and B-3 located in the 2008 closure area. PID readings collected from this layer in these soil borings ranged from 4.9 to 12.9 instrument units (IU) with the highest PID reading recorded at approximately 4 to 5 feet bgs in soil boring B-2. No visual/olfactory evidence of contamination was observed in the remainder of the soil borings and maximum PID readings at these locations (B-4 to B-8) ranged from 2.6 to 5.2 IU. Saturated soils were encountered in all eight soil borings at approximately 2 to 4 feet bgs, indicating a shallow groundwater table, consistent with historical site investigations. The soil boring logs are provided in Attachment A.

### **Soil Results**

Laboratory analytical results of soil samples collected in April 2019 are summarized in Table 1 and compared to the applicable WAC NR 720 RCLs. Sample locations are shown on Figure 2. The laboratory analytical report is provided in Attachment B.

#### PVOCs

PVOC were detected at concentrations exceeding groundwater pathway RCLs in three soil samples: B-2 (4-5'), B-3 (4-5'), and B-5 (4-5').

Specifically, benzene was detected above the groundwater pathway RCL of 5.1 µg/kg in B-3 (4-5') and B-5 (4-5') at concentrations of 71.8 J<sup>1</sup> µg/kg and 37.0 J µg/kg, respectively. Five PVOCs were detected in B-2 (4-5') above groundwater pathway RCLs; namely ethylbenzene at 7,400 µg/kg (above the RCL of 1,570 µg/kg), naphthalene at 3,440 µg/kg (above the RCL of 658.2 µg/kg), 1,2,4-trimethylbenzene at 30,500 µg/kg (above the RCL of 1,378.7 µg/kg), 1,3,5-trimethylbenzene at 7,900 µg/kg (above the RCL of 1,378.7 µg/kg), and xylene at 38,500 µg/kg (above the RCL of 3,960 µg/kg). No other soil samples contained concentrations of PVOCs above the applicable groundwater pathway RCLs. Additionally, none of the detected PVOC concentrations exceeded the applicable WAC NR 720 industrial direct contact RCL in samples collected within the direct contact zone (0 to 4 feet bgs). PVOCs were not detected above laboratory detection limits in soil samples collected from B-3 (1-2'), B-5 (1-2.5'), and B-8 (1-2.5').

#### PAHs

Benzo(a)pyrene (BaP), benzo(b)fluoranthene (BbF), chrysene, and/or naphthalene<sup>2</sup> were detected above the groundwater pathway RCLs in 9 of the 13 soil samples collected: B-1 (1-2'), B-1 (4-5'), B-2 (4-5'), B-3 (1-2'), B-3 (4-5'), B-4 (4-5'), B-5 (1-2.5'), B-5 (4-5'), and B-7 (1-2.5'). In addition, BaP was detected above its industrial direct contact RCL in B-5 (1-2.5'). Specifically:

- BaP was detected above its groundwater pathway RCL (470 µg/kg) in six soil samples and above the industrial direct contact RCL (2,110 µg/kg) in one soil sample, at a maximum detected concentration of 4,280 µg/kg in B-3 (4-5').
- BbF was detected above its groundwater pathway RCL (478.1 µg/kg) in six samples with the highest concentration of 5,100 µg/kg detected in B-1 (4-5').
- Chrysene was detected above its groundwater pathway RCL (144.2 µg/kg) in eight soil samples, with the highest concentration of 5,360 µg/kg detected in B-3 (4-5').
- Naphthalene was detected above its groundwater pathway RCL (658.2 µg/kg) in four samples, at a maximum detected value of 4,040 µg/kg in B-2 (4-5').

#### Metals

Samples collected from borings B-5 through B-8 were analyzed for RCRA metals. One or more RCRA metal was detected in concentrations above the applicable RCLs and/or Wisconsin background threshold values (BTVs) in four samples.

- Arsenic was detected above its BTV of 8.3 mg/kg in three samples, with a maximum detected concentration of 24.2 mg/kg observed in B-5 (1-2.5').
- Cadmium was detected above its BTV of 1.07 mg/kg in one sample, B-5 (1-2.5'), at a concentration of 2.3 mg/kg.
- Lead was detected above its BTV of 51.6 mg/kg in one sample, B-5 (4-5'), at a concentration of 81.5 mg/kg.

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<sup>1</sup> "J-flagged" result represents an estimated concentration that is above the Method Detection Limit (MDL) (the concentration at which laboratory equipment can detect the presence of the specific chemical), but below the laboratory Reporting Limit (RL) (the lowest concentration at which the laboratory can provide precise quantification).

<sup>2</sup> Naphthalene is considered both a VOC and a PAH and is reported under both laboratory methods.

- Mercury was detected at a concentration slightly above the groundwater pathway RCL of 0.21 mg/kg in one sample, B-5 (4-5') at a concentration of 0.29 mg/kg. There is no established BTV for mercury.
- Selenium was detected above the groundwater pathway RCL of 0.52 mg/kg in one sample, B-8 (1-2.5') at an estimated concentration of 2.8 J mg/kg. There is no established BTV for selenium.

## CONCLUSIONS AND RECOMMENDATIONS

Ramboll conducted a subsurface investigation to evaluate soil conditions in the 2008 historical closure areas and the area of former coal storage activities to "determine if any applicable State of Wisconsin soil clean up standard is exceeded," as required by the Lease terms. The soil sampling performed as part of this investigation revealed detections of PVOCs and PAHs at concentrations above the groundwater pathway RCLs, detections of metals above BTVs and/or groundwater pathway RCLs, and one detection of BaP above the industrial direct contact RCL.


According to available documentation, historical contamination in the 2008 closure areas was the result of a fuel oil release associated with the former ASTs located on the Hartmeyer property. Prior investigations evaluated TPH-DRO as the primary indicator of impacts to shallow soil, with additional documentation of benzene, ethylbenzene and PAHs in soil in the 2008 closure areas. Ramboll compared the results from the recent investigation to historical soil data from the 2008 closure. TPH-DRO is no longer a regulated soil constituent in Wisconsin, and as such was not evaluated during the recent investigation. The compounds detected during the recent investigations are generally consistent with those expected to be detected due to a historical fuel oil release and those compounds present at the time of the 2008 closure activities.

Boring locations B-1 through B-5 and B-8 are in the vicinity of historical boring/sample locations. The constituents detected during the April 2019 soil investigation appear to be generally consistent with soil data associated with the 2008 case closure and the open AST case. Borings B-6 and B-7 are located a few hundred feet away from the nearest historical boring locations. These data also appear generally consistent with historical data and may be attributed to the historical fill at the site. Kraft Heinz has submitted the results of this environmental assessment to the WDNR and indicated that Kraft Heinz would like to incorporate this data into one of the two existing BRRTS cases. To date, a response from the WDNR has not been received.

Additional sampling is recommended to further delineate the extent of the BaP detection in B-5 (1-2.5') above the industrial direct contact RCL, and to further delineate the extent of the arsenic detections in B-5 (1-2.5') and B-6 (1-2') above BTVs.


Thank you for opportunity to be of service. If you have any questions or need further information, please contact us.

Sincerely,



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## TABLES

**Table 1: Soil Analytical Results  
Hartmeyer Property  
2007 Roth Street, Madison, Wisconsin  
Project 1690012791**

Parameters	Soil RCLs		BTV	B-1 (1-2')	B-1 (4-5')	B-2 (1-2')	B-2 (4-5')	B-3 (1-2')	B-3 (4-5')	B-4 (1-2')	B-4 (4-5')
	Industrial Direct Contact	Groundwater Pathway		4/16/2019	4/16/2019	4/16/2019	4/16/2019	4/16/2019	4/16/2019	4/16/2019	4/16/2019
<b>VOCs (µg/kg)</b>											
Benzene	7,070	5.1	--	<25.0	<28.4	<25.5	<62.5	<25.0	<b>71.8 J C</b>	<25.0	<25.0
Ethylbenzene	35,400	1,570	--	<25.0	<28.4	<25.5	<b>7,400 C</b>	<25.0	129	<25.0	<25.0
Naphthalene	24,100	658.2	--	<40.0	<45.5	<b>81.5 J</b>	<b>3,440 C</b>	<40.0	416	<40.0	<40.0
Toluene	818,000	1,107.2	--	<25.0	51.4 J	<25.5	<62.5	<25.0	49.2 J	<25.0	72.3 J
1,2,4-Trimethylbenzene <sup>1</sup>	219,000	1,378.7	--	<b>44.6 J</b>	<28.4	60.7 J	<b>30,500 C</b>	<25.0	59.3 J	35.7 J	<25.0
1,3,5-Trimethylbenzene <sup>1</sup>	182,000	1,378.7	--	<25.0	<28.4	<25.5	<b>7,900 C</b>	<25.0	<25.0	<25.0	<25.0
o-Xylene	434,000	--	--	<25.0	<28.4	<25.5	7,850	<25.0	<25.0	<b>34.9 J</b>	<25.0
m-&p-Xylene <sup>2</sup>	388,000	--	--	<50.0	<56.8	<51.0	30,600	<50.0	<50.0	<50.0	<50.0
Xylenes, total	260,000	3,960	--	<75.0	<85.2	<76.5	<b>38,500 C</b>	<75.0	<75.0	<75.0	<75.0
<b>PAHs (µg/kg)</b>											
Acenaphthene	45,200,000	--	--	48.4	<131	<5.7	<34.0	177 J	4,950	23.2	40.9
Acenaphthylene	--	--	--	31.0	313 J	<4.8	<28.8	<76.7	2,420	10.1 J	8.9 J
Anthracene	100,000,000	196,949.2	--	119	650	8.8 J	67.7 J	478	6,820	43.9	90.3
Benzo(a)anthracene	20,800	--	--	139	3,110	13.0 J	59.6 J	1,330	5,610	52.3	242
Benzo(a)pyrene	2,110	470	--	106	<b>3,110 C</b>	11.9 J	87.1	<b>1,430 C</b>	<b>4,280 C</b>	37.8	244
Benzo(b)fluoranthene	21,100	478.1	--	81.1	<b>5,100 C</b>	11.2 J	81.0 J	<b>1,310 C</b>	<b>3,650 C</b>	23.6	333
Benzo(ghi)perylene	--	--	--	65.3	2,020	9.3 J	64.9	1,110	1,870	24.4	166
Benzo(k)fluoranthene	211,000	--	--	91.0	2,080	10.6 J	83.5	1,270	1,400	29.1	140
Chrysene	2,110,000	144.2	--	<b>160 C</b>	<b>4,480 C</b>	14.6 J	94.8 J	<b>1,470 C</b>	<b>5,360 C</b>	59.2	<b>260 C</b>
Dibenzo(a,h.)anthracene	2,110	--	--	23.2	430	<3.3	<19.6	348	487	7.9 J	45.2
Fluoranthene	30,100,000	88,877.8	--	272	9,030	23.4 J	100 J	3,340	11,300	69.7	644
Fluorene	30,100,000	14,829.9	--	52.5	<140	<6.0	<36.2	159 J	2,680	24.5	39.2
Indeno(1,2,3-cd)pyrene	21,100	--	--	46.5	1,580	7.0 J	<19.2	942	1,370	13.1	128
1-Methylnaphthalene	72,700	--	--	759	<136	50.3	462	<93.6	2,260	214	31.7
2-Methylnaphthalene	3,010,000	--	--	863	<169	74.0	1,120	<116	594	206	44.8
Naphthalene	24,100	658.2	--	410	<284	28.5 J	<b>4,040 C</b>	<196	<b>2,290 C</b>	90.2	82.1
Phenanthrene	--	--	--	755	2,650	50.4 J	175 J	2,060	21,400	291	395
Pyrene	22,600,000	54,545.5	--	243	6,160	21.3 J	84.7 J	2,570	15,200	72.1	438
<b>Metals (mg/kg)</b>											
Arsenic <sup>3</sup>	3.00	0.58	8.3	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Barium <sup>3</sup>	100,000	164.8	364	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Cadmium <sup>3</sup>	985	0.75	1.07	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Chromium	--	360,000	43.5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Lead <sup>3</sup>	800	27	51.6	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Mercury	3.13	0.21	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Selenium	5,840	0.52	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
Silver	5,840	0.85	--	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A

**Notes:**

VOCs = Volatile Organic Compounds  
 PAHs = Polynuclear Aromatic Hydrocarbons  
 RCL = Residual Contaminant Level  
 BTV = Background Threshold Value  
 µg/kg = micrograms per kilogram  
 mg/kg = milligrams per kilogram

<sup>1</sup> Groundwater Pathway RCL listed is for 1,2,4- and 1,3,5-Trimethylbenzenes combined.

<sup>2</sup> Direct Contact RCL listed is for the more stringent m-Xylene.

<sup>3</sup> Parameter BTV is larger than one or more of the RCLs or is the only standard available.

<sup>4</sup> Concentration above NR 720 RCL for Groundwater Pathway, but below BTV.

**Bolded value** indicates an NR 720 Residual Contaminant Level (RCL) exceedance.

**B** Parameter exceeds NR 720 RCL for Industrial Direct Contact.

**C** Parameter exceeds NR 720 RCL for Groundwater Pathway.

**D** Parameter exceeds Surficial BTV for metals.

**J** Estimated concentration at or above the LOD and below the LOQ.

-- No RCL or Surficial BTV established.

#N/A = Not analyzed

0-4' used for direct contact determination

Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated)

**Table 1: Soil Analytical Results  
Hartmeyer Property  
2007 Roth Street, Madison, Wisconsin  
Project 1690012791**

Parameters	Soil RCLs		BTV	B-5 (1-2.5')	B-5 (4-5')	B-6 (1-2')	B-7 (1-2.5')	B-8 (1-2.5')
	Industrial Direct Contact	Groundwater Pathway		4/16/2019	4/16/2019	4/16/2019	4/16/2019	4/16/2019
<b>VOCs (µg/kg)</b>								
Benzene	7,070	5.1	--	<25.0	<b>37.0 J C</b>	<33.8	<26.9	<25.0
Ethylbenzene	35,400	1,570	--	<25.0	49.2 J	<33.8	90.3	<25.0
Naphthalene	24,100	658.2	--	<40.0	283 J	112 J	260 J	<40.0
Toluene	818,000	1,107.2	--	<25.0	48.2 J	61.3 J	223	<25.0
1,2,4-Trimethylbenzene <sup>1</sup>	219,000	1,378.7	--	<25.0	45.5 J	200	205	<25.0
1,3,5-Trimethylbenzene <sup>1</sup>	182,000	1,378.7	--	<25.0	<25.0	83.5 J	60.1 J	<25.0
o-Xylene	434,000	--	--	<25.0	<25.0	136	242	<25.0
m-&p-Xylene <sup>2</sup>	388,000	--	--	<50.0	75.0 J	122 J	318	<50.0
Xylenes, total	260,000	3,960	--	<75.0	105 J	258 J	560	<75.0
<b>PAHs (µg/kg)</b>								
Acenaphthene	45,200,000	--	--	<99.2	145	35.8	100 J	7.7 J
Acenaphthylene	--	--	--	<84.2	486	4.9 J	327	5.4 J
Anthracene	100,000,000	196,949.2	--	579	330	29.6	383	22.4 J
Benzo(a)anthracene	20,800	--	--	2,300	502	32.2	924	33.6
Benzo(a)pyrene	2,110	470	--	<b>2,540 B,C</b>	<b>702 C</b>	23.4	<b>1,040 C</b>	24.1
Benzo(b)fluoranthene	21,100	478.1	--	<b>2,670 C</b>	<b>758 C</b>	18.3	<b>1,080 C</b>	25.7
Benzo(ghi)perylene	--	--	--	2,040	460	9.5 J	782	11.9
Benzo(k)fluoranthene	211,000	--	--	2,050	240	6.2 J	837	7.8 J
Chrysene	2,110,000	144.2	--	<b>2,500 C</b>	<b>552 C</b>	31.0	<b>1,120 C</b>	30.6
Dibenzo(a,h,)anthracene	2,110	--	--	698	126	<3.3	258	3.3 J
Fluoranthene	30,100,000	88,877.8	--	4,970	712	49.2	1,960	39.4
Fluorene	30,100,000	14,829.9	--	<106	201	43.3	163	<5.3
Indeno(1,2,3-cd)pyrene	21,100	--	--	1,760	346	3.6 J	690	6.3 J
1-Methylnaphthalene	72,700	--	--	<103	217	47.2	918	100
2-Methylnaphthalene	3,010,000	--	--	<128	324	50.2	825	85.5
Naphthalene	24,100	658.2	--	<215	<b>757 C</b>	40.3 J	<b>2,960 C</b>	29.7 J
Phenanthrene	--	--	--	2,020	468	234	1,920	122
Pyrene	22,600,000	54,545.5	--	3,610	890	44.4	1,670	37.0
<b>Metals (mg/kg)</b>								
Arsenic <sup>3</sup>	3.00	0.58	8.3	<b>24.2 B,C,D</b>	4.9 <sup>4</sup> J C	<b>10.5 B,C,D</b>	<1.2	<b>8.8 B,C,D</b>
Barium <sup>3</sup>	100,000	164.8	364	26.9	107	50.9	40.9	18.1
Cadmium <sup>3</sup>	985	0.75	1.07	<b>2.3 C,D</b>	0.45 J	0.19 J	<0.15	<0.16
Chromium	--	360,000	43.5	13.6	17.4	9.3	16.3	7.9
Lead <sup>3</sup>	800	27	51.6	24.4	<b>81.5 C,D</b>	11.3	8.2	3.6
Mercury	3.13	0.21	--	0.014 J	<b>0.29 C</b>	0.023 J	0.015 J	<0.012
Selenium	5,840	0.52	--	<1.6	<1.8	<1.8	<1.5	<b>2.8 J C</b>
Silver	5,840	0.85	--	0.78 J	0.54 J	0.55 J	0.54 J	<0.42

**Notes:**

- VOCs = Volatile Organic Compounds
- PAHs = Polynuclear Aromatic Hydrocarbons
- RCL = Residual Contaminant Level
- BTV = Background Threshold Value
- µg/kg = micrograms per kilogram
- mg/kg = milligrams per kilogram
- <sup>1</sup> Groundwater Pathway RCL listed is for 1,2,4- and 1,3,5-Trimethylbenzenes combined.
- <sup>2</sup> Direct Contact RCL listed is for the more stringent m-Xylene.
- <sup>3</sup> Parameter BTV is larger than one or more of the RCLs or is the only standard available.
- <sup>4</sup> Concentration above NR 720 RCL for Groundwater Pathway, but below BTV.
- Bolded value** indicates an NR 720 Residual Contaminant Level (RCL) exceedance.
- B** Parameter exceeds NR 720 RCL for Industrial Direct Contact.
- C** Parameter exceeds NR 720 RCL for Groundwater Pathway.
- D** Parameter exceeds Surficial BTV for metals.
- J** Estimated concentration at or above the LOD and below the LOQ.
- No RCL or Surficial BTV established.
- #N/A = Not analyzed
- 0-4' used for direct contact determination
- Soil RCLs and surficial BTVs established by the WDNR RR program using the EPA's RSL web-calculator with WAC NR 720 default parameters (WDNR PUB-RR-890, June 2014 - updated)

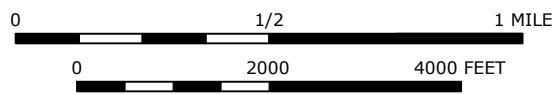


## FIGURES




**SITE**

CONTOUR INTERVAL 10 FEET



**LEGEND:**

 PROPERTY BOUNDARY (APPROXIMATE)

**SOURCE:**

2016 USGS 7.5 Minute Series Madison East, Madison West, De Forest, and Waunakee, Wisconsin Topographic Quadrangles.  
 Site Location; N: 43.109700° W: 89.361000° WGS84



QUADRANGLE LOCATION



**SITE LOCATION MAP**  
 HARTMEYER PROPERTY  
 2007 ROTH STREET  
 MADISON, WISCONSIN

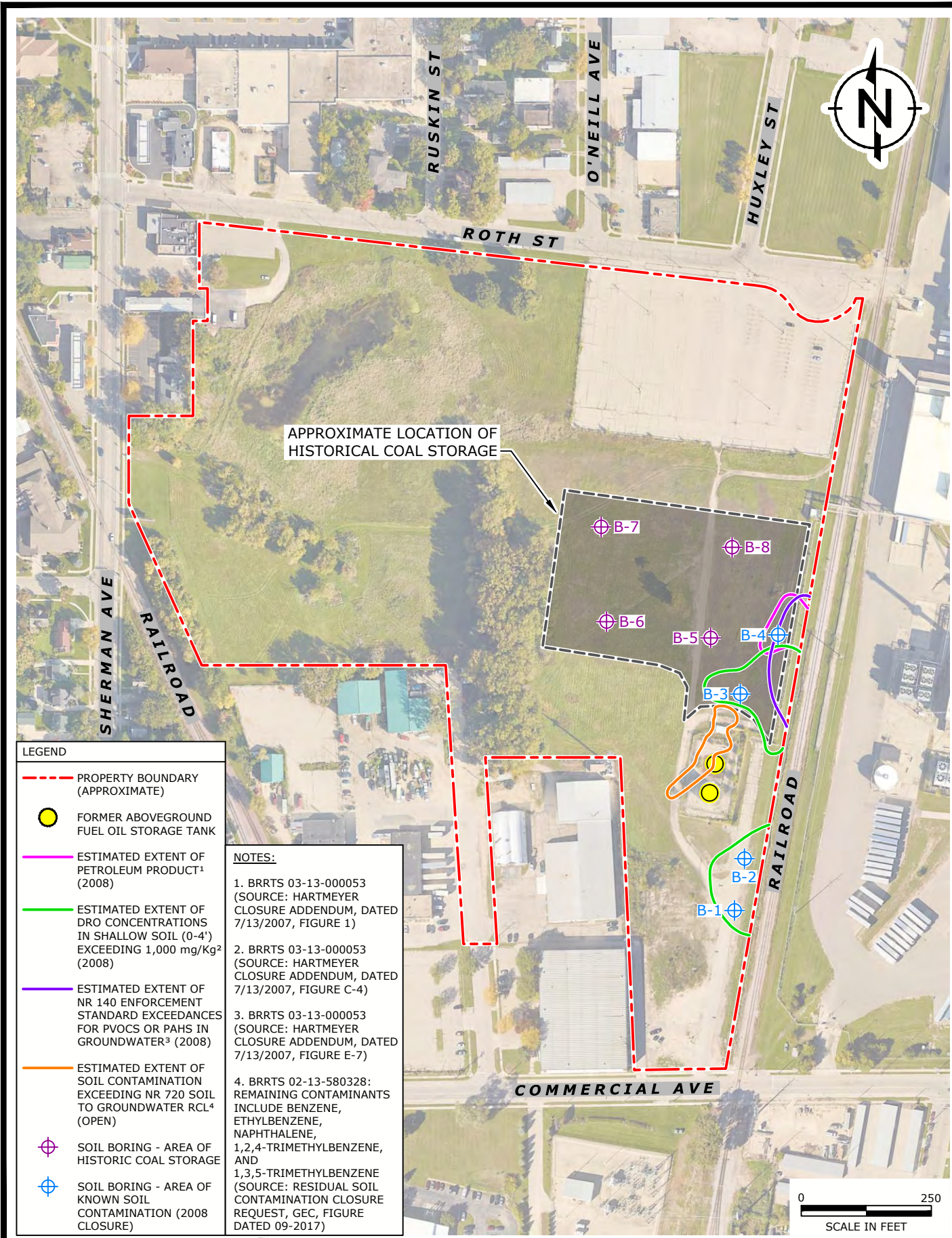
**FIGURE**  
**1**

DRAFTED BY: HJW

DATE: 4/29/19

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L:\Loop Project Files\CAD\1690012791\_Hartmeyer Soil Investigation\PH11\01\_Site Location Map (Madison WI).dwg




**LEGEND**

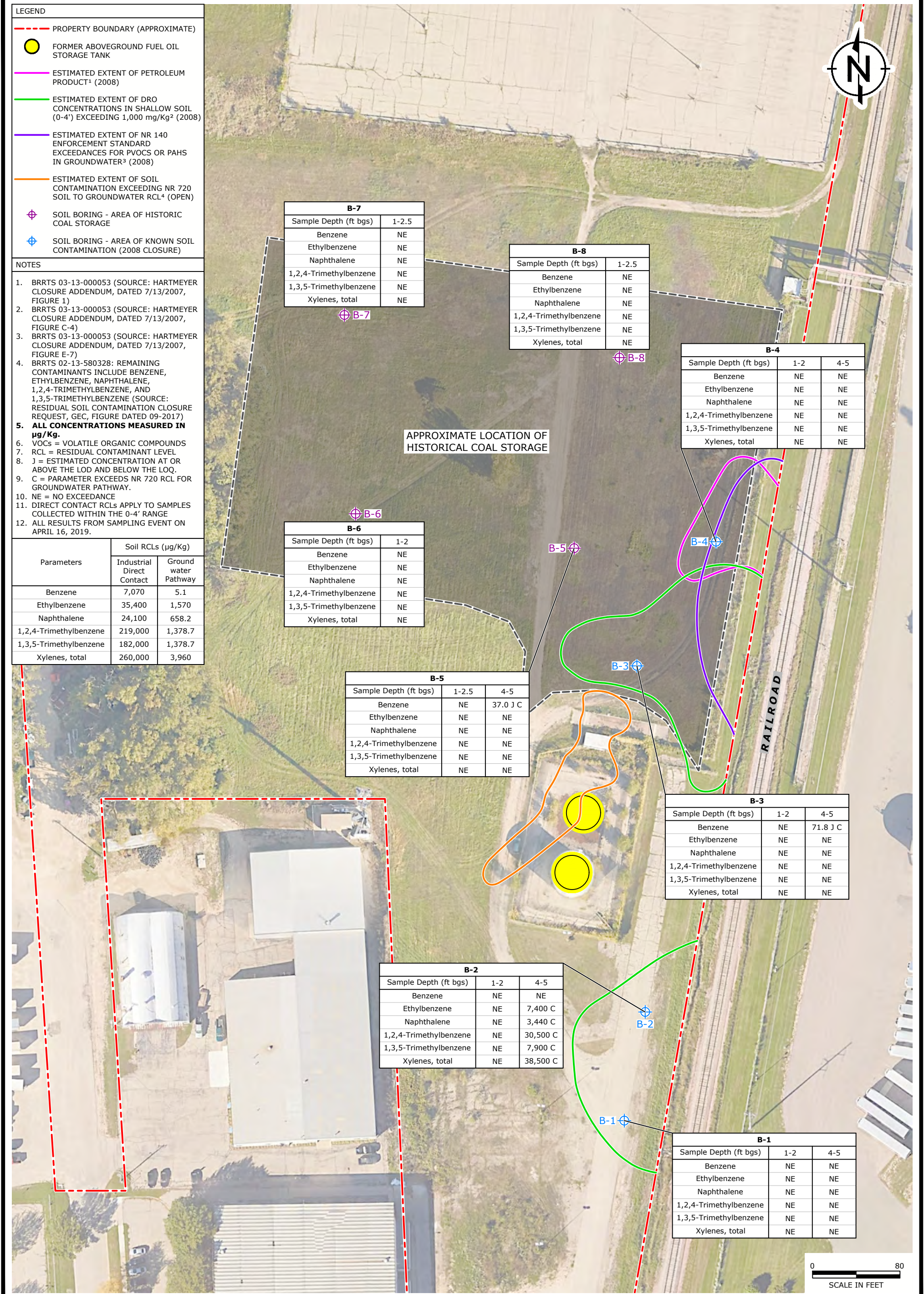
- - - PROPERTY BOUNDARY (APPROXIMATE)
- FORMER ABOVEGROUND FUEL OIL STORAGE TANK
- ESTIMATED EXTENT OF PETROLEUM PRODUCT<sup>1</sup> (2008)
- ESTIMATED EXTENT OF DRO CONCENTRATIONS IN SHALLOW SOIL (0-4') EXCEEDING 1,000 mg/Kg<sup>2</sup> (2008)
- ESTIMATED EXTENT OF NR 140 ENFORCEMENT STANDARD EXCEEDANCES FOR PVOCS OR PAHS IN GROUNDWATER<sup>3</sup> (2008)
- ESTIMATED EXTENT OF SOIL CONTAMINATION EXCEEDING NR 720 SOIL TO GROUNDWATER RCL<sup>4</sup> (OPEN)
- ⊕ SOIL BORING - AREA OF HISTORIC COAL STORAGE
- ⊕ SOIL BORING - AREA OF KNOWN SOIL CONTAMINATION (2008 CLOSURE)

**NOTES:**

1. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE 1)
2. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE C-4)
3. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE E-7)
4. BRRTS 02-13-580328: REMAINING CONTAMINANTS INCLUDE BENZENE, ETHYLBENZENE, NAPHTHALENE, 1,2,4-TRIMETHYLBENZENE, AND 1,3,5-TRIMETHYLBENZENE (SOURCE: RESIDUAL SOIL CONTAMINATION CLOSURE REQUEST, GEC, FIGURE DATED 09-2017)

SOURCE: AERIAL IMAGERY: GOOGLE EARTH™, IMAGE DATED 09/21/2014.

	<p><b>SITE LAYOUT AND SAMPLING LOCATIONS</b>                  HARTMEYER PROPERTY                  2077 ROTH STREET                  MADISON, WISCONSIN</p>	<p><b>FIGURE 2</b></p>
DRAFTED BY: HJW	DATE: 4/23/19	1690012791



**LEGEND**

- - - PROPERTY BOUNDARY (APPROXIMATE)
- FORMER ABOVEGROUND FUEL OIL STORAGE TANK
- ESTIMATED EXTENT OF PETROLEUM PRODUCT<sup>1</sup> (2008)
- ESTIMATED EXTENT OF DRO CONCENTRATIONS IN SHALLOW SOIL (0-4') EXCEEDING 1,000 mg/Kg<sup>2</sup> (2008)
- ESTIMATED EXTENT OF NR 140 ENFORCEMENT STANDARD EXCEEDANCES FOR PVOCS OR PAHS IN GROUNDWATER<sup>3</sup> (2008)
- ESTIMATED EXTENT OF SOIL CONTAMINATION EXCEEDING NR 720 SOIL TO GROUNDWATER RCL<sup>4</sup> (OPEN)
- ⊕ SOIL BORING - AREA OF HISTORIC COAL STORAGE
- ⊕ SOIL BORING - AREA OF KNOWN SOIL CONTAMINATION (2008 CLOSURE)

- NOTES**
1. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE 1)
  2. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE C-4)
  3. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE E-7)
  4. BRRTS 02-13-580328: REMAINING CONTAMINANTS INCLUDE BENZENE, ETHYLBENZENE, NAPHTHALENE, 1,2,4-TRIMETHYLBENZENE, AND 1,3,5-TRIMETHYLBENZENE (SOURCE: RESIDUAL SOIL CONTAMINATION CLOSURE REQUEST, GEC, FIGURE DATED 09-2017)
  5. **ALL CONCENTRATIONS MEASURED IN µg/Kg.**
  6. VOCs = VOLATILE ORGANIC COMPOUNDS
  7. RCL = RESIDUAL CONTAMINANT LEVEL
  8. J = ESTIMATED CONCENTRATION AT OR ABOVE THE LOD AND BELOW THE LOQ.
  9. C = PARAMETER EXCEEDS NR 720 RCL FOR GROUNDWATER PATHWAY.
  10. NE = NO EXCEEDANCE
  11. DIRECT CONTACT RCLs APPLY TO SAMPLES COLLECTED WITHIN THE 0-4' RANGE
  12. ALL RESULTS FROM SAMPLING EVENT ON APRIL 16, 2019.

Parameters	Soil RCLs (µg/Kg)	
	Industrial Direct Contact	Ground water Pathway
Benzene	7,070	5.1
Ethylbenzene	35,400	1,570
Naphthalene	24,100	658.2
1,2,4-Trimethylbenzene	219,000	1,378.7
1,3,5-Trimethylbenzene	182,000	1,378.7
Xylenes, total	260,000	3,960

**B-7**

Sample Depth (ft bgs)	1-2.5
Benzene	NE
Ethylbenzene	NE
Naphthalene	NE
1,2,4-Trimethylbenzene	NE
1,3,5-Trimethylbenzene	NE
Xylenes, total	NE

**B-8**

Sample Depth (ft bgs)	1-2.5
Benzene	NE
Ethylbenzene	NE
Naphthalene	NE
1,2,4-Trimethylbenzene	NE
1,3,5-Trimethylbenzene	NE
Xylenes, total	NE

**B-4**

Sample Depth (ft bgs)	1-2	4-5
Benzene	NE	NE
Ethylbenzene	NE	NE
Naphthalene	NE	NE
1,2,4-Trimethylbenzene	NE	NE
1,3,5-Trimethylbenzene	NE	NE
Xylenes, total	NE	NE

**B-6**

Sample Depth (ft bgs)	1-2
Benzene	NE
Ethylbenzene	NE
Naphthalene	NE
1,2,4-Trimethylbenzene	NE
1,3,5-Trimethylbenzene	NE
Xylenes, total	NE

**B-5**

Sample Depth (ft bgs)	1-2.5	4-5
Benzene	NE	37.0 J C
Ethylbenzene	NE	NE
Naphthalene	NE	NE
1,2,4-Trimethylbenzene	NE	NE
1,3,5-Trimethylbenzene	NE	NE
Xylenes, total	NE	NE

**B-3**

Sample Depth (ft bgs)	1-2	4-5
Benzene	NE	71.8 J C
Ethylbenzene	NE	NE
Naphthalene	NE	NE
1,2,4-Trimethylbenzene	NE	NE
1,3,5-Trimethylbenzene	NE	NE
Xylenes, total	NE	NE

**B-2**

Sample Depth (ft bgs)	1-2	4-5
Benzene	NE	NE
Ethylbenzene	NE	7,400 C
Naphthalene	NE	3,440 C
1,2,4-Trimethylbenzene	NE	30,500 C
1,3,5-Trimethylbenzene	NE	7,900 C
Xylenes, total	NE	38,500 C

**B-1**

Sample Depth (ft bgs)	1-2	4-5
Benzene	NE	NE
Ethylbenzene	NE	NE
Naphthalene	NE	NE
1,2,4-Trimethylbenzene	NE	NE
1,3,5-Trimethylbenzene	NE	NE
Xylenes, total	NE	NE

SOURCE: AERIAL IMAGERY: GOOGLE EARTH™, IMAGE DATED 09/21/2014.

**RAMBOLL**

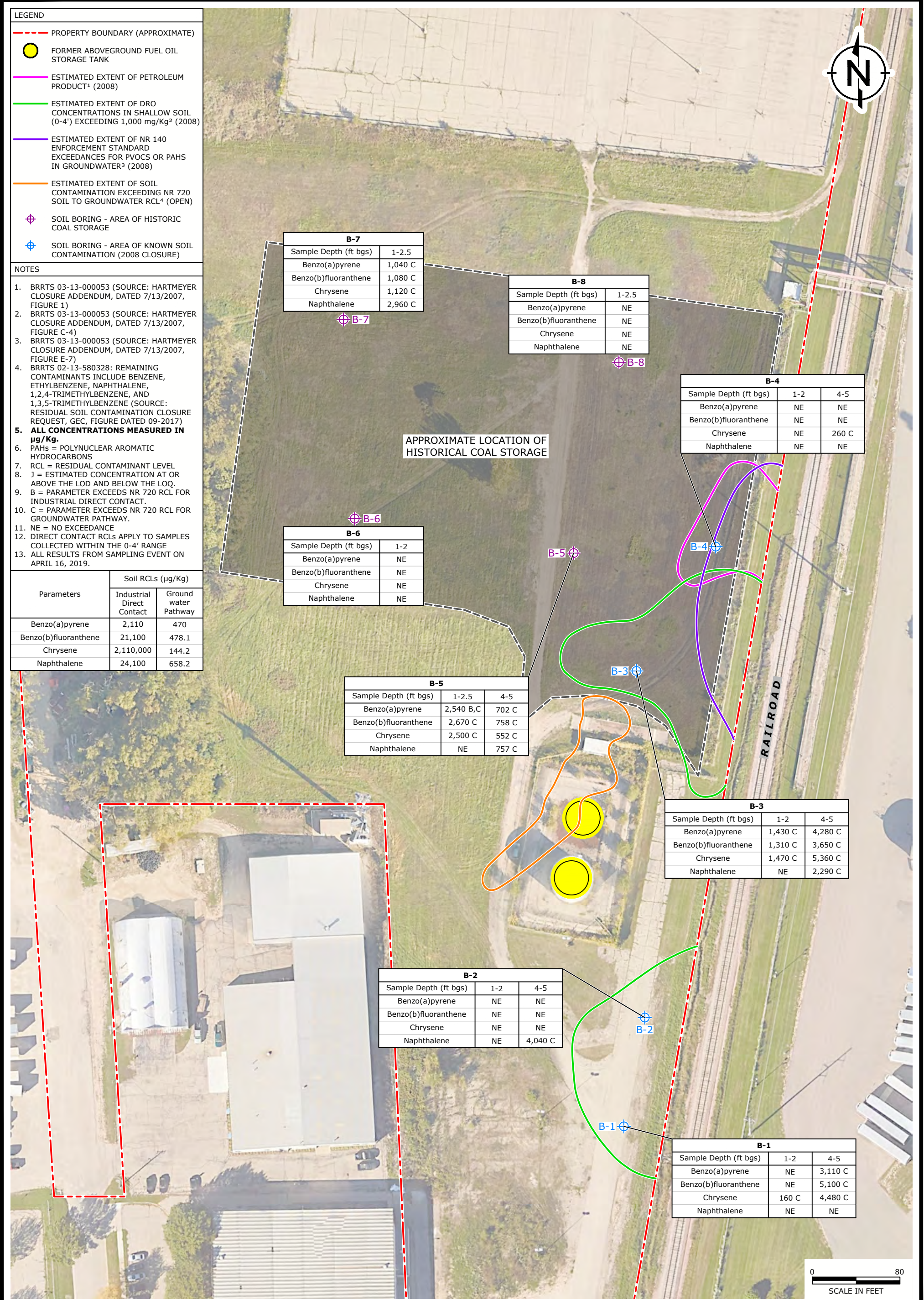
DRAFTED BY: HJW      DATE: 6/4/19

**INDUSTRIAL DIRECT CONTACT AND GROUNDWATER PATHWAY SOIL RCL EXCEEDANCES - VOCs (APRIL 2019)**

HARTMEYER PROPERTY  
2007 ROTH STREET  
MADISON, WISCONSIN

**FIGURE 3**

1690012791



**LEGEND**

- - - PROPERTY BOUNDARY (APPROXIMATE)
- FORMER ABOVEGROUND FUEL OIL STORAGE TANK
- ESTIMATED EXTENT OF PETROLEUM PRODUCT<sup>1</sup> (2008)
- ESTIMATED EXTENT OF DRO CONCENTRATIONS IN SHALLOW SOIL (0-4') EXCEEDING 1,000 mg/Kg<sup>2</sup> (2008)
- ESTIMATED EXTENT OF NR 140 ENFORCEMENT STANDARD EXCEEDANCES FOR PVOCS OR PAHS IN GROUNDWATER<sup>3</sup> (2008)
- ESTIMATED EXTENT OF SOIL CONTAMINATION EXCEEDING NR 720 SOIL TO GROUNDWATER RCL<sup>4</sup> (OPEN)
- ⊕ SOIL BORING - AREA OF HISTORIC COAL STORAGE
- ⊕ SOIL BORING - AREA OF KNOWN SOIL CONTAMINATION (2008 CLOSURE)

- NOTES**
1. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE 1)
  2. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE C-4)
  3. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE E-7)
  4. BRRTS 02-13-580328: REMAINING CONTAMINANTS INCLUDE BENZENE, ETHYLBENZENE, NAPHTHALENE, 1,2,4-TRIMETHYLBENZENE, AND 1,3,5-TRIMETHYLBENZENE (SOURCE: RESIDUAL SOIL CONTAMINATION CLOSURE REQUEST, GEC, FIGURE DATED 09-2017)
  5. **ALL CONCENTRATIONS MEASURED IN µg/Kg.**
  6. PAHs = POLYNUCLEAR AROMATIC HYDROCARBONS
  7. RCL = RESIDUAL CONTAMINANT LEVEL
  8. J = ESTIMATED CONCENTRATION AT OR ABOVE THE LOD AND BELOW THE LOQ.
  9. B = PARAMETER EXCEEDS NR 720 RCL FOR INDUSTRIAL DIRECT CONTACT.
  10. C = PARAMETER EXCEEDS NR 720 RCL FOR GROUNDWATER PATHWAY.
  11. NE = NO EXCEEDANCE
  12. DIRECT CONTACT RCLs APPLY TO SAMPLES COLLECTED WITHIN THE 0-4' RANGE
  13. ALL RESULTS FROM SAMPLING EVENT ON APRIL 16, 2019.

Parameters	Soil RCLs (µg/Kg)	
	Industrial Direct Contact	Ground water Pathway
Benzo(a)pyrene	2,110	470
Benzo(b)fluoranthene	21,100	478.1
Chrysene	2,110,000	144.2
Naphthalene	24,100	658.2

**B-7**

Sample Depth (ft bgs)	1-2.5
Benzo(a)pyrene	1,040 C
Benzo(b)fluoranthene	1,080 C
Chrysene	1,120 C
Naphthalene	2,960 C

**B-8**

Sample Depth (ft bgs)	1-2.5
Benzo(a)pyrene	NE
Benzo(b)fluoranthene	NE
Chrysene	NE
Naphthalene	NE

**B-4**

Sample Depth (ft bgs)	1-2	4-5
Benzo(a)pyrene	NE	NE
Benzo(b)fluoranthene	NE	NE
Chrysene	NE	260 C
Naphthalene	NE	NE

**B-6**

Sample Depth (ft bgs)	1-2
Benzo(a)pyrene	NE
Benzo(b)fluoranthene	NE
Chrysene	NE
Naphthalene	NE

**B-5**

Sample Depth (ft bgs)	1-2.5	4-5
Benzo(a)pyrene	2,540 B,C	702 C
Benzo(b)fluoranthene	2,670 C	758 C
Chrysene	2,500 C	552 C
Naphthalene	NE	757 C

**B-3**

Sample Depth (ft bgs)	1-2	4-5
Benzo(a)pyrene	1,430 C	4,280 C
Benzo(b)fluoranthene	1,310 C	3,650 C
Chrysene	1,470 C	5,360 C
Naphthalene	NE	2,290 C

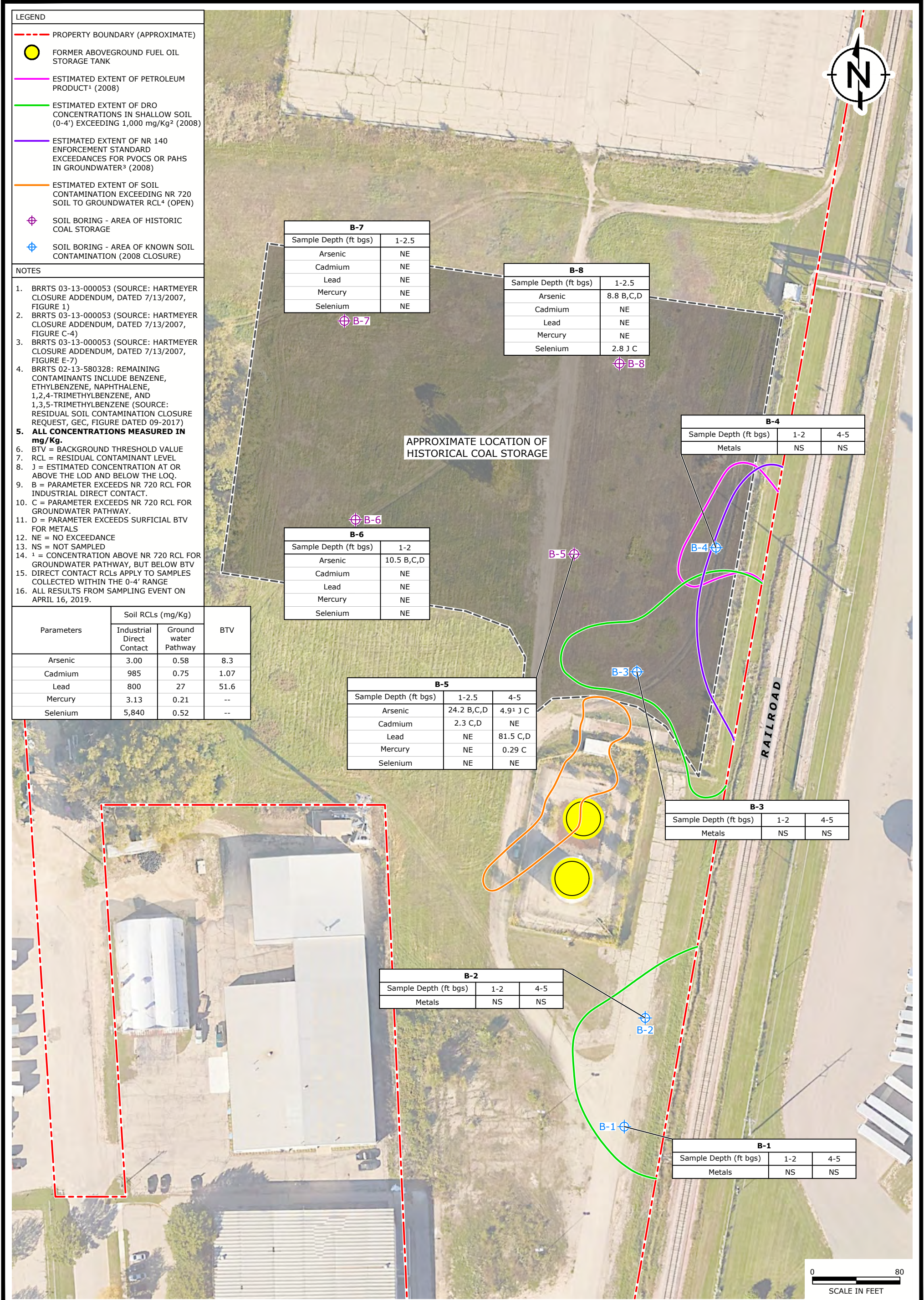
**B-2**

Sample Depth (ft bgs)	1-2	4-5
Benzo(a)pyrene	NE	NE
Benzo(b)fluoranthene	NE	NE
Chrysene	NE	NE
Naphthalene	NE	4,040 C

**B-1**

Sample Depth (ft bgs)	1-2	4-5
Benzo(a)pyrene	NE	3,110 C
Benzo(b)fluoranthene	NE	5,100 C
Chrysene	160 C	4,480 C
Naphthalene	NE	NE

SOURCE: AERIAL IMAGERY: GOOGLE EARTH™, IMAGE DATED 09/21/2014.



**LEGEND**

- - - PROPERTY BOUNDARY (APPROXIMATE)
- FORMER ABOVEGROUND FUEL OIL STORAGE TANK
- ESTIMATED EXTENT OF PETROLEUM PRODUCT<sup>1</sup> (2008)
- ESTIMATED EXTENT OF DRO CONCENTRATIONS IN SHALLOW SOIL (0-4') EXCEEDING 1,000 mg/Kg<sup>2</sup> (2008)
- ESTIMATED EXTENT OF NR 140 ENFORCEMENT STANDARD EXCEEDANCES FOR PVOCS OR PAHS IN GROUNDWATER<sup>3</sup> (2008)
- ESTIMATED EXTENT OF SOIL CONTAMINATION EXCEEDING NR 720 SOIL TO GROUNDWATER RCL<sup>4</sup> (OPEN)
- ⊕ SOIL BORING - AREA OF HISTORIC COAL STORAGE
- ⊕ SOIL BORING - AREA OF KNOWN SOIL CONTAMINATION (2008 CLOSURE)

- NOTES**
1. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE 1)
  2. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE C-4)
  3. BRRTS 03-13-000053 (SOURCE: HARTMEYER CLOSURE ADDENDUM, DATED 7/13/2007, FIGURE E-7)
  4. BRRTS 02-13-580328: REMAINING CONTAMINANTS INCLUDE BENZENE, ETHYLBENZENE, NAPHTHALENE, 1,2,4-TRIMETHYLBENZENE, AND 1,3,5-TRIMETHYLBENZENE (SOURCE: RESIDUAL SOIL CONTAMINATION CLOSURE REQUEST, GEC, FIGURE DATED 09-2017)
  5. **ALL CONCENTRATIONS MEASURED IN mg/Kg.**
  6. BTV = BACKGROUND THRESHOLD VALUE
  7. RCL = RESIDUAL CONTAMINANT LEVEL
  8. J = ESTIMATED CONCENTRATION AT OR ABOVE THE LOD AND BELOW THE LOQ.
  9. B = PARAMETER EXCEEDS NR 720 RCL FOR INDUSTRIAL DIRECT CONTACT.
  10. C = PARAMETER EXCEEDS NR 720 RCL FOR GROUNDWATER PATHWAY.
  11. D = PARAMETER EXCEEDS SURFICIAL BTV FOR METALS
  12. NE = NO EXCEEDANCE
  13. NS = NOT SAMPLED
  14. <sup>1</sup> = CONCENTRATION ABOVE NR 720 RCL FOR GROUNDWATER PATHWAY, BUT BELOW BTV
  15. DIRECT CONTACT RCLs APPLY TO SAMPLES COLLECTED WITHIN THE 0-4' RANGE
  16. ALL RESULTS FROM SAMPLING EVENT ON APRIL 16, 2019.

Parameters	Soil RCLs (mg/Kg)		BTV
	Industrial Direct Contact	Ground water Pathway	
Arsenic	3.00	0.58	8.3
Cadmium	985	0.75	1.07
Lead	800	27	51.6
Mercury	3.13	0.21	--
Selenium	5,840	0.52	--

**B-7**

Sample Depth (ft bgs)	1-2.5
Arsenic	NE
Cadmium	NE
Lead	NE
Mercury	NE
Selenium	NE

**B-8**

Sample Depth (ft bgs)	1-2.5
Arsenic	8.8 B,C,D
Cadmium	NE
Lead	NE
Mercury	NE
Selenium	2.8 J C

**B-4**

Sample Depth (ft bgs)	1-2	4-5
Metals	NS	NS

**B-6**

Sample Depth (ft bgs)	1-2
Arsenic	10.5 B,C,D
Cadmium	NE
Lead	NE
Mercury	NE
Selenium	NE

**B-5**

Sample Depth (ft bgs)	1-2.5	4-5
Arsenic	24.2 B,C,D	4.9 <sup>1</sup> J C
Cadmium	2.3 C,D	NE
Lead	NE	81.5 C,D
Mercury	NE	0.29 C
Selenium	NE	NE

**B-3**

Sample Depth (ft bgs)	1-2	4-5
Metals	NS	NS

**B-2**

Sample Depth (ft bgs)	1-2	4-5
Metals	NS	NS

**B-1**

Sample Depth (ft bgs)	1-2	4-5
Metals	NS	NS



SOURCE: AERIAL IMAGERY: GOOGLE EARTH™, IMAGE DATED 09/21/2014.

**RAMBOLL**

DRAFTED BY: HJW      DATE: 6/4/19

**INDUSTRIAL DIRECT CONTACT AND GROUNDWATER PATHWAY SOIL RCL EXCEEDANCES - METALS (APRIL 2019)**

HARTMEYER PROPERTY  
2007 ROTH STREET  
MADISON, WISCONSIN

**FIGURE 5**

1690012791

## ATTACHMENT A

### BORING LOGS

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

Facility/Project Name <b>Hartmeyer Soil Investigation</b>		License/Permit/Monitoring Number N/A		Boring Number <b>B-1</b>	
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Gage Kapugi On-Site Environmental</b>		Date Drilling Started <b>4/16/2019</b>		Date Drilling Completed <b>4/16/2019</b>	
WI Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level <b>Feet MSL</b>		Surface Elevation <b>Feet MSL</b>		Borehole Diameter <b>2.0 inches</b>	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>		State Plane <b>N, E S/C/N</b>		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
1/4 of Section , T N, R		Lat _____ " _____ "		Long _____ " _____ "	

Facility ID	County <b>Dane</b>	County Code <b>13</b>	Civil Town/City/ or Village <b>Madison</b>
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Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	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		
1 CS	60 54		0.0	<b>Concrete.</b>											
			0.5	<b>FILL:</b> Gravelly sand, moist.	FILL			0.3							
			1.0	<b>FILL:</b> Sand, some gravel, black, wet.											
			2.0		FILL			1.4					Soil sample collected at 1-2 ft bgs.		
			2.5												
			3.0												
			3.5	<b>FILL:</b> Silt, trace organics, black, wet, mild odor.											
			4.0												
			4.5		FILL			4.9							Soil sample collected at 4-5 ft bgs.
			5.0	End of boring at 5 ft. Abandoned with bentonite.											

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

Signature	Firm <b>Ramboll</b> 175 North Corporate Drive, Suite 160 Brookfield, WI 53045	Tel: 262-901-2722 Fax:
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Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Hartmeyer Soil Investigation</b>		License/Permit/Monitoring Number N/A		Boring Number <b>B-2</b>	
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Gage Kapugi On-Site Environmental</b>		Date Drilling Started <b>4/16/2019</b>		Date Drilling Completed <b>4/16/2019</b>	
WI Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level <b>Feet MSL</b>		Surface Elevation <b>Feet MSL</b>		Borehole Diameter <b>2.0 inches</b>	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>		State Plane <b>N, E S/C/N</b>		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
1/4 of Section , T N, R		Lat _____ ' _____ "		Long _____ ' _____ "	
Facility ID		County <b>Dane</b>		County Code <b>13</b>	
				Civil Town/City/ or Village <b>Madison</b>	

















Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
1 CS	60 54		0.0	<b>Concrete, asphalt, black rock.</b>											
			0.5	<b>FILL:</b> Gravelly sand, tan, moist.	FILL			0.1							
			2.0	<b>FILL:</b> Sand, some gravel, black, wet.				0.3					Soil sample collected at 1-2 ft. bgs. Water level 2 ft. at time of drilling		
			4.0	<b>FILL:</b> Silt, trace organics, black, wet, mild odor.	FILL			12.9					Soil sample collected at 4-5 ft. bgs.		
			5.0	End of boring at 5 ft. Abandoned with bentonite.											

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

Signature	Firm <b>Ramboll</b> 175 North Corporate Drive, Suite 160 Brookfield, WI 53045	Tel: 262-901-2722 Fax:
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Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Hartmeyer Soil Investigation</b>			License/Permit/Monitoring Number N/A		Boring Number <b>B-3</b>	
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Gage Kapugi On-Site Environmental</b>			Date Drilling Started <b>4/16/2019</b>		Date Drilling Completed <b>4/16/2019</b>	Drilling Method <b>Direct Push</b>
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level <b>Feet MSL</b>		Surface Elevation <b>Feet MSL</b>	Borehole Diameter <b>2.0 inches</b>
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/> State Plane <b>N, E S/C/N</b>			Lat _____ " _____ "		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
1/4 of	1/4 of Section	T N, R	Long _____ " _____ "			
Facility ID		County <b>Dane</b>	County Code <b>13</b>	Civil Town/City/ or Village <b>Madison</b>		

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
1 CS	60 48			<b>Topsoil with black flat rock.</b>											
			0.5	<b>FILL:</b> Gravelly sand, black, wet.	FILL			1.8							
			1.0	<b>FILL:</b> Gravelly sand, tan, wet.	FILL			1.6							Soil sample collected at 1-2 ft. bgs.
			2.0	<b>FILL:</b> Sand and gravel, brownish black, wet.	FILL			1.5							
			3.0	<b>FILL</b> Silt with trace organics, black, mild odor.	FILL			5.4							Water level 3 ft. at time of drilling.
			4.0		FILL										
			4.5	Sand seams at 4.5 and 5 ft. bgs.											Soil sample collected at 4-5 ft. bgs.
			5.0	End of boring at 5 ft. Abandoned with bentonite.											

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

Signature	Firm <b>Ramboll</b> 175 North Corporate Drive, Suite 160 Brookfield, WI 53045	Tel: 262-901-2722 Fax:
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Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Hartmeyer Soil Investigation</b>		License/Permit/Monitoring Number N/A		Boring Number <b>B-4</b>	
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Gage Kapugi On-Site Environmental</b>		Date Drilling Started <b>4/16/2019</b>		Date Drilling Completed <b>4/16/2019</b>	
WI Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level <b>Feet MSL</b>		Surface Elevation <b>Feet MSL</b>		Borehole Diameter <b>2.0 inches</b>	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>		State Plane <b>N, E S/C/N</b>		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
1/4 of Section , T N, R		Lat _____ ° _____ ' _____ "		Long _____ ° _____ ' _____ "	
Facility ID		County <b>Dane</b>		County Code <b>13</b>	
				Civil Town/City/ or Village <b>Madison</b>	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	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		
1 CS	60 48		0.5	<b>Topsoil, black flat rock.</b>											
				<b>FILL:</b> Sand with gravel, blackish brown.						5.1					
				Wet at 2 ft.	FILL					1.3				Soil sample collected at 1-2 ft. bgs. Water level 2 ft. at time of drilling.	
			4.0	<b>FILL:</b> Silt with some sand, trace gravel, black, wet.	FILL										
			5.0	End of boring at 5 ft. Abandoned with bentonite.											

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

Signature	Firm <b>Ramboll</b> 175 North Corporate Drive, Suite 160 Brookfield, WI 53045	Tel: 262-901-2722 Fax:
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Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Hartmeyer Soil Investigation</b>		License/Permit/Monitoring Number N/A		Boring Number <b>B-5</b>	
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Gage Kapugi On-Site Environmental</b>		Date Drilling Started <b>4/16/2019</b>		Date Drilling Completed <b>4/16/2019</b>	
WI Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level <b>Feet MSL</b>		Surface Elevation <b>Feet MSL</b>		Borehole Diameter <b>2.0 inches</b>	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/>		State Plane <b>N, E S/C/N</b>		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
1/4 of Section , T N, R		Lat _____ ° _____ ' _____ "		Long _____ ° _____ ' _____ "	
Facility ID		County <b>Dane</b>		County Code <b>13</b>	
				Civil Town/City/ or Village <b>Madison</b>	

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	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		
1 CS	60 48		0.0	<b>Topsoil.</b>											
			0.5	<b>FILL:</b> Gravelly sand with some silt, orangish brown, moist.	FILL			2.5							
			2.0	<b>FILL:</b> Silt with sand and gravel, tan, moist to wet.	FILL			2.1							Soil sample collected at 1-2.5 ft. bgs.
			3.5	<b>FILL:</b> Silt, trace organics and gravel, blackish brown, wet.	FILL			3.0							Water level 3.5 ft. at time of drilling.
			5.0	End of boring at 5 ft. Abandoned with bentonite.											Soil sample collected at 4-5 ft. bgs.

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

Signature	Firm <b>Ramboll</b> 175 North Corporate Drive, Suite 160 Brookfield, WI 53045	Tel: 262-901-2722 Fax:
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Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Hartmeyer Soil Investigation</b>		License/Permit/Monitoring Number N/A		Boring Number <b>B-6</b>	
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Gage Kapugi On-Site Environmental</b>		Date Drilling Started 4/16/2019		Date Drilling Completed 4/16/2019	
WI Unique Well No.		DNR Well ID No.		Common Well Name	
Final Static Water Level Feet MSL		Surface Elevation Feet MSL		Borehole Diameter inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/> State Plane 1/4 of 1/4 of Section , T N, R		Lat _____ ° _____ ' _____ " _____" Long _____ ° _____ ' _____ " _____"		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Dane		County Code 13	
Civil Town/City/ or Village Madison					

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	Soil/Rock Description And Geologic Origin For Each Major Unit	U S C S	Graphic Log	Well Diagram	PID/FID	Soil Properties					RQD/ Comments	
									Compressive Strength	Moisture Content	Liquid Limit	Plasticity Index	P 200		
1 CS	60 48		0.0	<b>Topsoil.</b>											
			0.5	<b>FILL:</b> Gravelly clay with some silt, brown, moist.	FILL			2.8							
			1.0	<b>FILL:</b> Sand with gravel and black flat stones, brownish black.											
			1.5												
			2.0	Wet at 2 ft.											
			2.5												
			3.0												
			3.5												
			4.0												
			4.5	<b>FILL:</b> Clayey silt with trace organics and gravel, wet.	FILL			2.6							
			5.0	End of boring at 5 ft. Abandoned with bentonite.											

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

Signature	Firm <b>Ramboll</b> 175 North Corporate Drive, Suite 160 Brookfield, WI 53045	Tel: 262-901-2722 Fax:
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Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Hartmeyer Soil Investigation</b>			License/Permit/Monitoring Number N/A		Boring Number <b>B-7</b>	
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Gage Kapugi On-Site Environmental</b>			Date Drilling Started 4/16/2019		Date Drilling Completed 4/16/2019	Drilling Method Direct Push
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL		Surface Elevation Feet MSL	Borehole Diameter inches
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/> State Plane 1/4 of 1/4 of Section , T N, R			Lat _____ ° _____ ' _____ " _____" Long _____ ° _____ ' _____ " _____"		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Dane	County Code 13	Civil Town/City/ or Village Madison		

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	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		
1 CS	60 36		0.0	<b>Topsoil.</b>											
			0.5	<b>FILL:</b> Clayey sand with some gravel, brown black, moist.	FILL			3.7							
			1.0	<b>FILL:</b> Sand and gravel with black flat rock, brown black, wet, some tan stone near 3 ft.	FILL			4.3							Soil sample collected at 1-2.5 ft. bgs.
			3.0	<b>FILL:</b> Clayey silt with trace gravel and organics, brown black, moist.	FILL			4.3							Water level 3 ft. at time of drilling.
			5.0	End of boring at 5 ft. Abandoned with bentonite.											

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

Signature	Firm <b>Ramboll</b> 175 North Corporate Drive, Suite 160 Brookfield, WI 53045	Tel: 262-901-2722 Fax:
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Route To: Watershed/Wastewater  Waste Management   
Remediation/Redevelopment  Other

Facility/Project Name <b>Hartmeyer Soil Investigation</b>			License/Permit/Monitoring Number N/A		Boring Number <b>B-8</b>	
Boring Drilled By: Name of crew chief (first, last) and Firm <b>Gage Kapugi On-Site Environmental</b>			Date Drilling Started 4/16/2019		Date Drilling Completed 4/16/2019	Drilling Method Direct Push
WI Unique Well No.	DNR Well ID No.	Common Well Name	Final Static Water Level Feet MSL		Surface Elevation Feet MSL	Borehole Diameter inches
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/> ) or Boring Location <input checked="" type="checkbox"/> State Plane 1/4 of 1/4 of Section , T N, R			Lat _____ ° _____ ' _____ " _____" Long _____ ° _____ ' _____ " _____"		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID		County Dane	County Code 13	Civil Town/City/ or Village Madison		

Sample Number and Type	Length Att. & Recovered (in)	Blow Counts	Depth In Feet	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		
1 CS	60 54		0.0	<b>Topsoil.</b>											
			0.5	<b>FILL:</b> Sand and gravel, blackish brown, moist.											
			1.0		FILL			3.9							Soil sample collected at 1-2.5 ft. bgs
			1.5												
			2.0												
			2.5	<b>FILL:</b> Clayey silt with trace organics and gravel, blackish brown, wet.											
			3.0	Red brick at 3 ft.				3.2							
			3.5												
			4.0	Sand and gravel seam at 4 ft.	FILL										
			4.5												
			5.0	End of boring at 5 ft. Abandoned with bentonite.				2.7							Water level 4 ft. at time of drilling.

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

Signature	Firm <b>Ramboll</b> 175 North Corporate Drive, Suite 160 Brookfield, WI 53045	Tel: 262-901-2722 Fax:
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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: \_\_\_\_\_

<b>1. Well Location Information</b>				<b>2. Facility/ Owner Information</b>			
County <b>Dane</b>		WI Unique Well # of Removed Well		Hicap #		Facility Name <b>Hartmeyer Property</b>	
Latitude / Longitude (Degrees and Minutes)		Method Code (see instructions)		Facility ID (FID or PWS)		License/Permit/Monitoring #	
_____ ' N _____ ' W				Original Well Owner			
1/4 1/4 1/4		Section		Township		Range E	
or Gov't Lot #				N		w	
Well Street Address <b>2007 Roth Street</b>				Present Well Owner			
Well City, Village or Town <b>Madison</b>				Mailing Address of Present Owner			
Subdivision Name				Well ZIP Code <b>53704</b>		City of Present Owner	
				Lot #		State	
Reason For Removal From Service <b>Borehole Only</b>				WI Unique Well # of Replacement Well		ZIP Code	
<b>3. Well / Drillhole / Borehole Information</b>				<b>4. Pump, Liner, Screen, Casing &amp; Sealing Material</b>			
Monitoring Well Water Well <u>Borehole / Drillhole</u>		Original Construction Date (mm/dd/yyyy) <b>4/16/2019</b>		Pump and piping removed?		Yes No <u>(N/A)</u>	
Construction Type: <u>Drilled</u> Driven (Sandpoint) Dug		If a Well Construction Report is available, please attach.		Liner(s) removed?		Yes No <u>(N/A)</u>	
Formation Type: <u>Unconsolidated Formation</u> Bedrock				Screen removed?		Yes No <u>(N/A)</u>	
Total Well Depth From Ground Surface (ft.) <b>NA</b>		Casing Diameter (in.) <b>NA</b>		Casing left in place?		Yes No <u>(N/A)</u>	
Lower Drillhole Diameter (in.) <b>NA</b>		Casing Depth (ft.) <b>NA</b>		Was casing cut off below surface?		Yes No <u>(N/A)</u>	
Was well annular space grouted? Yes No Unknown				Did sealing material rise to surface?		<u>(Yes)</u> No <u>(N/A)</u>	
If yes, to what depth (feet)? <b>NA</b>		Depth to Water (feet) <b>NA</b>		Did material settle after 24 hours?		Yes <u>(No)</u> <u>(N/A)</u>	
<b>5. Material Used To Fill Well / Drillhole</b>				If yes, was hole retopped? If bentonite chips were used, were they hydrated with water from a known safe source?			
Bentonite Chips				Yes No <u>(N/A)</u>		Yes No <u>(N/A)</u>	
From (ft.)		To (ft.)		No. Yards, Sacks Sealant or Volume (circle one)		Mix Ratio or Mud Weight	
Surface		5					
<b>6. Comments</b>							
Boring ID: <u>B-1</u>							

<b>7. Supervision of Work</b>				<b>DNR Use Only</b>			
Name of Person or Firm Doing Filling & Sealing <b>Ramboll/On-Site Environmental</b>		License #		Date of Filling & Sealing (mm/dd/yyyy) <b>4/16/2019</b>		Date Received	
Street or Route <b>175 N Corporate Drive, Suite 160</b>		Telephone Number <b>(262) 901-3506</b>		Comments		Noted By	
City <b>Brookfield</b>		State <b>WI</b>		ZIP Code <b>53045</b>		Signature of Person Doing Work <i>Gage Kapugi</i>	
						Date Signed <b>04/30/2019</b>	



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## Instructions

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### Well Filling and Sealing

Wisconsin Administrative Code (NR81 1, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

**General Instructions:** Fill out Well/Drillhole/Borehole Filling & Sealing Form 3300-005 as completely as possible for each well or borehole filled and sealed. Information should be provided for every box on the form where available. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

**Verification Only of Fill and Seal:** If you are only verifying that filling and sealing has previously occurred on a well and are NOT performing any filling and sealing work on the well, check the box near the top of the form. Complete Parts 1 and 2 of the form completely and any information you can provide in Parts 3, 4 and 5. You must provide comments in Part 6 as to the method used to verify both the filling and sealing of the well. Complete Part 7, excluding the date of Filling and Sealing. It will be implied that you did not do the filling and sealing work as stated in Part 7.

**Route to:** Check the appropriate routing box on the top of the form to assure proper routing to the DNR program requiring this well be filled and sealed. Mail the form and any attachments to the Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921.

If you do any work to fill or seal the well, you must complete this form as intended and do not check the Verification Only of Fill and Seal box.

#### (1) WELL LOCATION INFORMATION

**WI Unique Well #:** Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

**Hicap #:** If this was a high capacity well, enter the number assigned to the well by the Department.

**Well Location:** The well location can be determined by latitude and longitude coordinates in degrees and decimal minutes (to the thousandths, for example, latitude 43°04.347'N longitude 89°24.803'W) using a Global Positioning System (GPS) unit. If using GPS, check the method code for the GPS unit. The location can also be determined using Public Land Survey (Gov't Lot or 1/4 /1/4, 1/4, Section, Township and Range).

**Method Code:** This field lists data collection method codes for latitude and longitude coordinates. This field must be entered if a latitude/longitude coordinate is entered.

GPS006 - Mapping or recreational grade GPS receiver with no differential correction and selective availability off

GPS007 - Mapping or recreational grade GPS receiver with no differential correction and selective availability on

GPS008 - GPS receiver grade and or differential correction procedures unknown

#### (2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

**Facility ID:** Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

**License/Permit/Monitoring #:** Fill in number assigned to facility by the Department. If unknown, leave blank.

**Present Well Owner:** Fill in the name, address, city, state and ZIP code of the present owner.

#### (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

**Original Construction Date:** Fill in the original date of construction for the well or boring in mm/dd/yyyy format.

**Depth to Water:** Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

**Date of Filling & Sealing:** List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed.

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  
 Waste Management

Watershed/Wastewater

Remediation/Redevelopment

Other: \_\_\_\_\_

**1. Well Location Information**

County <b>Dane</b>	WI Unique Well # of Removed Well	Hicap #
Latitude / Longitude (Degrees and Minutes)		Method Code (see instructions)
° _____ ' N		
° _____ ' W		
1/4 1/4	Section	Township Range E
or Gov't Lot #		N w
Well Street Address <b>2007 Roth Street</b>		
Well City, Village or Town <b>Madison</b>		Well ZIP Code <b>53704</b>
Subdivision Name		Lot #

**2. Facility/ Owner Information**

Facility Name <b>Hartmeyer Property</b>
Facility ID (FID or PWS)
License/Permit/Monitoring #
Original Well Owner
Present Well Owner
Mailing Address of Present Owner
City of Present Owner
State
ZIP Code

Reason For Removal From Service

**Borehole Only**

WI Unique Well # of Replacement Well

**3. Well / Drillhole / Borehole Information**

Monitoring Well Water Well <u>Borehole / Drillhole</u>	Original Construction Date (mm/dd/yyyy) <b>4/16/2019</b>
If a Well Construction Report is available, please attach.	
Construction Type: <u>Drilled</u>	Driven (Sandpoint) Dug
Other (specify):	

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

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

Formation Type:

Unconsolidated Formation Bedrock

Required Method of Placing Sealing Material

Conductor Pipe-Gravity Conductor Pipe-Pumped  
 Screened & Poured Other (Explain):

Total Well Depth From Ground Surface (ft.) Casing Diameter (in.)

NA NA

(Bentonite Chips)

Lower Drillhole Diameter (in.) Casing Depth (ft.)

NA NA

Sealing Materials

Neat Cement Grout Clay-Sand Slurry (11 lb./gal. wt.)  
 Sand-Cement (Concrete) Grout Bentonite-Sand Slurry "  
 Concrete Bentonite Chips

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)? Depth to Water (feet)

NA NA

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
Bentonite Chips	Surface	5		

**6. Comments**

Boring ID: **B-2**

**7. Supervision of Work**

Name of Person or Firm Doing Filling & Sealing <b>Ramboll/On-Site Environmental</b>	License #	Date of Filling & Sealing (mm/dd/yyyy) <b>4/16/2019</b>	DNR Use Only	
Street or Route <b>175 N Corporate Drive, Suite 160</b>		Telephone Number <b>(262) 901-3506</b>	Date Received	Noted By
City <b>Brookfield</b>	State <b>WI</b>	ZIP Code <b>53045</b>	Comments	
Signature of Person Doing Work <i>Gage Kapugi</i>			Date Signed <b>04/30/2019</b>	

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## Instructions

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### Well Filling and Sealing

Wisconsin Administrative Code (NR81 1, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

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**Well Location:** The well location can be determined by latitude and longitude coordinates in degrees and decimal minutes (to the thousandths, for example, latitude 43°04.347'N longitude 89°24.803'W) using a Global Positioning System (GPS) unit. If using GPS, check the method code for the GPS unit. The location can also be determined using Public Land Survey (Gov't Lot or 1/4 /1/4, 1/4, Section, Township and Range).

**Method Code:** This field lists data collection method codes for latitude and longitude coordinates. This field must be entered if a latitude/longitude coordinate is entered.

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GPS008 - GPS receiver grade and or differential correction procedures unknown

#### (2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

**Facility ID:** Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

**License/Permit/Monitoring #:** Fill in number assigned to facility by the Department. If unknown, leave blank.

**Present Well Owner:** Fill in the name, address, city, state and ZIP code of the present owner.

#### (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

**Original Construction Date:** Fill in the original date of construction for the well or boring in mm/dd/yyyy format.

**Depth to Water:** Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

**Date of Filling & Sealing:** List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed.

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	<u>Remediation/Redevelopment</u>
Waste Management	Other: _____	

<b>1. Well Location Information</b>			<b>2. Facility/ Owner Information</b>		
County <b>Dane</b>	WI Unique Well # of Removed Well	Hicap #	Facility Name <b>Hartmeyer Property</b>		
Latitude / Longitude (Degrees and Minutes)		Method Code (see instructions)	Facility ID (FID or PWS)		
_____ ° _____ ' N			License/Permit/Monitoring #		
_____ ° _____ ' W			Original Well Owner		
1/4 1/4	1/4	Section	Township	Range	E
or Gov't Lot #			N		w
Well Street Address <b>2007 Roth Street</b>			Present Well Owner		
Well City, Village or Town <b>Madison</b>			Mailing Address of Present Owner		
Subdivision Name			Well ZIP Code <b>53704</b>	City of Present Owner	
			Lot #	State	ZIP Code

Reason For Removal From Service <b>Borehole Only</b>		WI Unique Well # of Replacement Well	<b>4. Pump, Liner, Screen, Casing &amp; Sealing Material</b>		
			Pump and piping removed?	Yes	No <u>(N/A)</u>
			Liner(s) removed?	Yes	No <u>(N/A)</u>
			Screen removed?	Yes	No <u>(N/A)</u>
			Casing left in place?	Yes	No <u>(N/A)</u>
			Was casing cut off below surface?	Yes	No <u>(N/A)</u>
			Did sealing material rise to surface?	<u>(Yes)</u>	No <u>(N/A)</u>
			Did material settle after 24 hours?	Yes	<u>(No)</u> <u>(N/A)</u>
			If yes, was hole retopped?	Yes	No <u>(N/A)</u>
			If bentonite chips were used, were they hydrated with water from a known safe source?	Yes	No <u>(N/A)</u>

<b>3. Well / Drillhole / Borehole Information</b>		Original Construction Date (mm/dd/yyyy) <b>4/16/2019</b>	
Monitoring <sup>Well</sup> Water Well <u>(Borehole / Drillhole)</u>	If a Well Construction Report is available, please attach		
Construction <sup>Type</sup> :			
<u>(Drilled)</u>	Driven (Sandpoint)	Dug	Other (specify):

Formation <sup>Type</sup> :		Required Method of Placing Sealing Material	
<u>(Unconsolidated Formation)</u>	Bedrock	<u>(Conductor Pipe-Gravity)</u>	Conductor Pipe-Pumped
Total Well Depth From Ground Surface (ft.) <b>NA</b>	Casing Diameter (in.) <b>NA</b>	Screened & Poured	Other (Explain):
Lower Drillhole Diameter (in.) <b>NA</b>	Casing Depth (ft.) <b>NA</b>	(Bentonite Chips)	
Was well annular space grouted?	Yes	No	Unknown
If yes, to what depth (feet)?	Depth to Water (feet)		
<b>NA</b>	<b>NA</b>		

5. Material Used To Fill Well / Drillhole		From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips		Surface	5		

**6. Comments**  
Boring ID: B-3

<b>7. Supervision of Work</b>			<b>DNR Use Only</b>	
Name of Person or Firm Doing Filling & Sealing <b>Ramboll/On-Site Environmental</b>	License #	Date of Filling & Sealing (mm/dd/yyyy) <b>4/16/2019</b>	Date Received	Noted By
Street or Route <b>175 N Corporate Drive, Suite 160</b>		Telephone Number <b>(262) 901-3506</b>	Comments	
City <b>Brookfield</b>	State <b>WI</b>	ZIP Code <b>53045</b>	Signature of Person Doing Work <i>Gage Kapugi</i>	Date Signed <b>04/30/2019</b>

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## Instructions

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### Well Filling and Sealing

Wisconsin Administrative Code (NR81 1, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

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2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

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#### (1) WELL LOCATION INFORMATION

**WI Unique Well #:** Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

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GPS008 - GPS receiver grade and or differential correction procedures unknown

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**Facility ID:** Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

**License/Permit/Monitoring #:** Fill in number assigned to facility by the Department. If unknown, leave blank.

**Present Well Owner:** Fill in the name, address, city, state and ZIP code of the present owner.

#### (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

**Original Construction Date:** Fill in the original date of construction for the well or boring in mm/dd/yyyy format.

**Depth to Water:** Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

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(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

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**Verification Only of Fill and Seal**

**Route to:**

Drinking Water	Watershed/Wastewater	<u>Remediation/Redevelopment</u>
Waste Management	Other: _____	

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

County <b>Dane</b>	WI Unique Well # of Removed Well	Hicap #	Facility Name <b>Hartmeyer Property</b>		
Latitude / Longitude (Degrees and Minutes)		Method Code (see instructions)		Facility ID (FID or PWS)	
_____ ° _____ ' N				License/Permit/Monitoring #	
_____ ° _____ ' W				Original Well Owner	
1/4 1/4	1/4	Section	Township	Range	E
or Gov't Lot #			N		w
Well Street Address <b>2007 Roth Street</b>					
Well City, Village or Town <b>Madison</b>			Well ZIP Code <b>53704</b>		
Subdivision Name			Lot #		City of Present Owner
					State
					ZIP Code

Reason For Removal From Service <b>Borehole Only</b>	WI Unique Well # of Replacement Well	<b>4. Pump, Liner, Screen, Casing &amp; Sealing Material</b>			
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<b>3. Well / Drillhole / Borehole Information</b>	Original Construction Date (mm/dd/yyyy) <b>4/16/2019</b>	Pump and piping removed?	Yes	No	<u>N/A</u>
Monitoring <sup>Well</sup> Water Well <u>Borehole / Drillhole</u>	If a Well Construction Report is available, please attach.	Liner(s) removed?	Yes	No	<u>N/A</u>
Construction <sup>Type</sup> <u>Drilled</u>	Driven (Sandpoint)	Screen removed?	Yes	No	<u>N/A</u>
Other (specify):	Dug	Casing left in place?	Yes	No	<u>N/A</u>
Formation Type: <u>Unconsolidated Formation</u>	Bedrock	Was casing cut off below surface?	Yes	No	<u>N/A</u>
Total Well Depth From Ground Surface (ft.) NA	Casing Diameter (in.) NA	Did sealing material rise to surface?	<u>Yes</u>	No	N/A
Lower Drillhole Diameter (in.) NA	Casing Depth (ft.) NA	Did material settle after 24 hours?	Yes	<u>No</u>	N/A
Was well annular space grouted? Yes No Unknown		If yes, was hole retopped?	Yes	No	<u>N/A</u>
If yes, to what depth (feet)? NA	Depth to Water (feet) NA	If bentonite chips were used, were they hydrated with water from a known safe source?	Yes	No	<u>N/A</u>

Required Method of Placing Sealing Material <u>Conductor Pipe-Gravity</u> Conductor Pipe-Pumped Screened & Poured Other (Explain):	(Bentonite Chips)
Sealing Materials Neat Cement Grout Clay-Sand Slurry (11 lb./gal. wt.) Sand-Cement (Concrete) Grout Bentonite-Sand Slurry " Concrete <u>Bentonite Chips</u>	
<i>For Monitoring Wells and Monitoring Well Boreholes Only:</i> Bentonite Chips Bentonite - Cement Grout Granular Bentonite Bentonite - Sand Slurry	

5. Material Used To Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	5		

**6. Comments**  
Boring ID: B-4

<b>7. Supervision of Work</b>				<b>DNR Use Only</b>	
Name of Person or Firm Doing Filling & Sealing <b>Ramboll/On-Site Environmental</b>	License #	Date of Filling & Sealing (mm/dd/yyyy) <b>4/16/2019</b>	Date Received	Noted By	
Street or Route <b>175 N Corporate Drive, Suite 160</b>	Telephone Number <b>(262) 901-3506</b>		Comments		
City <b>Brookfield</b>	State <b>WI</b>	ZIP Code <b>53045</b>	Signature of Person Doing Work <i>Gage Kapugi</i>		Date Signed <b>04/30/2019</b>

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## Instructions

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**Method Code:** This field lists data collection method codes for latitude and longitude coordinates. This field must be entered if a latitude/longitude coordinate is entered.

GPS006 - Mapping or recreational grade GPS receiver with no differential correction and selective availability off

GPS007 - Mapping or recreational grade GPS receiver with no differential correction and selective availability on

GPS008 - GPS receiver grade and or differential correction procedures unknown

#### (2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

**Facility ID:** Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

**License/Permit/Monitoring #:** Fill in number assigned to facility by the Department. If unknown, leave blank.

**Present Well Owner:** Fill in the name, address, city, state and ZIP code of the present owner.

#### (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

**Original Construction Date:** Fill in the original date of construction for the well or boring in mm/dd/yyyy format.

**Depth to Water:** Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

**Date of Filling & Sealing:** List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed.

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  
Waste Management

Watershed/Wastewater

Remediation/Redevelopment

Other: \_\_\_\_\_

**1. Well Location Information**

County <b>Dane</b>	WI Unique Well # of Removed Well	Hicap #
Latitude / Longitude (Degrees and Minutes)		Method Code (see instructions)
_____ ° _____ ' N		
_____ ° _____ ' W		
1/4/1/4	1/4	Section
or Gov't Lot #		Township
		Range
		E
		w
Well Street Address <b>2007 Roth Street</b>		
Well City, Village or Town <b>Madison</b>		Well ZIP Code <b>53704</b>
Subdivision Name		Lot #

**2. Facility/ Owner Information**

Facility Name <b>Hartmeyer Property</b>
Facility ID (FID or PWS)
License/Permit/Monitoring #
Original Well Owner
Present Well Owner
Mailing Address of Present Owner
City of Present Owner
State
ZIP Code

**3. Well / Drillhole / Borehole Information**

Reason For Removal From Service <b>Borehole Only</b>	WI Unique Well # of Replacement Well
Monitoring Well Water Well <u>Borehole / Drillhole</u>	Original Construction Date (mm/dd/yyyy) <b>4/16/2019</b>
Construction Type: <u>Drilled</u> Driven (Sandpoint) Dug Other (specify):	If a Well Construction Report is available, please attach

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

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

**Formation Type:**

<u>Unconsolidated Formation</u>	Bedrock
Total Well Depth From Ground Surface (ft.) <b>NA</b>	Casing Diameter (in.) <b>NA</b>
Lower Drillhole Diameter (in.) <b>NA</b>	Casing Depth (ft.) <b>NA</b>
Was well annular space grouted?	Yes No Unknown
If yes, to what depth (feet)? <b>NA</b>	Depth to Water (feet) <b>NA</b>

**Required Method of Placing Sealing Material**

<u>Conductor Pipe-Gravity</u>	Conductor Pipe-Pumped
Screened & Poured	Other (Explain):
(Bentonite Chips)	
<b>Sealing Materials</b>	
Neat Cement Grout	Clay-Sand Slurry (11 lb /gal. wt.)
Sand-Cement (Concrete) Grout	Bentonite-Sand Slurry "
Concrete	<u>Bentonite Chips</u>
<b>For Monitoring Wells and Monitoring Well Boreholes Only:</b>	
Bentonite Chips	Bentonite - Cement Grout
Granular Bentonite	Bentonite - Sand Slurry

**5. Material Used To Fill Well / Drillhole**

	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Bentonite Chips	Surface	5		

**6. Comments**

Boring ID: 3-5

**7. Supervision of Work**

Name of Person or Firm Doing Filling & Sealing <b>Ramboll/On-Site Environmental</b>			License #		Date of Filling & Sealing (mm/dd/yyyy) <b>4/16/2019</b>		DNR Use Only	
Street or Route <b>175 N Corporate Drive, Suite 160</b>			Telephone Number <b>(262) 901-3506</b>		Date Received		Noted By	
City <b>Brookfield</b>			State <b>WI</b>		ZIP Code <b>53045</b>		Signature of Person Doing Work <i>Gage Kapugi</i>	
							Date Signed <b>04/30/2019</b>	



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## Instructions

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### Well Filling and Sealing

Wisconsin Administrative Code (NR81 1, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

**General Instructions:** Fill out Well/Drillhole/Borehole Filling & Sealing Form 3300-005 as completely as possible for each well or borehole filled and sealed. Information should be provided for every box on the form where available. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

**Verification Only of Fill and Seal:** If you are only verifying that filling and sealing has previously occurred on a well and are NOT performing any filling and sealing work on the well, check the box near the top of the form. Complete Parts 1 and 2 of the form completely and any information you can provide in Parts 3, 4 and 5. You must provide comments in Part 6 as to the method used to verify both the filling and sealing of the well. Complete Part 7, excluding the date of Filling and Sealing. It will be implied that you did not do the filling and sealing work as stated in Part 7.

**Route to:** Check the appropriate routing box on the top of the form to assure proper routing to the DNR program requiring this well be filled and sealed. Mail the form and any attachments to the Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921.

If you do any work to fill or seal the well, you must complete this form as intended and do not check the Verification Only of Fill and Seal box.

#### (1) WELL LOCATION INFORMATION

**WI Unique Well #:** Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

**Hicap #:** If this was a high capacity well, enter the number assigned to the well by the Department.

**Well Location:** The well location can be determined by latitude and longitude coordinates in degrees and decimal minutes (to the thousandths, for example, latitude 43°04.347'N longitude 89°24.803'W) using a Global Positioning System (GPS) unit. If using GPS, check the method code for the GPS unit. The location can also be determined using Public Land Survey (Gov't Lot or 1/4 /1/4, 1/4, Section, Township and Range).

**Method Code:** This field lists data collection method codes for latitude and longitude coordinates. This field must be entered if a latitude/longitude coordinate is entered.

GPS006 - Mapping or recreational grade GPS receiver with no differential correction and selective availability off

GPS007 - Mapping or recreational grade GPS receiver with no differential correction and selective availability on

GPS008 - GPS receiver grade and or differential correction procedures unknown

#### (2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

**Facility ID:** Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

**License/Permit/Monitoring #:** Fill in number assigned to facility by the Department. If unknown, leave blank.

**Present Well Owner:** Fill in the name, address, city, state and ZIP code of the present owner.

#### (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

**Original Construction Date:** Fill in the original date of construction for the well or boring in mm/dd/yyyy format.

**Depth to Water:** Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

**Date of Filling & Sealing:** List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed.

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  
Waste Management

Watershed/Wastewater

Other: \_\_\_\_\_

Remediation/Redevelopment

**1. Well Location Information**

County <b>Dane</b>	WI Unique Well # of Removed Well	Hicap #
Latitude / Longitude (Degrees and Minutes)		Method Code (see instructions)
_____ ' N		
_____ ' W		
1/4 1/4	Section	Township
or Gov't Lot #		Range
		E
		w
Well Street Address <b>2007 Roth Street</b>		
Well City, Village or Town <b>Madison</b>		Well ZIP Code <b>53704</b>
Subdivision Name		Lot #

**2. Facility/ Owner Information**

Facility Name <b>Hartmeyer Property</b>
Facility ID (FID or PWS)
License/Permit/Monitoring #
Original Well Owner
Present Well Owner
Mailing Address of Present Owner
City of Present Owner
State
ZIP Code

Reason For Removal From Service

**Borehole Only**

WI Unique Well # of Replacement Well

**3. Well / Drillhole / Borehole Information**

Monitoring Well Water Well <u>Borehole / Drillhole</u>	Original Construction Date (mm/dd/yyyy) <b>4/16/2019</b>
If a Well Construction Report is available, please attach.	
Construction Type: <u>Drilled</u>	Driven (Sandpoint)
Other (specify):	
Dug	

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

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

Formation Type:

Unconsolidated Formation      Bedrock

Required Method of Placing Sealing Material

Conductor Pipe-Gravity      Conductor Pipe-Pumped  
Screened & Poured      Other (Explain):

Total Well Depth From Ground Surface (ft.)      Casing Diameter (in.)

NA      NA

(Bentonite Chips)

Lower Drillhole Diameter (in.)      Casing Depth (ft.)

NA      NA

Sealing Materials

Neat Cement Grout      Clay-Sand Slurry (11 lb./gal. wt.)  
Sand-Cement (Concrete) Grout      Bentonite-Sand Slurry " "

Was well annular space grouted?      Yes      No      Unknown

If yes, to what depth (feet)?      Depth to Water (feet)

NA      NA

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**

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	5		

**6. Comments**

Boring ID: B-6

**7. Supervision of Work**

Name of Person or Firm Doing Filling & Sealing <b>Ramboll/On-Site Environmental</b>	License #	Date of Filling & Sealing (mm/dd/yyyy) <b>4/16/2019</b>	<b>DNR Use Only</b>	
Street or Route <b>175 N Corporate Drive, Suite 160</b>	Telephone Number <b>(262) 901-3506</b>	Comments	Date Received	Noted By
City <b>Brookfield</b>	State <b>WI</b>	ZIP Code <b>53045</b>	Signature of Person Doing Work <i>Gage Kapugi</i>	Date Signed <b>04/30/2019</b>

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## Instructions

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### Well Filling and Sealing

Wisconsin Administrative Code (NR81 1, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

**General Instructions:** Fill out Well/Drillhole/Borehole Filling & Sealing Form 3300-005 as completely as possible for each well or borehole filled and sealed. Information should be provided for every box on the form where available. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

**Verification Only of Fill and Seal:** If you are only verifying that filling and sealing has previously occurred on a well and are NOT performing any filling and sealing work on the well, check the box near the top of the form. Complete Parts 1 and 2 of the form completely and any information you can provide in Parts 3, 4 and 5. You must provide comments in Part 6 as to the method used to verify both the filling and sealing of the well. Complete Part 7, excluding the date of Filling and Sealing. It will be implied that you did not do the filling and sealing work as stated in Part 7.

**Route to:** Check the appropriate routing box on the top of the form to assure proper routing to the DNR program requiring this well be filled and sealed. Mail the form and any attachments to the Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921.

If you do any work to fill or seal the well, you must complete this form as intended and do not check the Verification Only of Fill and Seal box.

#### (1) WELL LOCATION INFORMATION

**WI Unique Well #:** Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

**Hicap #:** If this was a high capacity well, enter the number assigned to the well by the Department.

**Well Location:** The well location can be determined by latitude and longitude coordinates in degrees and decimal minutes (to the thousandths, for example, latitude 43°04.347'N longitude 89°24.803'W) using a Global Positioning System (GPS) unit. If using GPS, check the method code for the GPS unit. The location can also be determined using Public Land Survey (Gov't Lot or 1/4 /1/4, 1/4, Section, Township and Range).

**Method Code:** This field lists data collection method codes for latitude and longitude coordinates. This field must be entered if a latitude/longitude coordinate is entered.

GPS006 - Mapping or recreational grade GPS receiver with no differential correction and selective availability off

GPS007 - Mapping or recreational grade GPS receiver with no differential correction and selective availability on

GPS008 - GPS receiver grade and or differential correction procedures unknown

#### (2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

**Facility ID:** Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

**License/Permit/Monitoring #:** Fill in number assigned to facility by the Department. If unknown, leave blank.

**Present Well Owner:** Fill in the name, address, city, state and ZIP code of the present owner.

#### (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

**Original Construction Date:** Fill in the original date of construction for the well or boring in mm/dd/yyyy format.

**Depth to Water:** Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

**Date of Filling & Sealing:** List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed.

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  
 Waste Management

Watershed/Wastewater

Remediation/Redevelopment

Other: \_\_\_\_\_

**1. Well Location Information**

County <b>Dane</b>	WI Unique Well # of Removed Well	Hicap #
Latitude / Longitude (Degrees and Minutes)		Method Code (see instructions)
_____ ° _____ ' N		
_____ ° _____ ' W		
1/4 / 1/4	Section	Township
or Gov't Lot #		Range
		E
		W
Well Street Address <b>2007 Roth Street</b>		
Well City, Village or Town <b>Madison</b>		Well ZIP Code <b>53704</b>
Subdivision Name		Lot #

**2. Facility/ Owner Information**

Facility Name <b>Hartmeyer Property</b>
Facility ID (FID or PWS)
License/Permit/Monitoring #
Original Well Owner
Present Well Owner
Mailing Address of Present Owner
City of Present Owner
State
ZIP Code

Reason For Removal From Service

**Borehole Only**

WI Unique Well # of Replacement Well

**3. Well / Drillhole / Borehole Information**

Monitoring Well Water Well <b>Borehole / Drillhole</b>	Original Construction Date (mm/dd/yyyy) <b>4/16/2019</b>
If a Well Construction Report is available, please attach.	
Construction Type	
<b>Drilled</b>	Driven (Sandpoint)
	Dug
Other (specify):	

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

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

Formation Type:

**Unconsolidated Formation** Bedrock

Required Method of Placing Sealing Material

<b>Conductor Pipe-Gravity</b>	Conductor Pipe-Pumped
Screened & Poured	Other (Explain):
<b>(Bentonite Chips)</b>	
Sealing Materials	
Neat Cement Grout	Clay-Sand Slurry (11 lb./gal. wt.)
Sand-Cement (Concrete) Grout	Bentonite-Sand Slurry "
Concrete	<b>(Bentonite Chips)</b>
<i>For Monitoring Wells and Monitoring Well Boreholes Only:</i>	
Bentonite Chips	Bentonite - Cement Grout
Granular Bentonite	Bentonite - Sand Slurry

Total Well Depth From Ground Surface (ft.) Casing Diameter (in.)

NA NA

Lower Drillhole Diameter (in.) Casing Depth (ft.)

NA NA

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)? Depth to Water (feet)

NA NA

**5. Material Used To Fill Well / Drillhole**

From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
Surface	5		

**6. Comments**

Boring ID: **R-7**

**7. Supervision of Work**

Name of Person or Firm Doing Filling & Sealing <b>Ramboll/On-Site Environmental</b>	License #	Date of Filling & Sealing (mm/dd/yyyy) <b>4/16/2019</b>	<b>DNR Use Only</b>	
Street or Route <b>175 N Corporate Drive, Suite 160</b>			Date Received	Noted By
Telephone Number <b>(262) 901-3506</b>			Comments	
City <b>Brookfield</b>	State <b>WI</b>	ZIP Code <b>53045</b>	Signature of Person Doing Work <i>Gage Kapugi</i>	Date Signed <b>04/30/2019</b>

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## Instructions

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### Well Filling and Sealing

Wisconsin Administrative Code (NR81 1, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

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#### (1) WELL LOCATION INFORMATION

**WI Unique Well #:** Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

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**Method Code:** This field lists data collection method codes for latitude and longitude coordinates. This field must be entered if a latitude/longitude coordinate is entered.

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GPS007 - Mapping or recreational grade GPS receiver with no differential correction and selective availability on

GPS008 - GPS receiver grade and or differential correction procedures unknown

#### (2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

**Facility ID:** Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

**License/Permit/Monitoring #:** Fill in number assigned to facility by the Department. If unknown, leave blank.

**Present Well Owner:** Fill in the name, address, city, state and ZIP code of the present owner.

#### (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

**Original Construction Date:** Fill in the original date of construction for the well or boring in mm/dd/yyyy format.

**Depth to Water:** Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

**Date of Filling & Sealing:** List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed.

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  
Waste Management

Watershed/Wastewater

Other: \_\_\_\_\_

Remediation/Redevelopment

**1. Well Location Information**

County: Dane  
WI Unique Well # of Removed Well: \_\_\_\_\_  
Hicap #: \_\_\_\_\_

Latitude / Longitude (Degrees and Minutes): \_\_\_\_\_ ' N  
\_\_\_\_\_ ' W

Method Code (see instructions): \_\_\_\_\_  
Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_ E  
or Gov't Lot #: \_\_\_\_\_ N W

Well Street Address: 2007 Roth Street

Well City, Village or Town: Madison Well ZIP Code: 53704

Subdivision Name: \_\_\_\_\_ Lot #: \_\_\_\_\_

Reason For Removal From Service: Borehole Only  
WI Unique Well # of Replacement Well: \_\_\_\_\_

**3. Well / Drillhole / Borehole Information**

Monitoring Well: Borehole / Drillhole  
Original Construction Date (mm/dd/yyyy): 4/16/2019  
If a Well Construction Report is available, please attach.

Construction Type: Drilled  
Driven (Sandpoint) Dug  
Other (specify): \_\_\_\_\_

Formation Type: Unconsolidated Formation Bedrock

Total Well Depth From Ground Surface (ft.): NA Casing Diameter (in.): NA

Lower Drillhole Diameter (in.): NA Casing Depth (ft.): NA

Was well annular space grouted? Yes No Unknown

If yes, to what depth (feet)? NA Depth to Water (feet): NA

**5. Material Used To Fill Well / Drillhole**

Bentonite Chips

**2 Facility/ Owner Information**

Facility Name: Hartmeyer Property  
Facility ID (FID or PWS): \_\_\_\_\_

License/Permit/Monitoring #: \_\_\_\_\_

Original Well Owner: \_\_\_\_\_

Present Well Owner: \_\_\_\_\_

Mailing Address of Present Owner: \_\_\_\_\_

City of Present Owner: \_\_\_\_\_ State: \_\_\_\_\_ ZIP Code: \_\_\_\_\_

**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 Other (Explain): \_\_\_\_\_

(Bentonite Chips)

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

**6. Comments**

Boring ID: R-8

**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	
Ramboll/On-Site Environmental		4/16/2019			
Street or Route	Telephone Number		Comments		
175 N Corporate Drive, Suite 160	(262) 901-3506				
City	State	ZIP Code	Signature of Person Doing Work		Date Signed
Brookfield	WI	53045	Gage Kapugi		04/30/2019

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## Instructions

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### Well Filling and Sealing

Wisconsin Administrative Code (NR81 1, NR 812, and NR 141 requires well owners to permanently fill and seal any unused wells/drillholes/boreholes on their property. **As of June 1, 2008 water supply wells can only be filled and sealed by licensed well drillers and pump installers.**

1. Remove any pump, pump piping, debris or other obstacles that could interfere with the sealing operation.
2. Except when bentonite chips are used, the sealing material must be placed with the use of a conductor (tremie) pipe to fill the entire well column to the top with required sealing material. Refer to NR 812 and NR 141 for more details on filling and sealing requirements.

**General Instructions:** Fill out Well/Drillhole/Borehole Filling & Sealing Form 3300-005 as completely as possible for each well or borehole filled and sealed. Information should be provided for every box on the form where available. Sign each form. Please note that these forms are subject to change. (Personally identifiable information on these forms is not intended to be used for any other purpose.)

**Verification Only of Fill and Seal:** If you are only verifying that filling and sealing has previously occurred on a well and are NOT performing any filling and sealing work on the well, check the box near the top of the form. Complete Parts 1 and 2 of the form completely and any information you can provide in Parts 3, 4 and 5. You must provide comments in Part 6 as to the method used to verify both the filling and sealing of the well. Complete Part 7, excluding the date of Filling and Sealing. It will be implied that you did not do the filling and sealing work as stated in Part 7.

**Route to:** Check the appropriate routing box on the top of the form to assure proper routing to the DNR program requiring this well be filled and sealed. Mail the form and any attachments to the Department of Natural Resources, PO Box 7921, Madison, WI 53707-7921.

If you do any work to fill or seal the well, you must complete this form as intended and do not check the Verification Only of Fill and Seal box.

#### (1) WELL LOCATION INFORMATION

**WI Unique Well #:** Fill in the 2 alphabetic and 3 numeric Wisconsin Unique Well Number (WUWN) of the well being filled and sealed. Check the well, sample tap in the house or the fuse box for a WUWN if one has been assigned to the well.

**Hicap #:** If this was a high capacity well, enter the number assigned to the well by the Department.

**Well Location:** The well location can be determined by latitude and longitude coordinates in degrees and decimal minutes (to the thousandths, for example, latitude 43°04.347'N longitude 89°24.803'W) using a Global Positioning System (GPS) unit. If using GPS, check the method code for the GPS unit. The location can also be determined using Public Land Survey (Gov't Lot or 1/4 /1/4, 1/4, Section, Township and Range).

**Method Code:** This field lists data collection method codes for latitude and longitude coordinates. This field must be entered if a latitude/longitude coordinate is entered.

GPS006 - Mapping or recreational grade GPS receiver with no differential correction and selective availability off

GPS007 - Mapping or recreational grade GPS receiver with no differential correction and selective availability on

GPS008 - GPS receiver grade and or differential correction procedures unknown

#### (2) FACILITY / OWNER INFORMATION

If the well is located at a commercial or government facility, fill in the name of landfill, wastewater treatment facility, surface impoundment, spill or project.

**Facility ID:** Fill in the nine digits Facility ID (FID or PWS) assigned to the site by the Department.

**License/Permit/Monitoring #:** Fill in number assigned to facility by the Department. If unknown, leave blank.

**Present Well Owner:** Fill in the name, address, city, state and ZIP code of the present owner.

#### (3) WELL/DRILLHOLE/BOREHOLE INFORMATION

**Original Construction Date:** Fill in the original date of construction for the well or boring in mm/dd/yyyy format.

**Depth to Water:** Enter depth to water from ground surface.

(4) **PUMP, LINER, SCREEN, CASING, & SEALING MATERIAL:** Check only one box where Yes, No or Not Applicable is indicated. Check all boxes which apply otherwise.

(5) **MATERIAL USED TO FILL THE WELL/DRILLHOLE:** Enter the description of the filling material, the depth From and To, circle one measurement unit (Yards, Sacks or Volume), and enter the mix ratio or mud weight (in pounds per gallon).

(6) **COMMENTS:** Describe any of the above boxes in more detail or add information as required to describe the filling and sealing procedures.

(7) **NAME OF PERSON OR FIRM DOING SEALING WORK:** Enter the name (first and last) or firm name, address, and phone number of the person who supervised the work.

**Date of Filling & Sealing:** List Month/Day/Year (mm/dd/yyyy) the well was filled & sealed.

## ATTACHMENT B

### LABORATORY ANALYTICAL DATA



May 01, 2019

Adam Streiffer  
Ramboll Environ  
175 North Corporate Drive  
Suite 160  
Brookfield, WI 53045

RE: Project: 1690012791 HARTMEYER  
Pace Project No.: 40185945

Dear Adam Streiffer:

Enclosed are the analytical results for sample(s) received by the laboratory on April 17, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC 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 Mleczko  
steve.mleczko@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

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### Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302

Florida/NELAP Certification #: E87948

Illinois Certification #: 200050

Kentucky UST Certification #: 82

Louisiana Certification #: 04168

Minnesota Certification #: 055-999-334

New York Certification #: 12064

North Dakota Certification #: R-150

Virginia VELAP ID: 460263

South Carolina Certification #: 83006001

Texas Certification #: T104704529-14-1

Wisconsin Certification #: 405132750

Wisconsin DATCP Certification #: 105-444

USDA Soil Permit #: P330-16-00157

Federal Fish & Wildlife Permit #: LE51774A-0

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40185945001	B-1 (1-2')	Solid	04/16/19 08:35	04/17/19 09:30
40185945002	B-1 (4-5')	Solid	04/16/19 08:35	04/17/19 09:30
40185945003	B-2 (1-2')	Solid	04/16/19 08:15	04/17/19 09:30
40185945004	B-2 (4-5')	Solid	04/16/19 08:15	04/17/19 09:30
40185945005	B-3 (1-2')	Solid	04/16/19 08:55	04/17/19 09:30
40185945006	B-3 (4-5')	Solid	04/16/19 08:55	04/17/19 09:30
40185945007	B-4 (1-2')	Solid	04/16/19 09:10	04/17/19 09:30
40185945008	B-4 (4-5')	Solid	04/16/19 09:10	04/17/19 09:30
40185945009	B-5 (1-2.5')	Solid	04/16/19 09:25	04/17/19 09:30
40185945010	B-5 (4-5')	Solid	04/16/19 09:25	04/17/19 09:30
40185945011	B-6 (1-2')	Solid	04/16/19 10:00	04/17/19 09:30
40185945012	B-7 (1-2.5')	Solid	04/16/19 10:20	04/17/19 09:30
40185945013	B-8 (1-2.5')	Solid	04/16/19 09:40	04/17/19 09:30
40185945014	TRIP BLANK	Solid	04/16/19 00:00	04/17/19 09:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40185945001	B-1 (1-2')	EPA 8270 by SIM	ARO	20
		EPA 8260	MDS	13
		ASTM D2974-87	SKW	1
40185945002	B-1 (4-5')	EPA 8270 by SIM	ARO	20
		EPA 8260	MDS	13
		ASTM D2974-87	PCG	1
40185945003	B-2 (1-2')	EPA 8270 by SIM	ARO	20
		EPA 8260	MDS	13
		ASTM D2974-87	SKW	1
40185945004	B-2 (4-5')	EPA 8270 by SIM	ARO	20
		EPA 8260	MDS	13
		ASTM D2974-87	PCG	1
40185945005	B-3 (1-2')	EPA 8270 by SIM	ARO	20
		EPA 8260	MDS	13
		ASTM D2974-87	SKW	1
40185945006	B-3 (4-5')	EPA 8270 by SIM	ARO	20
		EPA 8260	MDS	13
		ASTM D2974-87	PCG	1
40185945007	B-4 (1-2')	EPA 8270 by SIM	ARO	20
		EPA 8260	MDS	13
		ASTM D2974-87	SKW	1
40185945008	B-4 (4-5')	EPA 8270 by SIM	ARO	20
		EPA 8260	MDS	13
		ASTM D2974-87	PCG	1
40185945009	B-5 (1-2.5')	EPA 6010	TXW	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20
		EPA 8260	MDS	13
		ASTM D2974-87	SKW	1
40185945010	B-5 (4-5')	EPA 6010	TXW	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20
		EPA 8260	MDS	13
		ASTM D2974-87	SKW	1
40185945011	B-6 (1-2')	EPA 6010	TXW	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40185945012	B-7 (1-2.5')	EPA 8260	MDS	13
		ASTM D2974-87	SKW	1
		EPA 6010	TXW	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20
40185945013	B-8 (1-2.5')	EPA 8260	MDS	13
		ASTM D2974-87	SKW	1
		EPA 6010	TXW	7
		EPA 7471	AJT	1
		EPA 8270 by SIM	ARO	20
40185945014	TRIP BLANK	EPA 8260	MDS	13
		ASTM D2974-87	SKW	1
		EPA 8260	MDS	13

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: B-1 (1-2)**      **Lab ID: 40185945001**      Collected: 04/16/19 08:35      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546									
Acenaphthene	48.4	ug/kg	32.4	9.8	2	04/22/19 08:19	04/22/19 17:53	83-32-9	
Acenaphthylene	31.0	ug/kg	27.7	8.3	2	04/22/19 08:19	04/22/19 17:53	208-96-8	
Anthracene	119	ug/kg	47.8	14.4	2	04/22/19 08:19	04/22/19 17:53	120-12-7	
Benzo(a)anthracene	139	ug/kg	26.7	8.0	2	04/22/19 08:19	04/22/19 17:53	56-55-3	
Benzo(a)pyrene	106	ug/kg	21.0	6.3	2	04/22/19 08:19	04/22/19 17:53	50-32-8	
Benzo(b)fluoranthene	81.1	ug/kg	23.7	7.1	2	04/22/19 08:19	04/22/19 17:53	205-99-2	
Benzo(g,h,i)perylene	65.3	ug/kg	17.0	5.1	2	04/22/19 08:19	04/22/19 17:53	191-24-2	
Benzo(k)fluoranthene	91.0	ug/kg	21.0	6.3	2	04/22/19 08:19	04/22/19 17:53	207-08-9	
Chrysene	160	ug/kg	28.2	8.5	2	04/22/19 08:19	04/22/19 17:53	218-01-9	
Dibenz(a,h)anthracene	23.2	ug/kg	18.7	5.6	2	04/22/19 08:19	04/22/19 17:53	53-70-3	
Fluoranthene	272	ug/kg	43.8	13.1	2	04/22/19 08:19	04/22/19 17:53	206-44-0	
Fluorene	52.5	ug/kg	34.7	10.4	2	04/22/19 08:19	04/22/19 17:53	86-73-7	
Indeno(1,2,3-cd)pyrene	46.5	ug/kg	18.4	5.5	2	04/22/19 08:19	04/22/19 17:53	193-39-5	
1-Methylnaphthalene	759	ug/kg	33.7	10.1	2	04/22/19 08:19	04/22/19 17:53	90-12-0	
2-Methylnaphthalene	863	ug/kg	42.0	12.6	2	04/22/19 08:19	04/22/19 17:53	91-57-6	
Naphthalene	410	ug/kg	70.7	21.2	2	04/22/19 08:19	04/22/19 17:53	91-20-3	
Phenanthrene	755	ug/kg	97.6	29.3	2	04/22/19 08:19	04/22/19 17:53	85-01-8	
Pyrene	243	ug/kg	37.7	11.3	2	04/22/19 08:19	04/22/19 17:53	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	56	%	28-99		2	04/22/19 08:19	04/22/19 17:53	321-60-8	
Terphenyl-d14 (S)	43	%	10-107		2	04/22/19 08:19	04/22/19 17:53	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260    Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	44.6J	ug/kg	75.5	31.5	1	04/18/19 08:15	04/18/19 11:54	95-63-6	
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 11:54	108-67-8	W
Benzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 11:54	71-43-2	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 11:54	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 11:54	1634-04-4	W
Naphthalene	<40.0	ug/kg	250	40.0	1	04/18/19 08:15	04/18/19 11:54	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 11:54	108-88-3	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	04/18/19 08:15	04/18/19 11:54	1330-20-7	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	04/18/19 08:15	04/18/19 11:54	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 11:54	95-47-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	94	%	57-146		1	04/18/19 08:15	04/18/19 11:54	1868-53-7	
Toluene-d8 (S)	90	%	64-134		1	04/18/19 08:15	04/18/19 11:54	2037-26-5	
4-Bromofluorobenzene (S)	93	%	54-126		1	04/18/19 08:15	04/18/19 11:54	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	20.6	%	0.10	0.10	1		04/23/19 09:19		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: B-1 (4-5)**      **Lab ID: 40185945002**      Collected: 04/16/19 08:35      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546									
Acenaphthene	<131	ug/kg	435	131	20	04/23/19 08:41	04/23/19 12:11	83-32-9	
Acenaphthylene	313J	ug/kg	371	111	20	04/23/19 08:41	04/23/19 12:11	208-96-8	
Anthracene	650	ug/kg	641	193	20	04/23/19 08:41	04/23/19 12:11	120-12-7	
Benzo(a)anthracene	3110	ug/kg	358	107	20	04/23/19 08:41	04/23/19 12:11	56-55-3	
Benzo(a)pyrene	3110	ug/kg	283	84.8	20	04/23/19 08:41	04/23/19 12:11	50-32-8	
Benzo(b)fluoranthene	5100	ug/kg	318	95.3	20	04/23/19 08:41	04/23/19 12:11	205-99-2	
Benzo(g,h,i)perylene	2020	ug/kg	229	68.6	20	04/23/19 08:41	04/23/19 12:11	191-24-2	
Benzo(k)fluoranthene	2080	ug/kg	282	84.7	20	04/23/19 08:41	04/23/19 12:11	207-08-9	
Chrysene	4480	ug/kg	378	114	20	04/23/19 08:41	04/23/19 12:11	218-01-9	
Dibenz(a,h)anthracene	430	ug/kg	251	75.5	20	04/23/19 08:41	04/23/19 12:11	53-70-3	
Fluoranthene	9030	ug/kg	587	176	20	04/23/19 08:41	04/23/19 12:11	206-44-0	
Fluorene	<140	ug/kg	466	140	20	04/23/19 08:41	04/23/19 12:11	86-73-7	
Indeno(1,2,3-cd)pyrene	1580	ug/kg	247	74.2	20	04/23/19 08:41	04/23/19 12:11	193-39-5	
1-Methylnaphthalene	<136	ug/kg	452	136	20	04/23/19 08:41	04/23/19 12:11	90-12-0	
2-Methylnaphthalene	<169	ug/kg	564	169	20	04/23/19 08:41	04/23/19 12:11	91-57-6	
Naphthalene	<284	ug/kg	948	284	20	04/23/19 08:41	04/23/19 12:11	91-20-3	
Phenanthrene	2650	ug/kg	1310	393	20	04/23/19 08:41	04/23/19 12:11	85-01-8	
Pyrene	6160	ug/kg	506	152	20	04/23/19 08:41	04/23/19 12:11	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	44	%	28-99		20	04/23/19 08:41	04/23/19 12:11	321-60-8	
Terphenyl-d14 (S)	39	%	10-107		20	04/23/19 08:41	04/23/19 12:11	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260      Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<28.4	ug/kg	68.2	28.4	1	04/23/19 08:30	04/24/19 19:39	95-63-6	W
1,3,5-Trimethylbenzene	<28.4	ug/kg	68.2	28.4	1	04/23/19 08:30	04/24/19 19:39	108-67-8	W
Benzene	<28.4	ug/kg	68.2	28.4	1	04/23/19 08:30	04/24/19 19:39	71-43-2	W
Ethylbenzene	<28.4	ug/kg	68.2	28.4	1	04/23/19 08:30	04/24/19 19:39	100-41-4	W
Methyl-tert-butyl ether	<28.4	ug/kg	68.2	28.4	1	04/23/19 08:30	04/24/19 19:39	1634-04-4	W
Naphthalene	<45.5	ug/kg	284	45.5	1	04/23/19 08:30	04/24/19 19:39	91-20-3	W
Toluene	51.4J	ug/kg	115	48.0	1	04/23/19 08:30	04/24/19 19:39	108-88-3	
Xylene (Total)	<85.2	ug/kg	205	85.2	1	04/23/19 08:30	04/24/19 19:39	1330-20-7	W
m&p-Xylene	<56.8	ug/kg	136	56.8	1	04/23/19 08:30	04/24/19 19:39	179601-23-1	W
o-Xylene	<28.4	ug/kg	68.2	28.4	1	04/23/19 08:30	04/24/19 19:39	95-47-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	91	%	57-146		1	04/23/19 08:30	04/24/19 19:39	1868-53-7	
Toluene-d8 (S)	84	%	64-134		1	04/23/19 08:30	04/24/19 19:39	2037-26-5	
4-Bromofluorobenzene (S)	90	%	54-126		1	04/23/19 08:30	04/24/19 19:39	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	40.8	%	0.10	0.10	1		04/24/19 19:37		

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: B-2 (1-2)**      **Lab ID: 40185945003**      Collected: 04/16/19 08:15      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546									
Acenaphthene	<5.7	ug/kg	18.8	5.7	1	04/22/19 08:19	04/22/19 21:22	83-32-9	
Acenaphthylene	<4.8	ug/kg	16.1	4.8	1	04/22/19 08:19	04/22/19 21:22	208-96-8	
Anthracene	8.8J	ug/kg	27.7	8.3	1	04/22/19 08:19	04/22/19 21:22	120-12-7	
Benzo(a)anthracene	13.0J	ug/kg	15.5	4.6	1	04/22/19 08:19	04/22/19 21:22	56-55-3	
Benzo(a)pyrene	11.9J	ug/kg	12.2	3.7	1	04/22/19 08:19	04/22/19 21:22	50-32-8	
Benzo(b)fluoranthene	11.2J	ug/kg	13.7	4.1	1	04/22/19 08:19	04/22/19 21:22	205-99-2	
Benzo(g,h,i)perylene	9.3J	ug/kg	9.9	3.0	1	04/22/19 08:19	04/22/19 21:22	191-24-2	
Benzo(k)fluoranthene	10.6J	ug/kg	12.2	3.7	1	04/22/19 08:19	04/22/19 21:22	207-08-9	
Chrysene	14.6J	ug/kg	16.4	4.9	1	04/22/19 08:19	04/22/19 21:22	218-01-9	
Dibenz(a,h)anthracene	<3.3	ug/kg	10.9	3.3	1	04/22/19 08:19	04/22/19 21:22	53-70-3	
Fluoranthene	23.4J	ug/kg	25.4	7.6	1	04/22/19 08:19	04/22/19 21:22	206-44-0	
Fluorene	<6.0	ug/kg	20.1	6.0	1	04/22/19 08:19	04/22/19 21:22	86-73-7	
Indeno(1,2,3-cd)pyrene	7.0J	ug/kg	10.7	3.2	1	04/22/19 08:19	04/22/19 21:22	193-39-5	
1-Methylnaphthalene	50.3	ug/kg	19.6	5.9	1	04/22/19 08:19	04/22/19 21:22	90-12-0	
2-Methylnaphthalene	74.0	ug/kg	24.4	7.3	1	04/22/19 08:19	04/22/19 21:22	91-57-6	
Naphthalene	28.5J	ug/kg	41.0	12.3	1	04/22/19 08:19	04/22/19 21:22	91-20-3	
Phenanthrene	50.4J	ug/kg	56.6	17.0	1	04/22/19 08:19	04/22/19 21:22	85-01-8	
Pyrene	21.3J	ug/kg	21.9	6.6	1	04/22/19 08:19	04/22/19 21:22	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	52	%	28-99		1	04/22/19 08:19	04/22/19 21:22	321-60-8	
Terphenyl-d14 (S)	48	%	10-107		1	04/22/19 08:19	04/22/19 21:22	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260      Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	60.7J	ug/kg	89.3	37.2	1	04/18/19 08:15	04/18/19 13:04	95-63-6	
1,3,5-Trimethylbenzene	<25.5	ug/kg	61.2	25.5	1	04/18/19 08:15	04/18/19 13:04	108-67-8	W
Benzene	<25.5	ug/kg	61.2	25.5	1	04/18/19 08:15	04/18/19 13:04	71-43-2	W
Ethylbenzene	<25.5	ug/kg	61.2	25.5	1	04/18/19 08:15	04/18/19 13:04	100-41-4	W
Methyl-tert-butyl ether	<25.5	ug/kg	61.2	25.5	1	04/18/19 08:15	04/18/19 13:04	1634-04-4	W
Naphthalene	81.5J	ug/kg	372	59.6	1	04/18/19 08:15	04/18/19 13:04	91-20-3	
Toluene	<25.5	ug/kg	61.2	25.5	1	04/18/19 08:15	04/18/19 13:04	108-88-3	W
Xylene (Total)	<76.5	ug/kg	184	76.5	1	04/18/19 08:15	04/18/19 13:04	1330-20-7	W
m&p-Xylene	<51.0	ug/kg	122	51.0	1	04/18/19 08:15	04/18/19 13:04	179601-23-1	W
o-Xylene	<25.5	ug/kg	61.2	25.5	1	04/18/19 08:15	04/18/19 13:04	95-47-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	93	%	57-146		1	04/18/19 08:15	04/18/19 13:04	1868-53-7	
Toluene-d8 (S)	90	%	64-134		1	04/18/19 08:15	04/18/19 13:04	2037-26-5	
4-Bromofluorobenzene (S)	99	%	54-126		1	04/18/19 08:15	04/18/19 13:04	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	31.4	%	0.10	0.10	1		04/23/19 09:19		

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: B-2 (4-5)**      **Lab ID: 40185945004**      Collected: 04/16/19 08:15      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546									
Acenaphthene	<34.0	ug/kg	113	34.0	4	04/25/19 08:41	04/25/19 14:41	83-32-9	
Acenaphthylene	<28.8	ug/kg	96.2	28.8	4	04/25/19 08:41	04/25/19 14:41	208-96-8	
Anthracene	67.7J	ug/kg	166	50.0	4	04/25/19 08:41	04/25/19 14:41	120-12-7	
Benzo(a)anthracene	59.6J	ug/kg	92.7	27.7	4	04/25/19 08:41	04/25/19 14:41	56-55-3	
Benzo(a)pyrene	87.1	ug/kg	73.2	22.0	4	04/25/19 08:41	04/25/19 14:41	50-32-8	
Benzo(b)fluoranthene	81.0J	ug/kg	82.3	24.7	4	04/25/19 08:41	04/25/19 14:41	205-99-2	
Benzo(g,h,i)perylene	64.9	ug/kg	59.2	17.8	4	04/25/19 08:41	04/25/19 14:41	191-24-2	
Benzo(k)fluoranthene	83.5	ug/kg	73.1	21.9	4	04/25/19 08:41	04/25/19 14:41	207-08-9	
Chrysene	94.8J	ug/kg	98.0	29.5	4	04/25/19 08:41	04/25/19 14:41	218-01-9	
Dibenz(a,h)anthracene	<19.6	ug/kg	65.2	19.6	4	04/25/19 08:41	04/25/19 14:41	53-70-3	
Fluoranthene	100J	ug/kg	152	45.6	4	04/25/19 08:41	04/25/19 14:41	206-44-0	
Fluorene	<36.2	ug/kg	121	36.2	4	04/25/19 08:41	04/25/19 14:41	86-73-7	
Indeno(1,2,3-cd)pyrene	<19.2	ug/kg	64.1	19.2	4	04/25/19 08:41	04/25/19 14:41	193-39-5	
1-Methylnaphthalene	462	ug/kg	117	35.2	4	04/25/19 08:41	04/25/19 14:41	90-12-0	
2-Methylnaphthalene	1120	ug/kg	146	43.8	4	04/25/19 08:41	04/25/19 14:41	91-57-6	
Naphthalene	4040	ug/kg	246	73.7	4	04/25/19 08:41	04/25/19 14:41	91-20-3	
Phenanthrene	175J	ug/kg	339	102	4	04/25/19 08:41	04/25/19 14:41	85-01-8	
Pyrene	84.7J	ug/kg	131	39.5	4	04/25/19 08:41	04/25/19 14:41	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	37	%	28-99		4	04/25/19 08:41	04/25/19 14:41	321-60-8	
Terphenyl-d14 (S)	30	%	10-107		4	04/25/19 08:41	04/25/19 14:41	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260      Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	30500	ug/kg	328	137	2.5	04/23/19 08:30	04/24/19 03:50	95-63-6	
1,3,5-Trimethylbenzene	7900	ug/kg	328	137	2.5	04/23/19 08:30	04/24/19 03:50	108-67-8	
Benzene	<62.5	ug/kg	150	62.5	2.5	04/23/19 08:30	04/24/19 03:50	71-43-2	W
Ethylbenzene	7400	ug/kg	328	137	2.5	04/23/19 08:30	04/24/19 03:50	100-41-4	
Methyl-tert-butyl ether	<62.5	ug/kg	150	62.5	2.5	04/23/19 08:30	04/24/19 03:50	1634-04-4	W
Naphthalene	3440	ug/kg	1370	219	2.5	04/23/19 08:30	04/24/19 03:50	91-20-3	
Toluene	<62.5	ug/kg	150	62.5	2.5	04/23/19 08:30	04/24/19 03:50	108-88-3	W
Xylene (Total)	38500	ug/kg	984	410	2.5	04/23/19 08:30	04/24/19 03:50	1330-20-7	
m&p-Xylene	30600	ug/kg	656	273	2.5	04/23/19 08:30	04/24/19 03:50	179601-23-1	
o-Xylene	7850	ug/kg	328	137	2.5	04/23/19 08:30	04/24/19 03:50	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	95	%	57-146		2.5	04/23/19 08:30	04/24/19 03:50	1868-53-7	
Toluene-d8 (S)	84	%	64-134		2.5	04/23/19 08:30	04/24/19 03:50	2037-26-5	
4-Bromofluorobenzene (S)	98	%	54-126		2.5	04/23/19 08:30	04/24/19 03:50	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	54.3	%	0.10	0.10	1		04/24/19 19:37		

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: B-3 (1-2)**      **Lab ID: 40185945005**      Collected: 04/16/19 08:55      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546									
Acenaphthene	177J	ug/kg	300	90.3	20	04/30/19 09:47	04/30/19 15:39	83-32-9	
Acenaphthylene	<76.7	ug/kg	256	76.7	20	04/30/19 09:47	04/30/19 15:39	208-96-8	
Anthracene	478	ug/kg	442	133	20	04/30/19 09:47	04/30/19 15:39	120-12-7	
Benzo(a)anthracene	1330	ug/kg	247	73.8	20	04/30/19 09:47	04/30/19 15:39	56-55-3	
Benzo(a)pyrene	1430	ug/kg	195	58.5	20	04/30/19 09:47	04/30/19 15:39	50-32-8	
Benzo(b)fluoranthene	1310	ug/kg	219	65.7	20	04/30/19 09:47	04/30/19 15:39	205-99-2	
Benzo(g,h,i)perylene	1110	ug/kg	158	47.3	20	04/30/19 09:47	04/30/19 15:39	191-24-2	
Benzo(k)fluoranthene	1270	ug/kg	195	58.4	20	04/30/19 09:47	04/30/19 15:39	207-08-9	
Chrysene	1470	ug/kg	261	78.5	20	04/30/19 09:47	04/30/19 15:39	218-01-9	
Dibenz(a,h)anthracene	348	ug/kg	173	52.0	20	04/30/19 09:47	04/30/19 15:39	53-70-3	
Fluoranthene	3340	ug/kg	405	121	20	04/30/19 09:47	04/30/19 15:39	206-44-0	
Fluorene	159J	ug/kg	321	96.3	20	04/30/19 09:47	04/30/19 15:39	86-73-7	
Indeno(1,2,3-cd)pyrene	942	ug/kg	171	51.2	20	04/30/19 09:47	04/30/19 15:39	193-39-5	
1-Methylnaphthalene	<93.6	ug/kg	312	93.6	20	04/30/19 09:47	04/30/19 15:39	90-12-0	
2-Methylnaphthalene	<116	ug/kg	389	116	20	04/30/19 09:47	04/30/19 15:39	91-57-6	
Naphthalene	<196	ug/kg	654	196	20	04/30/19 09:47	04/30/19 15:39	91-20-3	
Phenanthrene	2060	ug/kg	903	271	20	04/30/19 09:47	04/30/19 15:39	85-01-8	
Pyrene	2570	ug/kg	349	105	20	04/30/19 09:47	04/30/19 15:39	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	48	%	28-99		20	04/30/19 09:47	04/30/19 15:39	321-60-8	
Terphenyl-d14 (S)	46	%	10-107		20	04/30/19 09:47	04/30/19 15:39	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260      Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:27	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:27	108-67-8	W
Benzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:27	71-43-2	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:27	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:27	1634-04-4	W
Naphthalene	<40.0	ug/kg	250	40.0	1	04/18/19 08:15	04/18/19 13:27	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:27	108-88-3	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	04/18/19 08:15	04/18/19 13:27	1330-20-7	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	04/18/19 08:15	04/18/19 13:27	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:27	95-47-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	94	%	57-146		1	04/18/19 08:15	04/18/19 13:27	1868-53-7	
Toluene-d8 (S)	95	%	64-134		1	04/18/19 08:15	04/18/19 13:27	2037-26-5	
4-Bromofluorobenzene (S)	109	%	54-126		1	04/18/19 08:15	04/18/19 13:27	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	14.2	%	0.10	0.10	1		04/23/19 09:19		

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### ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER  
Pace Project No.: 40185945

**Sample: B-3 (4-5)**      **Lab ID: 40185945006**      Collected: 04/16/19 08:55      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546									
Acenaphthene	4950	ug/kg	338	102	20	04/23/19 08:41	04/23/19 12:46	83-32-9	
Acenaphthylene	2420	ug/kg	288	86.3	20	04/23/19 08:41	04/23/19 12:46	208-96-8	
Anthracene	6820	ug/kg	497	149	20	04/23/19 08:41	04/23/19 12:46	120-12-7	
Benzo(a)anthracene	5610	ug/kg	277	83.0	20	04/23/19 08:41	04/23/19 12:46	56-55-3	
Benzo(a)pyrene	4280	ug/kg	219	65.8	20	04/23/19 08:41	04/23/19 12:46	50-32-8	
Benzo(b)fluoranthene	3650	ug/kg	246	73.9	20	04/23/19 08:41	04/23/19 12:46	205-99-2	
Benzo(g,h,i)perylene	1870	ug/kg	177	53.2	20	04/23/19 08:41	04/23/19 12:46	191-24-2	
Benzo(k)fluoranthene	1400	ug/kg	219	65.7	20	04/23/19 08:41	04/23/19 12:46	207-08-9	
Chrysene	5360	ug/kg	293	88.3	20	04/23/19 08:41	04/23/19 12:46	218-01-9	
Dibenz(a,h)anthracene	487	ug/kg	195	58.5	20	04/23/19 08:41	04/23/19 12:46	53-70-3	
Fluoranthene	11300	ug/kg	455	136	20	04/23/19 08:41	04/23/19 12:46	206-44-0	
Fluorene	2680	ug/kg	361	108	20	04/23/19 08:41	04/23/19 12:46	86-73-7	
Indeno(1,2,3-cd)pyrene	1370	ug/kg	192	57.6	20	04/23/19 08:41	04/23/19 12:46	193-39-5	
1-Methylnaphthalene	2260	ug/kg	351	105	20	04/23/19 08:41	04/23/19 12:46	90-12-0	
2-Methylnaphthalene	594	ug/kg	437	131	20	04/23/19 08:41	04/23/19 12:46	91-57-6	
Naphthalene	2290	ug/kg	736	220	20	04/23/19 08:41	04/23/19 12:46	91-20-3	
Phenanthrene	21400	ug/kg	1020	305	20	04/23/19 08:41	04/23/19 12:46	85-01-8	
Pyrene	15200	ug/kg	393	118	20	04/23/19 08:41	04/23/19 12:46	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	48	%	28-99		20	04/23/19 08:41	04/23/19 12:46	321-60-8	
Terphenyl-d14 (S)	41	%	10-107		20	04/23/19 08:41	04/23/19 12:46	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260    Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	59.3J	ug/kg	78.4	32.7	1	04/23/19 08:30	04/24/19 15:14	95-63-6	
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 15:14	108-67-8	W
Benzene	71.8J	ug/kg	78.4	32.7	1	04/23/19 08:30	04/24/19 15:14	71-43-2	
Ethylbenzene	129	ug/kg	78.4	32.7	1	04/23/19 08:30	04/24/19 15:14	100-41-4	
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 15:14	1634-04-4	W
Naphthalene	416	ug/kg	327	52.3	1	04/23/19 08:30	04/24/19 15:14	91-20-3	
Toluene	49.2J	ug/kg	78.4	32.7	1	04/23/19 08:30	04/24/19 15:14	108-88-3	
Xylene (Total)	<75.0	ug/kg	180	75.0	1	04/23/19 08:30	04/24/19 15:14	1330-20-7	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	04/23/19 08:30	04/24/19 15:14	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 15:14	95-47-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	100	%	57-146		1	04/23/19 08:30	04/24/19 15:14	1868-53-7	
Toluene-d8 (S)	99	%	64-134		1	04/23/19 08:30	04/24/19 15:14	2037-26-5	
4-Bromofluorobenzene (S)	114	%	54-126		1	04/23/19 08:30	04/24/19 15:14	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	23.5	%	0.10	0.10	1		04/24/19 19:37		

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: B-4 (1-2') Lab ID: 40185945007** Collected: 04/16/19 09:10 Received: 04/17/19 09:30 Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	23.2	ug/kg	16.3	4.9	1	04/22/19 08:19	04/22/19 18:11	83-32-9	
Acenaphthylene	10.1J	ug/kg	13.9	4.2	1	04/22/19 08:19	04/22/19 18:11	208-96-8	
Anthracene	43.9	ug/kg	24.1	7.2	1	04/22/19 08:19	04/22/19 18:11	120-12-7	
Benzo(a)anthracene	52.3	ug/kg	13.4	4.0	1	04/22/19 08:19	04/22/19 18:11	56-55-3	
Benzo(a)pyrene	37.8	ug/kg	10.6	3.2	1	04/22/19 08:19	04/22/19 18:11	50-32-8	
Benzo(b)fluoranthene	23.6	ug/kg	11.9	3.6	1	04/22/19 08:19	04/22/19 18:11	205-99-2	
Benzo(g,h,i)perylene	24.4	ug/kg	8.6	2.6	1	04/22/19 08:19	04/22/19 18:11	191-24-2	
Benzo(k)fluoranthene	29.1	ug/kg	10.6	3.2	1	04/22/19 08:19	04/22/19 18:11	207-08-9	
Chrysene	59.2	ug/kg	14.2	4.3	1	04/22/19 08:19	04/22/19 18:11	218-01-9	
Dibenz(a,h)anthracene	7.9J	ug/kg	9.4	2.8	1	04/22/19 08:19	04/22/19 18:11	53-70-3	
Fluoranthene	69.7	ug/kg	22.1	6.6	1	04/22/19 08:19	04/22/19 18:11	206-44-0	
Fluorene	24.5	ug/kg	17.5	5.2	1	04/22/19 08:19	04/22/19 18:11	86-73-7	
Indeno(1,2,3-cd)pyrene	13.1	ug/kg	9.3	2.8	1	04/22/19 08:19	04/22/19 18:11	193-39-5	
1-Methylnaphthalene	214	ug/kg	17.0	5.1	1	04/22/19 08:19	04/22/19 18:11	90-12-0	
2-Methylnaphthalene	206	ug/kg	21.2	6.3	1	04/22/19 08:19	04/22/19 18:11	91-57-6	
Naphthalene	90.2	ug/kg	35.6	10.7	1	04/22/19 08:19	04/22/19 18:11	91-20-3	
Phenanthrene	291	ug/kg	49.2	14.8	1	04/22/19 08:19	04/22/19 18:11	85-01-8	
Pyrene	72.1	ug/kg	19.0	5.7	1	04/22/19 08:19	04/22/19 18:11	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	60	%	28-99		1	04/22/19 08:19	04/22/19 18:11	321-60-8	
Terphenyl-d14 (S)	50	%	10-107		1	04/22/19 08:19	04/22/19 18:11	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	35.7J	ug/kg	76.1	31.7	1	04/18/19 08:15	04/18/19 15:45	95-63-6	
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 15:45	108-67-8	W
Benzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 15:45	71-43-2	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 15:45	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 15:45	1634-04-4	W
Naphthalene	<40.0	ug/kg	250	40.0	1	04/18/19 08:15	04/18/19 15:45	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 15:45	108-88-3	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	04/18/19 08:15	04/18/19 15:45	1330-20-7	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	04/18/19 08:15	04/18/19 15:45	179601-23-1	W
o-Xylene	34.9J	ug/kg	76.1	31.7	1	04/18/19 08:15	04/18/19 15:45	95-47-6	
<b>Surrogates</b>									
Dibromofluoromethane (S)	93	%	57-146		1	04/18/19 08:15	04/18/19 15:45	1868-53-7	
Toluene-d8 (S)	89	%	64-134		1	04/18/19 08:15	04/18/19 15:45	2037-26-5	
4-Bromofluorobenzene (S)	94	%	54-126		1	04/18/19 08:15	04/18/19 15:45	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	21.1	%	0.10	0.10	1		04/23/19 09:19		

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: B-4 (4-5)**      **Lab ID: 40185945008**      Collected: 04/16/19 09:10      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM      Preparation Method: EPA 3546									
Acenaphthene	<b>40.9</b>	ug/kg	21.9	6.6	1	04/23/19 08:41	04/23/19 19:09	83-32-9	
Acenaphthylene	<b>8.9J</b>	ug/kg	18.7	5.6	1	04/23/19 08:41	04/23/19 19:09	208-96-8	
Anthracene	<b>90.3</b>	ug/kg	32.3	9.7	1	04/23/19 08:41	04/23/19 19:09	120-12-7	
Benzo(a)anthracene	<b>242</b>	ug/kg	18.0	5.4	1	04/23/19 08:41	04/23/19 19:09	56-55-3	
Benzo(a)pyrene	<b>244</b>	ug/kg	14.2	4.3	1	04/23/19 08:41	04/23/19 19:09	50-32-8	
Benzo(b)fluoranthene	<b>333</b>	ug/kg	16.0	4.8	1	04/23/19 08:41	04/23/19 19:09	205-99-2	
Benzo(g,h,i)perylene	<b>166</b>	ug/kg	11.5	3.5	1	04/23/19 08:41	04/23/19 19:09	191-24-2	
Benzo(k)fluoranthene	<b>140</b>	ug/kg	14.2	4.3	1	04/23/19 08:41	04/23/19 19:09	207-08-9	
Chrysene	<b>260</b>	ug/kg	19.0	5.7	1	04/23/19 08:41	04/23/19 19:09	218-01-9	
Dibenz(a,h)anthracene	<b>45.2</b>	ug/kg	12.7	3.8	1	04/23/19 08:41	04/23/19 19:09	53-70-3	
Fluoranthene	<b>644</b>	ug/kg	29.6	8.9	1	04/23/19 08:41	04/23/19 19:09	206-44-0	
Fluorene	<b>39.2</b>	ug/kg	23.5	7.0	1	04/23/19 08:41	04/23/19 19:09	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>128</b>	ug/kg	12.5	3.7	1	04/23/19 08:41	04/23/19 19:09	193-39-5	
1-Methylnaphthalene	<b>31.7</b>	ug/kg	22.8	6.8	1	04/23/19 08:41	04/23/19 19:09	90-12-0	
2-Methylnaphthalene	<b>44.8</b>	ug/kg	28.4	8.5	1	04/23/19 08:41	04/23/19 19:09	91-57-6	
Naphthalene	<b>82.1</b>	ug/kg	47.8	14.3	1	04/23/19 08:41	04/23/19 19:09	91-20-3	
Phenanthrene	<b>395</b>	ug/kg	66.0	19.8	1	04/23/19 08:41	04/23/19 19:09	85-01-8	
Pyrene	<b>438</b>	ug/kg	25.5	7.7	1	04/23/19 08:41	04/23/19 19:09	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	50	%	28-99		1	04/23/19 08:41	04/23/19 19:09	321-60-8	
Terphenyl-d14 (S)	45	%	10-107		1	04/23/19 08:41	04/23/19 19:09	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260      Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<b>&lt;25.0</b>	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 02:41	95-63-6	W
1,3,5-Trimethylbenzene	<b>&lt;25.0</b>	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 02:41	108-67-8	W
Benzene	<b>&lt;25.0</b>	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 02:41	71-43-2	W
Ethylbenzene	<b>&lt;25.0</b>	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 02:41	100-41-4	W
Methyl-tert-butyl ether	<b>&lt;25.0</b>	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 02:41	1634-04-4	W
Naphthalene	<b>&lt;40.0</b>	ug/kg	250	40.0	1	04/23/19 08:30	04/24/19 02:41	91-20-3	W
Toluene	<b>72.3J</b>	ug/kg	102	42.6	1	04/23/19 08:30	04/24/19 02:41	108-88-3	
Xylene (Total)	<b>&lt;75.0</b>	ug/kg	180	75.0	1	04/23/19 08:30	04/24/19 02:41	1330-20-7	W
m&p-Xylene	<b>&lt;50.0</b>	ug/kg	120	50.0	1	04/23/19 08:30	04/24/19 02:41	179601-23-1	W
o-Xylene	<b>&lt;25.0</b>	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 02:41	95-47-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	106	%	57-146		1	04/23/19 08:30	04/24/19 02:41	1868-53-7	
Toluene-d8 (S)	100	%	64-134		1	04/23/19 08:30	04/24/19 02:41	2037-26-5	
4-Bromofluorobenzene (S)	111	%	54-126		1	04/23/19 08:30	04/24/19 02:41	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	<b>41.3</b>	%	0.10	0.10	1		04/24/19 19:37		

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: B-5 (1-2.5')**      **Lab ID: 40185945009**      Collected: 04/16/19 09:25      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010    Preparation Method: EPA 3050									
Arsenic	24.2	mg/kg	6.3	1.3	1	04/18/19 09:15	04/22/19 14:43	7440-38-2	
Barium	26.9	mg/kg	0.63	0.19	1	04/18/19 09:15	04/22/19 14:43	7440-39-3	
Cadmium	2.3	mg/kg	0.63	0.17	1	04/18/19 09:15	04/22/19 14:43	7440-43-9	
Chromium	13.6	mg/kg	1.3	0.35	1	04/18/19 09:15	04/22/19 14:43	7440-47-3	
Lead	24.4	mg/kg	2.5	0.75	1	04/18/19 09:15	04/22/19 14:43	7439-92-1	
Selenium	<1.6	mg/kg	5.5	1.6	1	04/18/19 09:15	04/22/19 14:43	7782-49-2	
Silver	0.78J	mg/kg	1.3	0.43	1	04/18/19 09:15	04/22/19 14:43	7440-22-4	
<b>7471 Mercury</b>									
Analytical Method: EPA 7471    Preparation Method: EPA 7471									
Mercury	0.014J	mg/kg	0.040	0.012	1	04/22/19 12:08	04/23/19 10:57	7439-97-6	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546									
Acenaphthene	<99.2	ug/kg	330	99.2	20	04/22/19 08:19	04/22/19 16:26	83-32-9	
Acenaphthylene	<84.2	ug/kg	281	84.2	20	04/22/19 08:19	04/22/19 16:26	208-96-8	
Anthracene	579	ug/kg	486	146	20	04/22/19 08:19	04/22/19 16:26	120-12-7	
Benzo(a)anthracene	2300	ug/kg	271	81.0	20	04/22/19 08:19	04/22/19 16:26	56-55-3	
Benzo(a)pyrene	2540	ug/kg	214	64.2	20	04/22/19 08:19	04/22/19 16:26	50-32-8	
Benzo(b)fluoranthene	2670	ug/kg	240	72.2	20	04/22/19 08:19	04/22/19 16:26	205-99-2	
Benzo(g,h,i)perylene	2040	ug/kg	173	51.9	20	04/22/19 08:19	04/22/19 16:26	191-24-2	
Benzo(k)fluoranthene	2050	ug/kg	214	64.1	20	04/22/19 08:19	04/22/19 16:26	207-08-9	
Chrysene	2500	ug/kg	286	86.2	20	04/22/19 08:19	04/22/19 16:26	218-01-9	
Dibenz(a,h)anthracene	698	ug/kg	190	57.1	20	04/22/19 08:19	04/22/19 16:26	53-70-3	
Fluoranthene	4970	ug/kg	445	133	20	04/22/19 08:19	04/22/19 16:26	206-44-0	
Fluorene	<106	ug/kg	353	106	20	04/22/19 08:19	04/22/19 16:26	86-73-7	
Indeno(1,2,3-cd)pyrene	1760	ug/kg	187	56.2	20	04/22/19 08:19	04/22/19 16:26	193-39-5	
1-Methylnaphthalene	<103	ug/kg	342	103	20	04/22/19 08:19	04/22/19 16:26	90-12-0	
2-Methylnaphthalene	<128	ug/kg	427	128	20	04/22/19 08:19	04/22/19 16:26	91-57-6	
Naphthalene	<215	ug/kg	718	215	20	04/22/19 08:19	04/22/19 16:26	91-20-3	
Phenanthrene	2020	ug/kg	991	298	20	04/22/19 08:19	04/22/19 16:26	85-01-8	
Pyrene	3610	ug/kg	383	115	20	04/22/19 08:19	04/22/19 16:26	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	53	%	28-99		20	04/22/19 08:19	04/22/19 16:26	321-60-8	
Terphenyl-d14 (S)	49	%	10-107		20	04/22/19 08:19	04/22/19 16:26	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260    Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:50	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:50	108-67-8	W
Benzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:50	71-43-2	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:50	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:50	1634-04-4	W
Naphthalene	<40.0	ug/kg	250	40.0	1	04/18/19 08:15	04/18/19 13:50	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:50	108-88-3	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	04/18/19 08:15	04/18/19 13:50	1330-20-7	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	04/18/19 08:15	04/18/19 13:50	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 13:50	95-47-6	W

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

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**Sample: B-5 (1-2.5')**      **Lab ID: 40185945009**      Collected: 04/16/19 09:25      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
<b>Surrogates</b>									
Dibromofluoromethane (S)	96	%	57-146		1	04/18/19 08:15	04/18/19 13:50	1868-53-7	
Toluene-d8 (S)	93	%	64-134		1	04/18/19 08:15	04/18/19 13:50	2037-26-5	
4-Bromofluorobenzene (S)	104	%	54-126		1	04/18/19 08:15	04/18/19 13:50	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	<b>21.7</b>	%	0.10	0.10	1		04/23/19 09:19		

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: B-5 (4-5)**      **Lab ID: 40185945010**      Collected: 04/16/19 09:25      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	<b>4.9J</b>	mg/kg	6.8	1.4	1	04/23/19 07:13	04/23/19 12:49	7440-38-2	
Barium	<b>107</b>	mg/kg	0.68	0.20	1	04/23/19 07:13	04/23/19 12:49	7440-39-3	M0,R1
Cadmium	<b>0.45J</b>	mg/kg	0.68	0.18	1	04/23/19 07:13	04/23/19 12:49	7440-43-9	
Chromium	<b>17.4</b>	mg/kg	1.4	0.38	1	04/23/19 07:13	04/23/19 12:49	7440-47-3	
Lead	<b>81.5</b>	mg/kg	2.7	0.81	1	04/23/19 07:13	04/23/19 12:49	7439-92-1	M0,R1
Selenium	<b>&lt;1.8</b>	mg/kg	5.9	1.8	1	04/23/19 07:13	04/23/19 12:49	7782-49-2	
Silver	<b>0.54J</b>	mg/kg	1.4	0.47	1	04/23/19 07:13	04/23/19 12:49	7440-22-4	
<b>7471 Mercury</b>									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<b>0.29</b>	mg/kg	0.044	0.013	1	04/24/19 08:52	04/25/19 09:19	7439-97-6	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<b>145</b>	ug/kg	17.5	5.3	1	04/23/19 08:41	04/23/19 19:26	83-32-9	
Acenaphthylene	<b>486</b>	ug/kg	15.0	4.5	1	04/23/19 08:41	04/23/19 19:26	208-96-8	
Anthracene	<b>330</b>	ug/kg	25.8	7.8	1	04/23/19 08:41	04/23/19 19:26	120-12-7	
Benzo(a)anthracene	<b>502</b>	ug/kg	14.4	4.3	1	04/23/19 08:41	04/23/19 19:26	56-55-3	
Benzo(a)pyrene	<b>702</b>	ug/kg	11.4	3.4	1	04/23/19 08:41	04/23/19 19:26	50-32-8	
Benzo(b)fluoranthene	<b>758</b>	ug/kg	12.8	3.8	1	04/23/19 08:41	04/23/19 19:26	205-99-2	
Benzo(g,h,i)perylene	<b>460</b>	ug/kg	9.2	2.8	1	04/23/19 08:41	04/23/19 19:26	191-24-2	
Benzo(k)fluoranthene	<b>240</b>	ug/kg	11.4	3.4	1	04/23/19 08:41	04/23/19 19:26	207-08-9	
Chrysene	<b>552</b>	ug/kg	15.2	4.6	1	04/23/19 08:41	04/23/19 19:26	218-01-9	
Dibenz(a,h)anthracene	<b>126</b>	ug/kg	10.1	3.0	1	04/23/19 08:41	04/23/19 19:26	53-70-3	
Fluoranthene	<b>712</b>	ug/kg	23.7	7.1	1	04/23/19 08:41	04/23/19 19:26	206-44-0	
Fluorene	<b>201</b>	ug/kg	18.8	5.6	1	04/23/19 08:41	04/23/19 19:26	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>346</b>	ug/kg	10	3.0	1	04/23/19 08:41	04/23/19 19:26	193-39-5	
1-Methylnaphthalene	<b>217</b>	ug/kg	18.2	5.5	1	04/23/19 08:41	04/23/19 19:26	90-12-0	
2-Methylnaphthalene	<b>324</b>	ug/kg	22.7	6.8	1	04/23/19 08:41	04/23/19 19:26	91-57-6	
Naphthalene	<b>757</b>	ug/kg	38.2	11.4	1	04/23/19 08:41	04/23/19 19:26	91-20-3	
Phenanthrene	<b>468</b>	ug/kg	52.7	15.8	1	04/23/19 08:41	04/23/19 19:26	85-01-8	
Pyrene	<b>890</b>	ug/kg	20.4	6.1	1	04/23/19 08:41	04/23/19 19:26	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	52	%	28-99		1	04/23/19 08:41	04/23/19 19:26	321-60-8	
Terphenyl-d14 (S)	51	%	10-107		1	04/23/19 08:41	04/23/19 19:26	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<b>45.5J</b>	ug/kg	81.6	34.0	1	04/23/19 08:30	04/24/19 20:02	95-63-6	
1,3,5-Trimethylbenzene	<b>&lt;25.0</b>	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 20:02	108-67-8	W
Benzene	<b>37.0J</b>	ug/kg	81.6	34.0	1	04/23/19 08:30	04/24/19 20:02	71-43-2	
Ethylbenzene	<b>49.2J</b>	ug/kg	81.6	34.0	1	04/23/19 08:30	04/24/19 20:02	100-41-4	
Methyl-tert-butyl ether	<b>&lt;25.0</b>	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 20:02	1634-04-4	W
Naphthalene	<b>283J</b>	ug/kg	340	54.4	1	04/23/19 08:30	04/24/19 20:02	91-20-3	
Toluene	<b>48.2J</b>	ug/kg	81.6	34.0	1	04/23/19 08:30	04/24/19 20:02	108-88-3	
Xylene (Total)	<b>105J</b>	ug/kg	245	102	1	04/23/19 08:30	04/24/19 20:02	1330-20-7	
m&p-Xylene	<b>75.0J</b>	ug/kg	163	68.0	1	04/23/19 08:30	04/24/19 20:02	179601-23-1	
o-Xylene	<b>&lt;25.0</b>	ug/kg	60.0	25.0	1	04/23/19 08:30	04/24/19 20:02	95-47-6	W

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

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**Sample: B-5 (4-5')**      **Lab ID: 40185945010**    Collected: 04/16/19 09:25    Received: 04/17/19 09:30    Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
<b>Surrogates</b>									
Dibromofluoromethane (S)	109	%	57-146		1	04/23/19 08:30	04/24/19 20:02	1868-53-7	
Toluene-d8 (S)	108	%	64-134		1	04/23/19 08:30	04/24/19 20:02	2037-26-5	
4-Bromofluorobenzene (S)	122	%	54-126		1	04/23/19 08:30	04/24/19 20:02	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	<b>26.4</b>	%	0.10	0.10	1		04/23/19 09:19		

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: B-6 (1-2)**      **Lab ID: 40185945011**      Collected: 04/16/19 10:00      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	<b>10.5</b>	mg/kg	7.0	1.5	1	04/18/19 09:15	04/22/19 14:46	7440-38-2	
Barium	<b>50.9</b>	mg/kg	0.70	0.21	1	04/18/19 09:15	04/22/19 14:46	7440-39-3	
Cadmium	<b>0.19J</b>	mg/kg	0.70	0.19	1	04/18/19 09:15	04/22/19 14:46	7440-43-9	
Chromium	<b>9.3</b>	mg/kg	1.4	0.39	1	04/18/19 09:15	04/22/19 14:46	7440-47-3	
Lead	<b>11.3</b>	mg/kg	2.8	0.83	1	04/18/19 09:15	04/22/19 14:46	7439-92-1	
Selenium	<b>&lt;1.8</b>	mg/kg	6.1	1.8	1	04/18/19 09:15	04/22/19 14:46	7782-49-2	
Silver	<b>0.55J</b>	mg/kg	1.4	0.48	1	04/18/19 09:15	04/22/19 14:46	7440-22-4	
<b>7471 Mercury</b>									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<b>0.023J</b>	mg/kg	0.049	0.015	1	04/22/19 12:08	04/23/19 10:59	7439-97-6	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	<b>35.8</b>	ug/kg	18.9	5.7	1	04/22/19 08:19	04/24/19 14:10	83-32-9	
Acenaphthylene	<b>4.9J</b>	ug/kg	16.2	4.8	1	04/22/19 08:19	04/24/19 14:10	208-96-8	
Anthracene	<b>29.6</b>	ug/kg	27.9	8.4	1	04/22/19 08:19	04/24/19 14:10	120-12-7	
Benzo(a)anthracene	<b>32.2</b>	ug/kg	15.6	4.7	1	04/22/19 08:19	04/24/19 14:10	56-55-3	
Benzo(a)pyrene	<b>23.4</b>	ug/kg	12.3	3.7	1	04/22/19 08:19	04/24/19 14:10	50-32-8	
Benzo(b)fluoranthene	<b>18.3</b>	ug/kg	13.8	4.1	1	04/22/19 08:19	04/24/19 14:10	205-99-2	
Benzo(g,h,i)perylene	<b>9.5J</b>	ug/kg	9.9	3.0	1	04/22/19 08:19	04/24/19 14:10	191-24-2	
Benzo(k)fluoranthene	<b>6.2J</b>	ug/kg	12.3	3.7	1	04/22/19 08:19	04/24/19 14:10	207-08-9	
Chrysene	<b>31.0</b>	ug/kg	16.4	5.0	1	04/22/19 08:19	04/24/19 14:10	218-01-9	
Dibenz(a,h)anthracene	<b>&lt;3.3</b>	ug/kg	10.9	3.3	1	04/22/19 08:19	04/24/19 14:10	53-70-3	
Fluoranthene	<b>49.2</b>	ug/kg	25.6	7.6	1	04/22/19 08:19	04/24/19 14:10	206-44-0	
Fluorene	<b>43.3</b>	ug/kg	20.3	6.1	1	04/22/19 08:19	04/24/19 14:10	86-73-7	
Indeno(1,2,3-cd)pyrene	<b>3.6J</b>	ug/kg	10.8	3.2	1	04/22/19 08:19	04/24/19 14:10	193-39-5	
1-Methylnaphthalene	<b>47.2</b>	ug/kg	19.7	5.9	1	04/22/19 08:19	04/24/19 14:10	90-12-0	
2-Methylnaphthalene	<b>50.2</b>	ug/kg	24.5	7.3	1	04/22/19 08:19	04/24/19 14:10	91-57-6	
Naphthalene	<b>40.3J</b>	ug/kg	41.3	12.4	1	04/22/19 08:19	04/24/19 14:10	91-20-3	
Phenanthrene	<b>234</b>	ug/kg	57.0	17.1	1	04/22/19 08:19	04/24/19 14:10	85-01-8	
Pyrene	<b>44.4</b>	ug/kg	22.0	6.6	1	04/22/19 08:19	04/24/19 14:10	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	32	%	28-99		1	04/22/19 08:19	04/24/19 14:10	321-60-8	
Terphenyl-d14 (S)	18	%	10-107		1	04/22/19 08:19	04/24/19 14:10	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<b>200</b>	ug/kg	119	49.7	1	04/18/19 08:15	04/18/19 18:21	95-63-6	
1,3,5-Trimethylbenzene	<b>83.5J</b>	ug/kg	119	49.7	1	04/18/19 08:15	04/18/19 18:21	108-67-8	
Benzene	<b>&lt;33.8</b>	ug/kg	81.1	33.8	1	04/18/19 08:15	04/18/19 18:21	71-43-2	W
Ethylbenzene	<b>&lt;33.8</b>	ug/kg	81.1	33.8	1	04/18/19 08:15	04/18/19 18:21	100-41-4	W
Methyl-tert-butyl ether	<b>&lt;33.8</b>	ug/kg	81.1	33.8	1	04/18/19 08:15	04/18/19 18:21	1634-04-4	W
Naphthalene	<b>112J</b>	ug/kg	497	79.6	1	04/18/19 08:15	04/18/19 18:21	91-20-3	
Toluene	<b>61.3J</b>	ug/kg	119	49.7	1	04/18/19 08:15	04/18/19 18:21	108-88-3	
Xylene (Total)	<b>258J</b>	ug/kg	358	149	1	04/18/19 08:15	04/18/19 18:21	1330-20-7	
m&p-Xylene	<b>122J</b>	ug/kg	238	99.4	1	04/18/19 08:15	04/18/19 18:21	179601-23-1	
o-Xylene	<b>136</b>	ug/kg	119	49.7	1	04/18/19 08:15	04/18/19 18:21	95-47-6	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

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**Sample: B-6 (1-2')**      **Lab ID: 40185945011**      Collected: 04/16/19 10:00      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
<b>Surrogates</b>									
Dibromofluoromethane (S)	94	%	57-146		1	04/18/19 08:15	04/18/19 18:21	1868-53-7	
Toluene-d8 (S)	86	%	64-134		1	04/18/19 08:15	04/18/19 18:21	2037-26-5	
4-Bromofluorobenzene (S)	84	%	54-126		1	04/18/19 08:15	04/18/19 18:21	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	<b>32.0</b>	%	0.10	0.10	1		04/23/19 09:19		

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER  
Pace Project No.: 40185945

**Sample: B-7 (1-2.5')**      **Lab ID: 40185945012**      Collected: 04/16/19 10:20      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010    Preparation Method: EPA 3050									
Arsenic	<1.2	mg/kg	5.8	1.2	1	04/18/19 09:15	04/22/19 14:48	7440-38-2	
Barium	40.9	mg/kg	0.58	0.17	1	04/18/19 09:15	04/22/19 14:48	7440-39-3	
Cadmium	<0.15	mg/kg	0.58	0.15	1	04/18/19 09:15	04/22/19 14:48	7440-43-9	
Chromium	16.3	mg/kg	1.2	0.32	1	04/18/19 09:15	04/22/19 14:48	7440-47-3	
Lead	8.2	mg/kg	2.3	0.69	1	04/18/19 09:15	04/22/19 14:48	7439-92-1	
Selenium	<1.5	mg/kg	5.0	1.5	1	04/18/19 09:15	04/22/19 14:48	7782-49-2	
Silver	0.54J	mg/kg	1.2	0.40	1	04/18/19 09:15	04/22/19 14:48	7440-22-4	
<b>7471 Mercury</b>									
Analytical Method: EPA 7471    Preparation Method: EPA 7471									
Mercury	0.015J	mg/kg	0.040	0.012	1	04/22/19 12:08	04/23/19 11:02	7439-97-6	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM    Preparation Method: EPA 3546									
Acenaphthene	100J	ug/kg	121	36.3	8	04/22/19 08:19	04/24/19 22:46	83-32-9	
Acenaphthylene	327	ug/kg	103	30.8	8	04/22/19 08:19	04/24/19 22:46	208-96-8	
Anthracene	383	ug/kg	178	53.4	8	04/22/19 08:19	04/24/19 22:46	120-12-7	
Benzo(a)anthracene	924	ug/kg	99.0	29.6	8	04/22/19 08:19	04/24/19 22:46	56-55-3	
Benzo(a)pyrene	1040	ug/kg	78.2	23.5	8	04/22/19 08:19	04/24/19 22:46	50-32-8	
Benzo(b)fluoranthene	1080	ug/kg	87.9	26.4	8	04/22/19 08:19	04/24/19 22:46	205-99-2	
Benzo(g,h,i)perylene	782	ug/kg	63.3	19.0	8	04/22/19 08:19	04/24/19 22:46	191-24-2	
Benzo(k)fluoranthene	837	ug/kg	78.1	23.4	8	04/22/19 08:19	04/24/19 22:46	207-08-9	
Chrysene	1120	ug/kg	105	31.5	8	04/22/19 08:19	04/24/19 22:46	218-01-9	
Dibenz(a,h)anthracene	258	ug/kg	69.6	20.9	8	04/22/19 08:19	04/24/19 22:46	53-70-3	
Fluoranthene	1960	ug/kg	163	48.7	8	04/22/19 08:19	04/24/19 22:46	206-44-0	
Fluorene	163	ug/kg	129	38.7	8	04/22/19 08:19	04/24/19 22:46	86-73-7	
Indeno(1,2,3-cd)pyrene	690	ug/kg	68.5	20.5	8	04/22/19 08:19	04/24/19 22:46	193-39-5	
1-Methylnaphthalene	918	ug/kg	125	37.6	8	04/22/19 08:19	04/24/19 22:46	90-12-0	
2-Methylnaphthalene	825	ug/kg	156	46.7	8	04/22/19 08:19	04/24/19 22:46	91-57-6	
Naphthalene	2960	ug/kg	263	78.7	8	04/22/19 08:19	04/24/19 22:46	91-20-3	
Phenanthrene	1920	ug/kg	363	109	8	04/22/19 08:19	04/24/19 22:46	85-01-8	
Pyrene	1670	ug/kg	140	42.2	8	04/22/19 08:19	04/24/19 22:46	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	54	%	28-99		8	04/22/19 08:19	04/24/19 22:46	321-60-8	
Terphenyl-d14 (S)	50	%	10-107		8	04/22/19 08:19	04/24/19 22:46	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260    Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	205	ug/kg	75.4	31.4	1	04/18/19 08:15	04/18/19 14:13	95-63-6	
1,3,5-Trimethylbenzene	60.1J	ug/kg	75.4	31.4	1	04/18/19 08:15	04/18/19 14:13	108-67-8	
Benzene	<26.9	ug/kg	64.5	26.9	1	04/18/19 08:15	04/18/19 14:13	71-43-2	W
Ethylbenzene	90.3	ug/kg	75.4	31.4	1	04/18/19 08:15	04/18/19 14:13	100-41-4	
Methyl-tert-butyl ether	<26.9	ug/kg	64.5	26.9	1	04/18/19 08:15	04/18/19 14:13	1634-04-4	W
Naphthalene	260J	ug/kg	314	50.3	1	04/18/19 08:15	04/18/19 14:13	91-20-3	
Toluene	223	ug/kg	75.4	31.4	1	04/18/19 08:15	04/18/19 14:13	108-88-3	
Xylene (Total)	560	ug/kg	226	94.2	1	04/18/19 08:15	04/18/19 14:13	1330-20-7	
m&p-Xylene	318	ug/kg	151	62.8	1	04/18/19 08:15	04/18/19 14:13	179601-23-1	
o-Xylene	242	ug/kg	75.4	31.4	1	04/18/19 08:15	04/18/19 14:13	95-47-6	

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

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**Sample: B-7 (1-2.5')**      **Lab ID: 40185945012**      Collected: 04/16/19 10:20      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
<b>Surrogates</b>									
Dibromofluoromethane (S)	93	%	57-146		1	04/18/19 08:15	04/18/19 14:13	1868-53-7	
Toluene-d8 (S)	94	%	64-134		1	04/18/19 08:15	04/18/19 14:13	2037-26-5	
4-Bromofluorobenzene (S)	105	%	54-126		1	04/18/19 08:15	04/18/19 14:13	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	<b>14.4</b>	%	0.10	0.10	1		04/23/19 09:19		

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: B-8 (1-2.5')**      **Lab ID: 40185945013**      Collected: 04/16/19 09:40      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP</b>									
Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	8.8	mg/kg	6.1	1.3	1	04/18/19 09:15	04/22/19 14:50	7440-38-2	
Barium	18.1	mg/kg	0.61	0.18	1	04/18/19 09:15	04/22/19 14:50	7440-39-3	
Cadmium	<0.16	mg/kg	0.61	0.16	1	04/18/19 09:15	04/22/19 14:50	7440-43-9	
Chromium	7.9	mg/kg	1.2	0.34	1	04/18/19 09:15	04/22/19 14:50	7440-47-3	
Lead	3.6	mg/kg	2.5	0.74	1	04/18/19 09:15	04/22/19 14:50	7439-92-1	
Selenium	2.8J	mg/kg	5.4	1.6	1	04/18/19 09:15	04/22/19 14:50	7782-49-2	B
Silver	<0.42	mg/kg	1.2	0.42	1	04/18/19 09:15	04/22/19 14:50	7440-22-4	
<b>7471 Mercury</b>									
Analytical Method: EPA 7471 Preparation Method: EPA 7471									
Mercury	<0.012	mg/kg	0.040	0.012	1	04/22/19 12:08	04/23/19 11:04	7439-97-6	
<b>8270 MSSV PAH by SIM</b>									
Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546									
Acenaphthene	7.7J	ug/kg	16.6	5.0	1	04/22/19 08:19	04/24/19 14:27	83-32-9	
Acenaphthylene	5.4J	ug/kg	14.2	4.3	1	04/22/19 08:19	04/24/19 14:27	208-96-8	
Anthracene	22.4J	ug/kg	24.5	7.4	1	04/22/19 08:19	04/24/19 14:27	120-12-7	
Benzo(a)anthracene	33.6	ug/kg	13.7	4.1	1	04/22/19 08:19	04/24/19 14:27	56-55-3	
Benzo(a)pyrene	24.1	ug/kg	10.8	3.2	1	04/22/19 08:19	04/24/19 14:27	50-32-8	
Benzo(b)fluoranthene	25.7	ug/kg	12.1	3.6	1	04/22/19 08:19	04/24/19 14:27	205-99-2	
Benzo(g,h,i)perylene	11.9	ug/kg	8.7	2.6	1	04/22/19 08:19	04/24/19 14:27	191-24-2	
Benzo(k)fluoranthene	7.8J	ug/kg	10.8	3.2	1	04/22/19 08:19	04/24/19 14:27	207-08-9	
Chrysene	30.6	ug/kg	14.5	4.4	1	04/22/19 08:19	04/24/19 14:27	218-01-9	
Dibenz(a,h)anthracene	3.3J	ug/kg	9.6	2.9	1	04/22/19 08:19	04/24/19 14:27	53-70-3	
Fluoranthene	39.4	ug/kg	22.5	6.7	1	04/22/19 08:19	04/24/19 14:27	206-44-0	
Fluorene	<5.3	ug/kg	17.8	5.3	1	04/22/19 08:19	04/24/19 14:27	86-73-7	
Indeno(1,2,3-cd)pyrene	6.3J	ug/kg	9.5	2.8	1	04/22/19 08:19	04/24/19 14:27	193-39-5	
1-Methylnaphthalene	100	ug/kg	17.3	5.2	1	04/22/19 08:19	04/24/19 14:27	90-12-0	
2-Methylnaphthalene	85.5	ug/kg	21.5	6.5	1	04/22/19 08:19	04/24/19 14:27	91-57-6	
Naphthalene	29.7J	ug/kg	36.3	10.9	1	04/22/19 08:19	04/24/19 14:27	91-20-3	
Phenanthrene	122	ug/kg	50.1	15.0	1	04/22/19 08:19	04/24/19 14:27	85-01-8	
Pyrene	37.0	ug/kg	19.4	5.8	1	04/22/19 08:19	04/24/19 14:27	129-00-0	
<b>Surrogates</b>									
2-Fluorobiphenyl (S)	56	%	28-99		1	04/22/19 08:19	04/24/19 14:27	321-60-8	
Terphenyl-d14 (S)	54	%	10-107		1	04/22/19 08:19	04/24/19 14:27	1718-51-0	
<b>8260 MSV Med Level Normal List</b>									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 14:36	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 14:36	108-67-8	W
Benzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 14:36	71-43-2	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 14:36	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 14:36	1634-04-4	W
Naphthalene	<40.0	ug/kg	250	40.0	1	04/18/19 08:15	04/18/19 14:36	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 14:36	108-88-3	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	04/18/19 08:15	04/18/19 14:36	1330-20-7	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	04/18/19 08:15	04/18/19 14:36	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 14:36	95-47-6	W

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## ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

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**Sample: B-8 (1-2.5')**      **Lab ID: 40185945013**      Collected: 04/16/19 09:40      Received: 04/17/19 09:30      Matrix: Solid

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

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>	Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B								
<b>Surrogates</b>									
Dibromofluoromethane (S)	96	%	57-146		1	04/18/19 08:15	04/18/19 14:36	1868-53-7	
Toluene-d8 (S)	95	%	64-134		1	04/18/19 08:15	04/18/19 14:36	2037-26-5	
4-Bromofluorobenzene (S)	100	%	54-126		1	04/18/19 08:15	04/18/19 14:36	460-00-4	
<b>Percent Moisture</b>									
Analytical Method: ASTM D2974-87									
Percent Moisture	<b>22.6</b>	%	0.10	0.10	1		04/23/19 09:19		

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### ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

**Sample: TRIP BLANK**      **Lab ID: 40185945014**      Collected: 04/16/19 00:00      Received: 04/17/19 09:30      Matrix: Solid

*Results reported on a "wet-weight" basis*

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV Med Level Normal List</b>		Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B							
1,2,4-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 12:17	95-63-6	W
1,3,5-Trimethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 12:17	108-67-8	W
Benzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 12:17	71-43-2	W
Ethylbenzene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 12:17	100-41-4	W
Methyl-tert-butyl ether	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 12:17	1634-04-4	W
Naphthalene	<40.0	ug/kg	250	40.0	1	04/18/19 08:15	04/18/19 12:17	91-20-3	W
Toluene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 12:17	108-88-3	W
Xylene (Total)	<75.0	ug/kg	180	75.0	1	04/18/19 08:15	04/18/19 12:17	1330-20-7	W
m&p-Xylene	<50.0	ug/kg	120	50.0	1	04/18/19 08:15	04/18/19 12:17	179601-23-1	W
o-Xylene	<25.0	ug/kg	60.0	25.0	1	04/18/19 08:15	04/18/19 12:17	95-47-6	W
<b>Surrogates</b>									
Dibromofluoromethane (S)	89	%	57-146		1	04/18/19 08:15	04/18/19 12:17	1868-53-7	
Toluene-d8 (S)	88	%	64-134		1	04/18/19 08:15	04/18/19 12:17	2037-26-5	
4-Bromofluorobenzene (S)	107	%	54-126		1	04/18/19 08:15	04/18/19 12:17	460-00-4	

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

QC Batch: 319053

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 40185945009, 40185945011, 40185945012, 40185945013

METHOD BLANK: 1854354

Matrix: Solid

Associated Lab Samples: 40185945009, 40185945011, 40185945012, 40185945013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.010	0.035	04/23/19 10:06	

LABORATORY CONTROL SAMPLE: 1854355

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.83	0.84	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1854356 1854357

Parameter	Units	1854356		1854357		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40185957001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Mercury	mg/kg	<0.012	0.92	0.91	0.94	0.94	101	103	85-115	1	20

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

QC Batch: 319244

Analysis Method: EPA 7471

QC Batch Method: EPA 7471

Analysis Description: 7471 Mercury

Associated Lab Samples: 40185945010

METHOD BLANK: 1854981

Matrix: Solid

Associated Lab Samples: 40185945010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	<0.010	0.035	04/25/19 09:08	

LABORATORY CONTROL SAMPLE: 1854982

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	0.83	0.85	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1854983 1854984

Parameter	Units	40186156001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury	mg/kg	0.051	0.92	0.91	0.98	0.97	101	101	85-115	1	20	

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER  
Pace Project No.: 40185945

QC Batch: 318766 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Associated Lab Samples: 40185945009, 40185945011, 40185945012, 40185945013

METHOD BLANK: 1852423 Matrix: Solid  
Associated Lab Samples: 40185945009, 40185945011, 40185945012, 40185945013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.0	5.0	04/22/19 14:12	
Barium	mg/kg	<0.15	0.50	04/22/19 14:12	
Cadmium	mg/kg	<0.13	0.50	04/22/19 14:12	
Chromium	mg/kg	<0.28	1.0	04/22/19 14:12	
Lead	mg/kg	<0.60	2.0	04/22/19 14:12	
Selenium	mg/kg	1.6J	4.4	04/22/19 14:12	
Silver	mg/kg	<0.34	1.0	04/22/19 14:12	

LABORATORY CONTROL SAMPLE: 1852424

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	47.9	96	80-120	
Barium	mg/kg	50	49.0	98	80-120	
Cadmium	mg/kg	50	50.2	100	80-120	
Chromium	mg/kg	50	48.7	97	80-120	
Lead	mg/kg	50	49.5	99	80-120	
Selenium	mg/kg	50	50.0	100	80-120	
Silver	mg/kg	25	25.8	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1852425 1852426

Parameter	Units	40185943002		1852425		1852426		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Arsenic	mg/kg	10.9	59.3	59.2	59.2	64.5	59.8	90	82	75-125	8	20	
Barium	mg/kg	52.3	59.3	59.2	59.2	122	120	117	114	75-125	1	20	
Cadmium	mg/kg	0.50J	59.3	59.2	59.0	56.4	56.4	99	94	75-125	4	20	
Chromium	mg/kg	22.7	59.3	59.2	81.8	77.6	77.6	100	93	75-125	5	20	
Lead	mg/kg	13.0	59.3	59.2	68.9	64.2	64.2	94	86	75-125	7	20	
Selenium	mg/kg	<1.6	59.3	59.2	57.6	54.3	54.3	97	92	75-125	6	20	
Silver	mg/kg	0.43J	29.7	29.7	30.5	30.2	30.2	101	100	75-125	1	20	

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER  
Pace Project No.: 40185945

QC Batch: 319136 Analysis Method: EPA 6010  
QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
Associated Lab Samples: 40185945010

METHOD BLANK: 1854569 Matrix: Solid  
Associated Lab Samples: 40185945010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.0	5.0	04/23/19 12:44	
Barium	mg/kg	<0.15	0.50	04/23/19 12:44	
Cadmium	mg/kg	<0.13	0.50	04/23/19 12:44	
Chromium	mg/kg	<0.28	1.0	04/23/19 12:44	
Lead	mg/kg	<0.60	2.0	04/23/19 12:44	
Selenium	mg/kg	<1.3	4.4	04/23/19 12:44	
Silver	mg/kg	<0.34	1.0	04/23/19 12:44	

LABORATORY CONTROL SAMPLE: 1854570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	46.9	94	80-120	
Barium	mg/kg	50	48.4	97	80-120	
Cadmium	mg/kg	50	48.2	96	80-120	
Chromium	mg/kg	50	51.6	103	80-120	
Lead	mg/kg	50	46.9	94	80-120	
Selenium	mg/kg	50	48.8	98	80-120	
Silver	mg/kg	25	26.3	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1854571 1854572

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40185945010 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
Arsenic	mg/kg	4.9J	67.7	67.6	65.8	67.4	90	92	75-125	2	20	
Barium	mg/kg	107	67.7	67.6	286	177	264	104	75-125	47	20	M0,R1
Cadmium	mg/kg	0.45J	67.7	67.6	64.4	63.6	94	93	75-125	1	20	
Chromium	mg/kg	17.4	67.7	67.6	87.7	86.5	104	102	75-125	1	20	
Lead	mg/kg	81.5	67.7	67.6	133	94.9	76	20	75-125	34	20	M0,R1
Selenium	mg/kg	<1.8	67.7	67.6	64.8	64.9	94	95	75-125	0	20	
Silver	mg/kg	0.54J	33.8	33.8	34.8	34.7	101	101	75-125	0	20	

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**QUALITY CONTROL DATA**

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

QC Batch:	318800	Analysis Method:	EPA 8260
QC Batch Method:	EPA 5035/5030B	Analysis Description:	8260 MSV Med Level Normal List
Associated Lab Samples:	40185945001, 40185945003, 40185945005, 40185945007, 40185945009, 40185945011, 40185945012, 40185945013, 40185945014		

METHOD BLANK:	1852604	Matrix:	Solid
Associated Lab Samples:	40185945001, 40185945003, 40185945005, 40185945007, 40185945009, 40185945011, 40185945012, 40185945013, 40185945014		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	04/18/19 09:52	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	04/18/19 09:52	
Benzene	ug/kg	<9.2	20.0	04/18/19 09:52	
Ethylbenzene	ug/kg	<12.4	50.0	04/18/19 09:52	
m&p-Xylene	ug/kg	<34.4	100	04/18/19 09:52	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	04/18/19 09:52	
Naphthalene	ug/kg	<40.0	250	04/18/19 09:52	
o-Xylene	ug/kg	<14.0	50.0	04/18/19 09:52	
Toluene	ug/kg	<11.2	50.0	04/18/19 09:52	
Xylene (Total)	ug/kg	<48.4	150	04/18/19 09:52	
4-Bromofluorobenzene (S)	%	108	54-126	04/18/19 09:52	
Dibromofluoromethane (S)	%	97	57-146	04/18/19 09:52	
Toluene-d8 (S)	%	96	64-134	04/18/19 09:52	

LABORATORY CONTROL SAMPLE: 1852605

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	2500	2410	96	70-130	
Ethylbenzene	ug/kg	2500	2510	101	82-122	
m&p-Xylene	ug/kg	5000	5130	103	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2560	102	70-130	
o-Xylene	ug/kg	2500	2520	101	70-130	
Toluene	ug/kg	2500	2350	94	80-121	
Xylene (Total)	ug/kg	7500	7660	102	70-130	
4-Bromofluorobenzene (S)	%			114	54-126	
Dibromofluoromethane (S)	%			103	57-146	
Toluene-d8 (S)	%			97	64-134	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1852606 1852607

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40185959004 Result	Spike Conc.	Spike Conc.	MS Result						
Benzene	ug/kg	<25.0	1280	1280	1280	1260	100	98	70-130	2	20
Ethylbenzene	ug/kg	<25.0	1280	1280	1320	1250	103	97	80-122	5	20
m&p-Xylene	ug/kg	<50.0	2570	2570	2740	2590	107	101	70-130	6	20
Methyl-tert-butyl ether	ug/kg	<25.0	1280	1280	1290	1310	101	102	70-130	2	20
o-Xylene	ug/kg	<25.0	1280	1280	1370	1310	107	102	70-130	4	20

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

Parameter	Units	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1852606		1852607		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		40185959004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Toluene	ug/kg	<25.0	1280	1280	1240	1160	96	90	80-121	7	20		
Xylene (Total)	ug/kg	<75.0	3850	3850	4110	3900	107	101	70-130	5	20		
4-Bromofluorobenzene (S)	%						123	119	54-126				
Dibromofluoromethane (S)	%						107	107	57-146				
Toluene-d8 (S)	%						104	103	64-134				

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER  
Pace Project No.: 40185945

QC Batch: 319216 Analysis Method: EPA 8260  
QC Batch Method: EPA 5035/5030B Analysis Description: 8260 MSV Med Level Normal List  
Associated Lab Samples: 40185945002, 40185945004, 40185945006, 40185945008, 40185945010

METHOD BLANK: 1854870 Matrix: Solid  
Associated Lab Samples: 40185945002, 40185945004, 40185945006, 40185945008, 40185945010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	<12.2	50.0	04/23/19 18:12	
1,3,5-Trimethylbenzene	ug/kg	<14.5	50.0	04/23/19 18:12	
Benzene	ug/kg	<9.2	20.0	04/23/19 18:12	
Ethylbenzene	ug/kg	<12.4	50.0	04/23/19 18:12	
m&p-Xylene	ug/kg	<34.4	100	04/23/19 18:12	
Methyl-tert-butyl ether	ug/kg	<12.7	50.0	04/23/19 18:12	
Naphthalene	ug/kg	<40.0	250	04/23/19 18:12	
o-Xylene	ug/kg	<14.0	50.0	04/23/19 18:12	
Toluene	ug/kg	<11.2	50.0	04/23/19 18:12	
Xylene (Total)	ug/kg	<48.4	150	04/23/19 18:12	
4-Bromofluorobenzene (S)	%	114	54-126	04/23/19 18:12	
Dibromofluoromethane (S)	%	100	57-146	04/23/19 18:12	
Toluene-d8 (S)	%	98	64-134	04/23/19 18:12	

LABORATORY CONTROL SAMPLE: 1854871

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Benzene	ug/kg	2500	2640	105	70-130	
Ethylbenzene	ug/kg	2500	2600	104	82-122	
m&p-Xylene	ug/kg	5000	5300	106	70-130	
Methyl-tert-butyl ether	ug/kg	2500	2590	104	70-130	
o-Xylene	ug/kg	2500	2640	106	70-130	
Toluene	ug/kg	2500	2450	98	80-121	
Xylene (Total)	ug/kg	7500	7940	106	70-130	
4-Bromofluorobenzene (S)	%			115	54-126	
Dibromofluoromethane (S)	%			102	57-146	
Toluene-d8 (S)	%			96	64-134	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER  
Pace Project No.: 40185945

QC Batch: 319038 Analysis Method: EPA 8270 by SIM  
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM  
Associated Lab Samples: 40185945001, 40185945003, 40185945007, 40185945009, 40185945011, 40185945012, 40185945013

METHOD BLANK: 1854300 Matrix: Solid  
Associated Lab Samples: 40185945001, 40185945003, 40185945007, 40185945009, 40185945011, 40185945012, 40185945013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	04/22/19 14:59	
2-Methylnaphthalene	ug/kg	<5.0	16.7	04/22/19 14:59	
Acenaphthene	ug/kg	<3.9	12.9	04/22/19 14:59	
Acenaphthylene	ug/kg	<3.3	11.0	04/22/19 14:59	
Anthracene	ug/kg	<5.7	19.0	04/22/19 14:59	
Benzo(a)anthracene	ug/kg	<3.2	10.6	04/22/19 14:59	
Benzo(a)pyrene	ug/kg	<2.5	8.4	04/22/19 14:59	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	04/22/19 14:59	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	04/22/19 14:59	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	04/22/19 14:59	
Chrysene	ug/kg	<3.4	11.2	04/22/19 14:59	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.5	04/22/19 14:59	
Fluoranthene	ug/kg	<5.2	17.4	04/22/19 14:59	
Fluorene	ug/kg	<4.1	13.8	04/22/19 14:59	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	04/22/19 14:59	
Naphthalene	ug/kg	<8.4	28.1	04/22/19 14:59	
Phenanthrene	ug/kg	<11.7	38.9	04/22/19 14:59	
Pyrene	ug/kg	<4.5	15.0	04/22/19 14:59	
2-Fluorobiphenyl (S)	%	69	28-99	04/22/19 14:59	
Terphenyl-d14 (S)	%	65	10-107	04/22/19 14:59	

LABORATORY CONTROL SAMPLE: 1854301

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	204	61	47-104	
2-Methylnaphthalene	ug/kg	333	216	65	50-100	
Acenaphthene	ug/kg	333	225	67	56-113	
Acenaphthylene	ug/kg	333	228	68	55-113	
Anthracene	ug/kg	333	248	74	59-103	
Benzo(a)anthracene	ug/kg	333	236	71	55-102	
Benzo(a)pyrene	ug/kg	333	257	77	59-114	
Benzo(b)fluoranthene	ug/kg	333	251	75	53-124	
Benzo(g,h,i)perylene	ug/kg	333	296	89	48-114	
Benzo(k)fluoranthene	ug/kg	333	237	71	61-118	
Chrysene	ug/kg	333	239	72	62-108	
Dibenz(a,h)anthracene	ug/kg	333	277	83	51-114	
Fluoranthene	ug/kg	333	245	73	59-113	
Fluorene	ug/kg	333	234	70	56-117	
Indeno(1,2,3-cd)pyrene	ug/kg	333	283	85	52-115	
Naphthalene	ug/kg	333	225	67	54-95	

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

LABORATORY CONTROL SAMPLE: 1854301

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	333	247	74	58-101	
Pyrene	ug/kg	333	243	73	56-105	
2-Fluorobiphenyl (S)	%			63	28-99	
Terphenyl-d14 (S)	%			63	10-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1854302 1854303

Parameter	Units	40186050008		1854303		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
1-Methylnaphthalene	ug/kg	11.5J	430	432	289	332	64	74	39-104	14	29	
2-Methylnaphthalene	ug/kg	14.5J	430	432	279	350	62	78	40-100	22	32	
Acenaphthene	ug/kg	<5.0	430	432	283	322	66	75	50-113	13	21	
Acenaphthylene	ug/kg	<4.3	430	432	291	324	67	75	42-114	11	27	
Anthracene	ug/kg	<7.4	430	432	280	318	64	73	33-105	13	21	
Benzo(a)anthracene	ug/kg	<4.1	430	432	285	315	66	73	43-102	10	21	
Benzo(a)pyrene	ug/kg	3.3J	430	432	302	337	69	77	34-117	11	22	
Benzo(b)fluoranthene	ug/kg	3.9J	430	432	314	335	72	77	35-124	6	35	
Benzo(g,h,i)perylene	ug/kg	9.5	430	432	279	308	63	69	10-120	10	30	
Benzo(k)fluoranthene	ug/kg	<3.2	430	432	278	319	64	74	31-128	14	27	
Chrysene	ug/kg	8.9J	430	432	286	321	64	72	39-108	12	20	
Dibenz(a,h)anthracene	ug/kg	<2.9	430	432	292	327	67	75	19-114	11	28	
Fluoranthene	ug/kg	<6.7	430	432	296	327	68	75	45-113	10	22	
Fluorene	ug/kg	<5.4	430	432	299	331	69	76	48-117	10	21	
Indeno(1,2,3-cd)pyrene	ug/kg	4.1J	430	432	289	322	66	74	10-123	11	28	
Naphthalene	ug/kg	15.2J	430	432	263	321	58	71	32-101	20	27	
Phenanthrene	ug/kg	19.4J	430	432	303	340	66	74	40-101	11	20	
Pyrene	ug/kg	<5.8	430	432	302	329	69	75	35-105	8	26	
2-Fluorobiphenyl (S)	%						61	69	28-99			
Terphenyl-d14 (S)	%						58	63	10-107			

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER  
Pace Project No.: 40185945

QC Batch: 319182 Analysis Method: EPA 8270 by SIM  
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM  
Associated Lab Samples: 40185945002, 40185945006, 40185945008, 40185945010

METHOD BLANK: 1854705 Matrix: Solid  
Associated Lab Samples: 40185945002, 40185945006, 40185945008, 40185945010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	04/23/19 11:37	
2-Methylnaphthalene	ug/kg	<5.0	16.7	04/23/19 11:37	
Acenaphthene	ug/kg	<3.9	12.9	04/23/19 11:37	
Acenaphthylene	ug/kg	<3.3	11.0	04/23/19 11:37	
Anthracene	ug/kg	<5.7	19.0	04/23/19 11:37	
Benzo(a)anthracene	ug/kg	<3.2	10.6	04/23/19 11:37	
Benzo(a)pyrene	ug/kg	<2.5	8.4	04/23/19 11:37	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	04/23/19 11:37	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	04/23/19 11:37	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	04/23/19 11:37	
Chrysene	ug/kg	<3.4	11.2	04/23/19 11:37	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.5	04/23/19 11:37	
Fluoranthene	ug/kg	<5.2	17.4	04/23/19 11:37	
Fluorene	ug/kg	<4.1	13.8	04/23/19 11:37	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	04/23/19 11:37	
Naphthalene	ug/kg	<8.4	28.1	04/23/19 11:37	
Phenanthrene	ug/kg	<11.7	38.8	04/23/19 11:37	
Pyrene	ug/kg	<4.5	15.0	04/23/19 11:37	
2-Fluorobiphenyl (S)	%	62	28-99	04/23/19 11:37	
Terphenyl-d14 (S)	%	64	10-107	04/23/19 11:37	

LABORATORY CONTROL SAMPLE: 1854706

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	181	54	47-104	
2-Methylnaphthalene	ug/kg	333	174	52	50-100	
Acenaphthene	ug/kg	333	221	66	56-113	
Acenaphthylene	ug/kg	333	205	61	55-113	
Anthracene	ug/kg	333	264	79	59-103	
Benzo(a)anthracene	ug/kg	333	215	65	55-102	
Benzo(a)pyrene	ug/kg	333	267	80	59-114	
Benzo(b)fluoranthene	ug/kg	333	228	68	53-124	
Benzo(g,h,i)perylene	ug/kg	333	224	67	48-114	
Benzo(k)fluoranthene	ug/kg	333	298	90	61-118	
Chrysene	ug/kg	333	272	82	62-108	
Dibenz(a,h)anthracene	ug/kg	333	234	70	51-114	
Fluoranthene	ug/kg	333	268	81	59-113	
Fluorene	ug/kg	333	226	68	56-117	
Indeno(1,2,3-cd)pyrene	ug/kg	333	228	69	52-115	
Naphthalene	ug/kg	333	200	60	54-95	

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

LABORATORY CONTROL SAMPLE: 1854706

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	333	228	68	58-101	
Pyrene	ug/kg	333	249	75	56-105	
2-Fluorobiphenyl (S)	%			55	28-99	
Terphenyl-d14 (S)	%			60	10-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1854707 1854708

Parameter	Units	1854707		1854708		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
1-Methylnaphthalene	ug/kg	<4.8	403	401	223	214	56	53	39-104	5	29	
2-Methylnaphthalene	ug/kg	<6.0	403	401	212	216	53	54	40-100	2	32	
Acenaphthene	ug/kg	<4.7	403	401	278	258	69	64	50-113	7	21	
Acenaphthylene	ug/kg	<4.0	403	401	259	241	64	60	42-114	7	27	
Anthracene	ug/kg	<6.9	403	401	243	292	60	73	33-105	18	21	
Benzo(a)anthracene	ug/kg	<3.8	403	401	267	239	66	59	43-102	11	21	
Benzo(a)pyrene	ug/kg	<3.0	403	401	328	260	82	65	34-117	23	22	R1
Benzo(b)fluoranthene	ug/kg	<3.4	403	401	304	258	75	64	35-124	16	35	
Benzo(g,h,i)perylene	ug/kg	<2.4	403	401	262	227	65	57	10-120	14	30	
Benzo(k)fluoranthene	ug/kg	<3.0	403	401	356	320	89	80	31-128	11	27	
Chrysene	ug/kg	<4.1	403	401	343	309	85	77	39-108	10	20	
Dibenz(a,h)anthracene	ug/kg	<2.7	403	401	254	213	63	53	19-114	18	28	
Fluoranthene	ug/kg	<6.3	403	401	341	301	85	75	45-113	12	22	
Fluorene	ug/kg	<5.0	403	401	286	260	71	65	48-117	9	21	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.7	403	401	266	222	66	55	10-123	18	28	
Naphthalene	ug/kg	<10.2	403	401	250	250	62	62	32-101	0	27	
Phenanthrene	ug/kg	<14.0	403	401	287	255	71	64	40-101	12	20	
Pyrene	ug/kg	<5.4	403	401	305	277	76	69	35-105	10	26	
2-Fluorobiphenyl (S)	%						53	55	28-99			
Terphenyl-d14 (S)	%						59	55	10-107			

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER  
Pace Project No.: 40185945

QC Batch: 319423 Analysis Method: EPA 8270 by SIM  
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM  
Associated Lab Samples: 40185945004

METHOD BLANK: 1856067 Matrix: Solid  
Associated Lab Samples: 40185945004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	04/25/19 12:42	
2-Methylnaphthalene	ug/kg	<5.0	16.7	04/25/19 12:42	
Acenaphthene	ug/kg	<3.9	12.9	04/25/19 12:42	
Acenaphthylene	ug/kg	<3.3	11.0	04/25/19 12:42	
Anthracene	ug/kg	<5.7	19.0	04/25/19 12:42	
Benzo(a)anthracene	ug/kg	<3.2	10.6	04/25/19 12:42	
Benzo(a)pyrene	ug/kg	<2.5	8.4	04/25/19 12:42	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	04/25/19 12:42	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	04/25/19 12:42	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	04/25/19 12:42	
Chrysene	ug/kg	<3.4	11.2	04/25/19 12:42	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.4	04/25/19 12:42	
Fluoranthene	ug/kg	<5.2	17.4	04/25/19 12:42	
Fluorene	ug/kg	<4.1	13.8	04/25/19 12:42	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	04/25/19 12:42	
Naphthalene	ug/kg	<8.4	28.1	04/25/19 12:42	
Phenanthrene	ug/kg	<11.6	38.8	04/25/19 12:42	
Pyrene	ug/kg	<4.5	15.0	04/25/19 12:42	
2-Fluorobiphenyl (S)	%	70	28-99	04/25/19 12:42	
Terphenyl-d14 (S)	%	66	10-107	04/25/19 12:42	

LABORATORY CONTROL SAMPLE: 1856068

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	256	77	47-104	
2-Methylnaphthalene	ug/kg	333	260	78	50-100	
Acenaphthene	ug/kg	333	265	79	56-113	
Acenaphthylene	ug/kg	333	267	80	55-113	
Anthracene	ug/kg	333	281	84	59-103	
Benzo(a)anthracene	ug/kg	333	262	79	55-102	
Benzo(a)pyrene	ug/kg	333	285	85	59-114	
Benzo(b)fluoranthene	ug/kg	333	276	83	53-124	
Benzo(g,h,i)perylene	ug/kg	333	324	97	48-114	
Benzo(k)fluoranthene	ug/kg	333	266	80	61-118	
Chrysene	ug/kg	333	264	79	62-108	
Dibenz(a,h)anthracene	ug/kg	333	307	92	51-114	
Fluoranthene	ug/kg	333	268	81	59-113	
Fluorene	ug/kg	333	270	81	56-117	
Indeno(1,2,3-cd)pyrene	ug/kg	333	312	94	52-115	
Naphthalene	ug/kg	333	265	80	54-95	

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

LABORATORY CONTROL SAMPLE: 1856068

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	333	276	83	58-101	
Pyrene	ug/kg	333	267	80	56-105	
2-Fluorobiphenyl (S)	%			80	28-99	
Terphenyl-d14 (S)	%			67	10-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1856069 1856070

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		40185998013 Result	Spike Conc.	Spike Conc.	MS Result							MSD Result
1-Methylnaphthalene	ug/kg	<4.9	406	406	280	311	69	76	39-104	10	29	
2-Methylnaphthalene	ug/kg	<6.1	406	406	290	315	71	77	40-100	8	32	
Acenaphthene	ug/kg	<4.7	406	406	280	309	69	76	50-113	10	21	
Acenaphthylene	ug/kg	<4.0	406	406	284	302	70	74	42-114	6	27	
Anthracene	ug/kg	<7.0	406	406	292	307	71	75	33-105	5	21	
Benzo(a)anthracene	ug/kg	6.1J	406	406	274	299	66	72	43-102	9	21	
Benzo(a)pyrene	ug/kg	6.9J	406	406	293	315	70	76	34-117	7	22	
Benzo(b)fluoranthene	ug/kg	6.1J	406	406	303	326	73	79	35-124	7	35	
Benzo(g,h,i)perylene	ug/kg	5.6J	406	406	299	324	72	78	10-120	8	30	
Benzo(k)fluoranthene	ug/kg	7.2J	406	406	265	295	63	71	31-128	11	27	
Chrysene	ug/kg	8.9J	406	406	285	306	68	73	39-108	7	20	
Dibenz(a,h)anthracene	ug/kg	<2.7	406	406	297	332	73	81	19-114	11	28	
Fluoranthene	ug/kg	14.1J	406	406	289	324	68	76	45-113	11	22	
Fluorene	ug/kg	<5.0	406	406	286	309	70	76	48-117	7	21	
Indeno(1,2,3-cd)pyrene	ug/kg	4.3J	406	406	298	331	72	80	10-123	11	28	
Naphthalene	ug/kg	<10.3	406	406	279	305	68	74	32-101	9	27	
Phenanthrene	ug/kg	<14.2	406	406	292	310	69	74	40-101	6	20	
Pyrene	ug/kg	12.5J	406	406	273	289	64	68	35-105	5	26	
2-Fluorobiphenyl (S)	%						61	60	28-99			
Terphenyl-d14 (S)	%						49	51	10-107			

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER  
Pace Project No.: 40185945

QC Batch: 319857 Analysis Method: EPA 8270 by SIM  
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM  
Associated Lab Samples: 40185945005

METHOD BLANK: 1858437 Matrix: Solid  
Associated Lab Samples: 40185945005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/kg	<4.0	13.4	04/30/19 15:04	
2-Methylnaphthalene	ug/kg	<5.0	16.7	04/30/19 15:04	
Acenaphthene	ug/kg	<3.9	12.9	04/30/19 15:04	
Acenaphthylene	ug/kg	<3.3	11.0	04/30/19 15:04	
Anthracene	ug/kg	<5.7	19.0	04/30/19 15:04	
Benzo(a)anthracene	ug/kg	<3.2	10.6	04/30/19 15:04	
Benzo(a)pyrene	ug/kg	<2.5	8.4	04/30/19 15:04	
Benzo(b)fluoranthene	ug/kg	<2.8	9.4	04/30/19 15:04	
Benzo(g,h,i)perylene	ug/kg	<2.0	6.8	04/30/19 15:04	
Benzo(k)fluoranthene	ug/kg	<2.5	8.4	04/30/19 15:04	
Chrysene	ug/kg	<3.4	11.2	04/30/19 15:04	
Dibenz(a,h)anthracene	ug/kg	<2.2	7.4	04/30/19 15:04	
Fluoranthene	ug/kg	<5.2	17.4	04/30/19 15:04	
Fluorene	ug/kg	<4.1	13.8	04/30/19 15:04	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	7.3	04/30/19 15:04	
Naphthalene	ug/kg	<8.4	28.1	04/30/19 15:04	
Phenanthrene	ug/kg	<11.6	38.8	04/30/19 15:04	
Pyrene	ug/kg	<4.5	15.0	04/30/19 15:04	
2-Fluorobiphenyl (S)	%	57	28-99	04/30/19 15:04	
Terphenyl-d14 (S)	%	60	10-107	04/30/19 15:04	

LABORATORY CONTROL SAMPLE: 1858438

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1-Methylnaphthalene	ug/kg	333	259	78	47-104	
2-Methylnaphthalene	ug/kg	333	261	78	50-100	
Acenaphthene	ug/kg	333	225	68	56-113	
Acenaphthylene	ug/kg	333	226	68	55-113	
Anthracene	ug/kg	333	231	69	59-103	
Benzo(a)anthracene	ug/kg	333	223	67	55-102	
Benzo(a)pyrene	ug/kg	333	246	74	59-114	
Benzo(b)fluoranthene	ug/kg	333	220	66	53-124	
Benzo(g,h,i)perylene	ug/kg	333	285	86	48-114	
Benzo(k)fluoranthene	ug/kg	333	260	78	61-118	
Chrysene	ug/kg	333	236	71	62-108	
Dibenz(a,h)anthracene	ug/kg	333	274	82	51-114	
Fluoranthene	ug/kg	333	228	69	59-113	
Fluorene	ug/kg	333	227	68	56-117	
Indeno(1,2,3-cd)pyrene	ug/kg	333	279	84	52-115	
Naphthalene	ug/kg	333	229	69	54-95	

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### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

LABORATORY CONTROL SAMPLE: 1858438

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenanthrene	ug/kg	333	227	68	58-101	
Pyrene	ug/kg	333	234	70	56-105	
2-Fluorobiphenyl (S)	%			66	28-99	
Terphenyl-d14 (S)	%			59	10-107	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1858439 1858440

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		40186295009 Result	Spike Conc.	Spike Conc.	Conc.								
1-Methylnaphthalene	ug/kg	<4.0	333	333	333	182	198	55	59	39-104	8	29	
2-Methylnaphthalene	ug/kg	<5.0	333	333	333	187	204	56	61	40-100	9	32	
Acenaphthene	ug/kg	<3.9	333	333	333	177	192	53	58	50-113	8	21	
Acenaphthylene	ug/kg	<3.3	333	333	333	177	193	53	58	42-114	9	27	
Anthracene	ug/kg	<5.7	333	333	333	193	203	58	61	33-105	5	21	
Benzo(a)anthracene	ug/kg	<3.2	333	333	333	190	198	57	59	43-102	4	21	
Benzo(a)pyrene	ug/kg	<2.5	333	333	333	205	211	61	63	34-117	3	22	
Benzo(b)fluoranthene	ug/kg	<2.8	333	333	333	204	201	61	60	35-124	1	35	
Benzo(g,h,i)perylene	ug/kg	<2.0	333	333	333	230	234	69	70	10-120	2	30	
Benzo(k)fluoranthene	ug/kg	<2.5	333	333	333	187	203	56	61	31-128	8	27	
Chrysene	ug/kg	<3.4	333	333	333	200	206	60	62	39-108	3	20	
Dibenz(a,h)anthracene	ug/kg	<2.2	333	333	333	221	229	66	69	19-114	4	28	
Fluoranthene	ug/kg	<5.2	333	333	333	192	201	58	60	45-113	5	22	
Fluorene	ug/kg	<4.1	333	333	333	184	198	55	59	48-117	7	21	
Indeno(1,2,3-cd)pyrene	ug/kg	<2.2	333	333	333	223	229	67	69	10-123	3	28	
Naphthalene	ug/kg	<8.4	333	333	333	164	181	49	54	32-101	10	27	
Phenanthrene	ug/kg	<11.6	333	333	333	190	199	57	60	40-101	4	20	
Pyrene	ug/kg	<4.5	333	333	333	193	201	58	60	35-105	4	26	
2-Fluorobiphenyl (S)	%							49	53	28-99			
Terphenyl-d14 (S)	%							47	50	10-107			

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### QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

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QC Batch:	319194	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	40185945001, 40185945003, 40185945005, 40185945007, 40185945009, 40185945010, 40185945011, 40185945012, 40185945013		

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SAMPLE DUPLICATE: 1854741

Parameter	Units	40185944001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	13.8	13.5	2	10	

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## QUALIFIERS

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

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### DEFINITIONS

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

ND - Not Detected at or above LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

### WORKORDER QUALIFIERS

WO: 40185945

[1] Revised - PM - PAH was missed at login for sample -005. Sample analysis added and revised report generated. SVM  
4/29/19

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

R1 RPD value was outside control limits.

W Non-detect results are reported on a wet weight basis.

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Project: 1690012791 HARTMEYER  
Pace Project No.: 40185945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40185945009	B-5 (1-2.5')	EPA 3050	318766	EPA 6010	318862
40185945010	B-5 (4-5')	EPA 3050	319136	EPA 6010	319236
40185945011	B-6 (1-2')	EPA 3050	318766	EPA 6010	318862
40185945012	B-7 (1-2.5')	EPA 3050	318766	EPA 6010	318862
40185945013	B-8 (1-2.5')	EPA 3050	318766	EPA 6010	318862
40185945009	B-5 (1-2.5')	EPA 7471	319053	EPA 7471	319125
40185945010	B-5 (4-5')	EPA 7471	319244	EPA 7471	319337
40185945011	B-6 (1-2')	EPA 7471	319053	EPA 7471	319125
40185945012	B-7 (1-2.5')	EPA 7471	319053	EPA 7471	319125
40185945013	B-8 (1-2.5')	EPA 7471	319053	EPA 7471	319125
40185945001	B-1 (1-2')	EPA 3546	319038	EPA 8270 by SIM	319119
40185945002	B-1 (4-5')	EPA 3546	319182	EPA 8270 by SIM	319217
40185945003	B-2 (1-2')	EPA 3546	319038	EPA 8270 by SIM	319119
40185945004	B-2 (4-5')	EPA 3546	319423	EPA 8270 by SIM	319479
40185945005	B-3 (1-2')	EPA 3546	319857	EPA 8270 by SIM	319926
40185945006	B-3 (4-5')	EPA 3546	319182	EPA 8270 by SIM	319217
40185945007	B-4 (1-2')	EPA 3546	319038	EPA 8270 by SIM	319119
40185945008	B-4 (4-5')	EPA 3546	319182	EPA 8270 by SIM	319217
40185945009	B-5 (1-2.5')	EPA 3546	319038	EPA 8270 by SIM	319119
40185945010	B-5 (4-5')	EPA 3546	319182	EPA 8270 by SIM	319217
40185945011	B-6 (1-2')	EPA 3546	319038	EPA 8270 by SIM	319119
40185945012	B-7 (1-2.5')	EPA 3546	319038	EPA 8270 by SIM	319119
40185945013	B-8 (1-2.5')	EPA 3546	319038	EPA 8270 by SIM	319119
40185945001	B-1 (1-2')	EPA 5035/5030B	318800	EPA 8260	318802
40185945002	B-1 (4-5')	EPA 5035/5030B	319216	EPA 8260	319219
40185945003	B-2 (1-2')	EPA 5035/5030B	318800	EPA 8260	318802
40185945004	B-2 (4-5')	EPA 5035/5030B	319216	EPA 8260	319219
40185945005	B-3 (1-2')	EPA 5035/5030B	318800	EPA 8260	318802
40185945006	B-3 (4-5')	EPA 5035/5030B	319216	EPA 8260	319219
40185945007	B-4 (1-2')	EPA 5035/5030B	318800	EPA 8260	318802
40185945008	B-4 (4-5')	EPA 5035/5030B	319216	EPA 8260	319219
40185945009	B-5 (1-2.5')	EPA 5035/5030B	318800	EPA 8260	318802
40185945010	B-5 (4-5')	EPA 5035/5030B	319216	EPA 8260	319219
40185945011	B-6 (1-2')	EPA 5035/5030B	318800	EPA 8260	318802
40185945012	B-7 (1-2.5')	EPA 5035/5030B	318800	EPA 8260	318802

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690012791 HARTMEYER

Pace Project No.: 40185945

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40185945013	B-8 (1-2.5')	EPA 5035/5030B	318800	EPA 8260	318802
40185945014	TRIP BLANK	EPA 5035/5030B	318800	EPA 8260	318802
40185945001	B-1 (1-2')	ASTM D2974-87	319194		
40185945002	B-1 (4-5')	ASTM D2974-87	319403		
40185945003	B-2 (1-2')	ASTM D2974-87	319194		
40185945004	B-2 (4-5')	ASTM D2974-87	319403		
40185945005	B-3 (1-2')	ASTM D2974-87	319194		
40185945006	B-3 (4-5')	ASTM D2974-87	319403		
40185945007	B-4 (1-2')	ASTM D2974-87	319194		
40185945008	B-4 (4-5')	ASTM D2974-87	319403		
40185945009	B-5 (1-2.5')	ASTM D2974-87	319194		
40185945010	B-5 (4-5')	ASTM D2974-87	319194		
40185945011	B-6 (1-2')	ASTM D2974-87	319194		
40185945012	B-7 (1-2.5')	ASTM D2974-87	319194		
40185945013	B-8 (1-2.5')	ASTM D2974-87	319194		

### REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)

Company Name: **Rumball**  
 Branch/Location: **Brockfield, WI**  
 Project Contact: **Adam Stralfer**  
 Phone: **(762) 901-3506**  
 Project Number: **1690018791**  
 Project Name: **Heartweaver**  
 Project State: **WI**  
 Sampled By (Print): **Roger Burgett**  
 Sampled By (Sign): *Roger Burgett*  
 PO #: \_\_\_\_\_  
 Regulatory Program: \_\_\_\_\_



**Preservation Codes**  
 A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH  
 H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

Filtered? (YES/NO)  
 Preservation (CODE)\*

**Data Package Options**  
 EPA Level III  
 EPA Level IV  
 On your sample (billable)  
 NOT needed on your sample

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

PAGE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	B-1 (1-2)	4/16/19	0935	3
002	B-1 (1-2)		0855	
003	B-2 (1-2)		0855	
004	B-2 (1-2)		0855	
005	B-3 (1-2)		0855	
006	B-3 (1-2)		0855	
007	B-4 (1-2)		0910	
008	B-4 (1-2)		0910	
009	B-5 (1-2)		0915	
010	B-5 (1-2)		0915	
011	B-6 (1-2)		1000	
012	B-7 (1-2)		1030	
013	B-8 (1-2)		0910	

V/I/N	Pick Letter	Analyses Requested		
		PUOC	PAHS	RCRA & Metals
X	U	X	X	X
X	A	X	X	X
X	A	X	X	X

**Rush Turnaround Time Requested - Prelims**  
 (Rush TAT subject to approval/surcharge)  
 Date Needed: \_\_\_\_\_  
 Relinquished By: *Tyler Burgett* Date/Time: 4/16/19 1300  
 Relinquished By: *Ed Ex* Date/Time: 4/17/19 0930

**Quote #:** \_\_\_\_\_  
**Mail To Contact:** \_\_\_\_\_  
**Mail To Company:** \_\_\_\_\_  
**Mail To Address:** \_\_\_\_\_  
**Invoice To Contact:** \_\_\_\_\_  
**Invoice To Company:** \_\_\_\_\_  
**Invoice To Address:** \_\_\_\_\_  
**Invoice To Phone:** \_\_\_\_\_  
**CLIENT COMMENTS** (Lab Use Only)  
**LAB COMMENTS** (Lab Use Only)  
**Profile #** \_\_\_\_\_  
**Page Project No.** \_\_\_\_\_  
 Receipt Temp = **ROJ** °C  
 Sample Receipt pH \_\_\_\_\_  
 Cooler Custody Seal Present / Not Present Intact / Not Intact

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

40185945





### Sample Condition Upon Receipt Form (SCUR)

**Client Name:** Ramboll  
**Courier:**  CS Logistics  Fed Ex  Speedee  UPS  Walto  
 Client  Pace Other: \_\_\_\_\_

Project #: \_\_\_\_\_  
**WO# : 40185945**  
  
 40185945

**Tracking #:** 7866 8836 2760  
**Custody Seal on Cooler/Box Present:**  yes  no    **Seals intact:**  yes  no  
**Custody Seal on Samples Present:**  yes  no    **Seals intact:**  yes  no  
**Packing Material:**  Bubble Wrap  Bubble Bags  None  Other  
**Thermometer Used** SR - N/A    **Type of Ice:**  Wet  Blue Dry None     Samples on ice, cooling process has begun  
**Cooler Temperature**    **Uncorr:** R0E **ICorr:** \_\_\_\_\_

**Temp Blank Present:**  yes  no    **Biological Tissue is Frozen:**  yes  no  
 Temp should be above freezing to 6°C.  
 Biota Samples may be received at ≤ 0°C.

**Person examining contents:**  
**Date:** 4-17-19  
**Initials:** JK

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1. <u>CC</u>	<u>4-17-19 JK</u>
Chain of Custody Filled Out:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	2. <u>No MA: / : 1 VO: 0</u>	<u>4-17-19 JK</u>
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	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	6.	
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.	
Sufficient Volume:		8.	
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No    MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A			
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	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 type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>No date or ID on 014</u>	<u>4-17-19 JK</u>
-Includes date/time/ID/Analysis    Matrix: <u>S</u>			
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>MEOH</u>	<u>4-17-19 JK</u>
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank Lot # (if purchased):			

**Client Notification/ Resolution:** \_\_\_\_\_ If checked, see attached form for additional comments   
 Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Comments/ Resolution: \_\_\_\_\_

**Project Manager Review:** \_\_\_\_\_ **Date:** 4/17/19