RAMBOLL

ENVIRONMENT
& HEALTH

Sent Via Electronic Mail

Mr. Michael Schmoller
Wisconsin Department of Natural Resources
Remediation and Redevelopment Program
3911 Fish Hatchery Road
Fitchburg, WI 53711

DATA TRANSMITTAL- SOIL SAMPLE RESULTS
HARTMEYER PROPERTY
2007 ROTH STREET, MADISON, WISCONSIN
BRTTS NO. 02-13-580328

May 21, 2020

Ramboll
333 West Wacker Drive
Suite 2700
Chicago, IL 60606
USA

T +1 312 288 3800
F +1 312 288 3801
www.ramboll.com

Ref. 1690012791

Dear Mr. Schmoller:

Ramboll US Corporation (Ramboll), on behalf of the Kraft Heinz Foods Company (Kraft Heinz), is providing the Wisconsin Department of Natural Resources (WDNR) with the attached laboratory analytical results for soil samples collected at the Hartmeyer property located at 2007 Roth Street in Madison, Wisconsin (the "site").

As you know, Ramboll previously conducted subsurface investigations at the site in April and September 2019 to evaluate soil conditions in areas previously leased at the site by a predecessor to Kraft Heinz. Ramboll provided the results from these investigations to the WDNR in our November 25, 2019 technical assistance request, and further discussed the results with you during a technical assistance meeting in December 2019.

As a follow-up to the December 2019 meeting, Ramboll conducted additional soil investigation activities at the site in January 2020, as described below. The purpose of this additional investigation was to complete the delineation of arsenic concentrations in surficial soil at the site. Arsenic levels were compared to the Wisconsin Background Threshold Value (BTV) of 8.3 milligrams per kilogram (mg/kg). It is our understanding that the property owner brought fill material into this entire area, which may have been a source of the arsenic levels.

Summary of Investigation and Results

Ramboll advanced 50 shallow borings at the site using direct push technology to assess the lateral extent of fill soil and delineate arsenic concentrations above the BTV. For lateral delineation purposes, borings were generally advanced to a depth of approximately 4 feet below ground surface (bgs). Soil samples were continuously collected from the borings and field screened at the 0 to 1 and 1 to 2-foot bgs intervals for potential arsenic impacts, using visual indications (e.g., color, fill, soil type) and a hand-held x-ray fluorescence (XRF) device, which allows for real-time, semi-quantitative elemental analysis (e.g., arsenic). If field screening within a boring indicated potential arsenic concentrations above the BTV, then one or more additional "step out" borings were advanced in an effort to delineate the outer

extent of arsenic above the BTV. Based on field screening, soil samples were collected and submitted for laboratory analysis of arsenic via United States Environmental Protection Agency (USEPA) Method 6010. A number of the soil samples were placed on hold at the laboratory, pending the results of adjacent soil boring samples.

Tabulated soil sample analytical results from the January 2020 investigation are summarized in Table 1. Soil boring locations used for lateral delineation are shown graphically on Figure 1, and the detected arsenic concentrations of the samples selected for analysis are shown graphically on Figure 2. Figure 2 also includes the prior arsenic analytical results. Based on these results, the lateral distribution of arsenic at the site has been delineated as requested by the WDNR.

Thank you for your continued assistance on this project. Please do not hesitate to contact any of the individuals listed below if you have any questions regarding these results.

Sincerely,

Ramboll US Corporation

Erin E. Veder
Principal

D 312 288 3810
ebantz@ramboll.com

Susan Petrofske
Managing Consultant

D 262 901 3501
spetrofske@ramboll.com

Adam Streiffer
Senior Consultant

D 262 901 3506
astreiffer@ramboll.com

Attachments

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TABLE

Table 1: Soil Analytical Results, January 2020
Hartmeyer Property
2007 Roth Street, Madison, Wisconsin
Ramboll Project No. 1690012791

Parameters	Soil RCLs			BTV	B-9D (1-2)	B-10E (1-2)	B-11A (1-2)	B-11B (1-2)	B-11C (1-2)	B-11D (1-2)	B-11E (1-2)	B-12A (1-2)	B-13A (1-2)
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		1/16/2020	1/15/2020	1/15/2020	1/15/2020	1/15/2020	1/15/2020	1/15/2020	1/15/2020	1/15/2020
Metals (mg/kg)													
Arsenic	0.677	3	0.584	8.3	4.1 J A,B,C	**12.2** A,B,C,D	**11.2** A,B,C,D	2.0 J A,C	**9.6** A,B,C,D	6.4 J A,B, C	3.9 J A,B,C	<1.9	7.5 A,B,C

Parameters	Soil RCLs			BTV	B-14A (1-2)	B-15A (1-2)	B-16 (1-2)	B-17 (1-2)	B-18B (1-2)	B-18D (1-2)	B-20 (1-2)	B-21 (1-2)
	Non-Industrial Direct Contact	Industrial Direct Contact	Groundwater Pathway		1/15/2020	1/15/2020	1/15/2020	1/16/2020	1/16/2020	1/16/2020	1/16/2020	1/16/2020
Metals (mg/kg)												
Arsenic	0.677	3	0.584	8.3	6.7 A,B,C	7.1 A,B,C	4 J A,B,C	6.6 A,B,C	**16.7** A,B,C,D	3.3 J A,B,C	3.7 J A,B,C	2.4 J A,C

Notes:
RCL = Residual Contaminant Level
BTV = Background Threshold Value
mg/kg = milligrams per kilogram
A Parameter exceeds NR 720 Residual Contaminant Level (RCL) for Non-Industrial Direct Contact.
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.
LOD = Limit of Detection
LOQ = Limit of Quantitation

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 RCL spreadsheet, December 2018).

FIGURES

SOURCE: AERIAL IMAGERY: GOOGLE EARTH™, IMAGE DATED 10/03/2018.

L:\Loop Project Files_CAD\1690012791_Hartmeyer Soil Investigation_PHII\2020-03\01_Boring Location Map.dwg

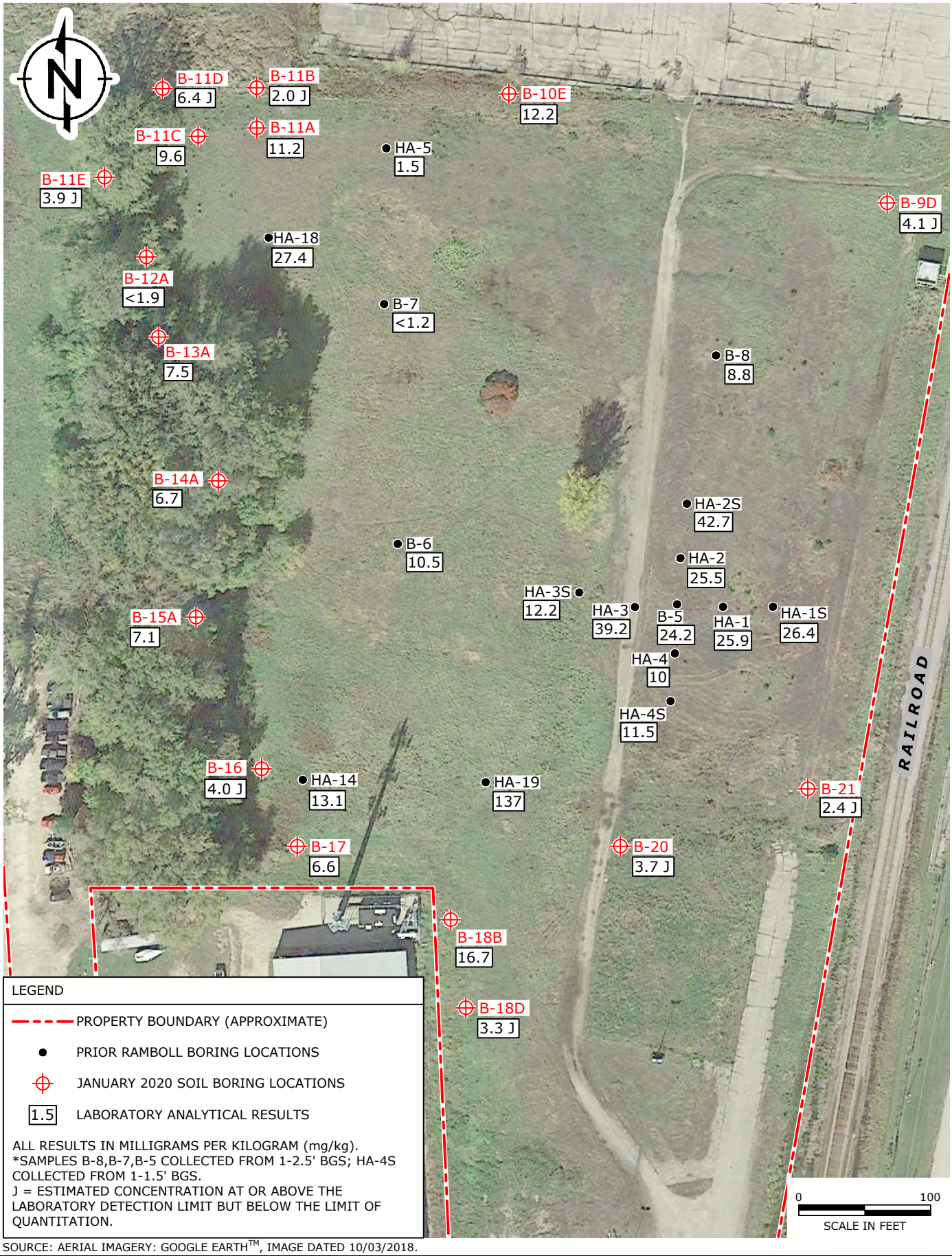
RAMBOLL

DRAFTED BY: HJW/ELS | DATE: 3/20/20

BORING LOCATION MAP
HARTMEYER PROPERTY
2007 ROTH STREET
MADISON, WISCONSIN

FIGURE
1

1690012791



SOURCE: AERIAL IMAGERY: GOOGLE EARTH™, IMAGE DATED 10/03/2018.

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SOIL ARSENIC CONCENTRATIONS AT 1-2'* BELOW GROUND SURFACE (BGS)
HARTMEYER PROPERTY
2007 ROTH STREET
MADISON, WISCONSIN

FIGURE
2

DRAFTED BY: HJW/ELS | DATE: 5/18/20 | 1690012791

L:\Loop Project Files_CAD\1690012791_Hartmeyer Soil Investigation_PHII\2020-05\02_Soil Arsenic Concentrations at 1-2' BGS.dwg

LABORATORY REPORTS

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

January 29, 2020

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

RE: Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Dear Adam Streiffer:
Enclosed are the analytical results for sample(s) received by the laboratory on January 24, 2020. 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

cc: Kyle Heimstead, Ramboll

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

CERTIFICATIONS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40202429001	**B-9D (1-2)**	Solid	01/16/20 16:10	01/24/20 08:35
40202429002	**B-10E (1-2)**	Solid	01/15/20 10:35	01/24/20 08:35
40202429003	**B-11C (1-2)**	Solid	01/15/20 11:40	01/24/20 08:35
40202429004	**B-11E (1-2)**	Solid	01/15/20 12:40	01/24/20 08:35
40202429005	**B-12A (1-2)**	Solid	01/15/20 13:25	01/24/20 08:35
40202429006	**B-13A (1-2)**	Solid	01/15/20 13:50	01/24/20 08:35
40202429007	**B-14A (1-2)**	Solid	01/15/20 14:40	01/24/20 08:35
40202429008	**B-15A (1-2)**	Solid	01/15/20 15:15	01/24/20 08:35
40202429009	**B-16 (1-2)**	Solid	01/15/20 16:10	01/24/20 08:35
40202429010	**B-17 (1-2)**	Solid	01/16/20 07:40	01/24/20 08:35
40202429011	**B-18B (1-2)**	Solid	01/16/20 09:45	01/24/20 08:35
40202429012	**B-18D (1-2)**	Solid	01/16/20 13:20	01/24/20 08:35
40202429013	**B-20 (1-2)**	Solid	01/16/20 10:00	01/24/20 08:35
40202429014	**B-21 (1-2)**	Solid	01/16/20 10:30	01/24/20 08:35
40202429015	**B-11A (1-2)**	Solid	01/15/20 11:10	01/24/20 08:35

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(920)469-2436

SAMPLE ANALYTE COUNT

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40202429001	**B-9D (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	MMX	1
40202429002	**B-10E (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	MMX	1
40202429003	**B-11C (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	MMX	1
40202429004	**B-11E (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	MMX	1
40202429005	**B-12A (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	MMX	1
40202429006	**B-13A (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	BAR	1
40202429007	**B-14A (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	BAR	1
40202429008	**B-15A (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	BAR	1
40202429009	**B-16 (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	BAR	1
40202429010	**B-17 (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	BAR	1
40202429011	**B-18B (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	BAR	1
40202429012	**B-18D (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	BAR	1
40202429013	**B-20 (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	BAR	1
40202429014	**B-21 (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	BAR	1
40202429015	**B-11A (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	BAR	1

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

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-9D (1-2) **Lab ID: 40202429001** Collected: 01/16/20 16:10 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.1J**	mg/kg	6.2	1.8	1	01/27/20 06:00	01/27/20 14:12	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.8**	%	0.10	0.10	1		01/28/20 16:43		

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-10E (1-2) **Lab ID: 40202429002** Collected: 01/15/20 10:35 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**12.2**	mg/kg	6.4	1.9	1	01/27/20 06:00	01/27/20 14:19	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**23.7**	%	0.10	0.10	1		01/28/20 16:43		

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-11C (1-2) **Lab ID: 40202429003** Collected: 01/15/20 11:40 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**9.6**	mg/kg	6.5	2.0	1	01/27/20 06:00	01/27/20 14:21	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**27.4**	%	0.10	0.10	1		01/28/20 16:43		

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-11E (1-2) **Lab ID: 40202429004** Collected: 01/15/20 12:40 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**3.9J**	mg/kg	6.1	1.8	1	01/27/20 06:00	01/27/20 14:24	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**24.9**	%	0.10	0.10	1		01/28/20 16:43		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-12A (1-2) **Lab ID: 40202429005** Collected: 01/15/20 13:25 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**<1.9**	mg/kg	6.5	1.9	1	01/27/20 06:00	01/27/20 14:26	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**24.9**	%	0.10	0.10	1		01/28/20 16:43		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-13A (1-2) **Lab ID: 40202429006** Collected: 01/15/20 13:50 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**7.5**	mg/kg	6.1	1.8	1	01/27/20 06:00	01/27/20 14:28	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**23.1**	%	0.10	0.10	1		01/28/20 17:16		

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

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-14A (1-2) **Lab ID: 40202429007** Collected: 01/15/20 14:40 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**6.7**	mg/kg	6.0	1.8	1	01/27/20 06:00	01/27/20 14:31	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**19.0**	%	0.10	0.10	1		01/28/20 17:16		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-15A (1-2) **Lab ID: 40202429008** Collected: 01/15/20 15:15 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**7.1**	mg/kg	6.1	1.8	1	01/27/20 06:00	01/27/20 14:38	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**22.4**	%	0.10	0.10	1		01/28/20 17:17		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-16 (1-2) **Lab ID: 40202429009** Collected: 01/15/20 16:10 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**4.0J**	mg/kg	6.1	1.8	1	01/27/20 06:00	01/27/20 14:40	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**20.8**	%	0.10	0.10	1		01/28/20 17:17		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-17 (1-2) **Lab ID: 40202429010** Collected: 01/16/20 07:40 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**6.6**	mg/kg	6.2	1.9	1	01/27/20 06:00	01/27/20 14:43	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**24.2**	%	0.10	0.10	1		01/28/20 17:17		

REPORT OF LABORATORY ANALYSIS

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1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-18B (1-2) **Lab ID: 40202429011** Collected: 01/16/20 09:45 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**16.7**	mg/kg	6.3	1.9	1	01/27/20 06:00	01/27/20 14:45	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**23.6**	%	0.10	0.10	1		01/28/20 17:17		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-18D (1-2) **Lab ID: 40202429012** Collected: 01/16/20 13:20 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**3.3J**	mg/kg	5.3	1.6	1	01/27/20 06:00	01/27/20 14:47	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**10.8**	%	0.10	0.10	1		01/28/20 17:17		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-20 (1-2) **Lab ID: 40202429013** Collected: 01/16/20 10:00 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**3.7J**	mg/kg	5.5	1.6	1	01/27/20 06:00	01/27/20 14:50	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.5**	%	0.10	0.10	1		01/28/20 17:17		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-21 (1-2) **Lab ID: 40202429014** Collected: 01/16/20 10:30 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**2.4J**	mg/kg	7.0	2.1	1	01/27/20 06:00	01/27/20 14:52	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**31.2**	%	0.10	0.10	1		01/28/20 17:17		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Sample: B-11A (1-2) **Lab ID: 40202429015** Collected: 01/15/20 11:10 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**11.2**	mg/kg	7.6	2.3	1	01/27/20 06:00	01/27/20 14:55	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**39.1**	%	0.10	0.10	1		01/28/20 17:17		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

QC Batch: 346292 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40202429001, 40202429002, 40202429003, 40202429004, 40202429005, 40202429006, 40202429007, 40202429008, 40202429009, 40202429010, 40202429011, 40202429012, 40202429013, 40202429014, 40202429015

METHOD BLANK: 2009011 Matrix: Solid
Associated Lab Samples: 40202429001, 40202429002, 40202429003, 40202429004, 40202429005, 40202429006, 40202429007, 40202429008, 40202429009, 40202429010, 40202429011, 40202429012, 40202429013, 40202429014, 40202429015

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.5	4.9	01/27/20 14:03	

LABORATORY CONTROL SAMPLE: 2009012

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	48.6	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2009013 2009014

Parameter	Units	40202429001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	4.1J	63.2	63.2	61.9	61.4	92	91	75-125	1	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

QC Batch: 346493 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40202429001, 40202429002, 40202429003, 40202429004, 40202429005

SAMPLE DUPLICATE: 2009732

Parameter	Units	40202429004 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	24.9	24.5	2	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

QC Batch: 346498 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40202429006, 40202429007, 40202429008, 40202429009, 40202429010, 40202429011, 40202429012, 40202429013, 40202429014, 40202429015

SAMPLE DUPLICATE: 2009733

Parameter	Units	40202477006 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	23.8	25.2	6	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

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.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690012791 HARTMEYER
Pace Project No.: 40202429

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40202429001	**B-9D (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429002	**B-10E (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429003	**B-11C (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429004	**B-11E (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429005	**B-12A (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429006	**B-13A (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429007	**B-14A (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429008	**B-15A (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429009	**B-16 (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429010	**B-17 (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429011	**B-18B (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429012	**B-18D (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429013	**B-20 (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429014	**B-21 (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429015	**B-11A (1-2)**	EPA 3050	346292	EPA 6010	346364
40202429001	**B-9D (1-2)**	ASTM D2974-87	346493		
40202429002	**B-10E (1-2)**	ASTM D2974-87	346493		
40202429003	**B-11C (1-2)**	ASTM D2974-87	346493		
40202429004	**B-11E (1-2)**	ASTM D2974-87	346493		
40202429005	**B-12A (1-2)**	ASTM D2974-87	346493		
40202429006	**B-13A (1-2)**	ASTM D2974-87	346498		
40202429007	**B-14A (1-2)**	ASTM D2974-87	346498		
40202429008	**B-15A (1-2)**	ASTM D2974-87	346498		
40202429009	**B-16 (1-2)**	ASTM D2974-87	346498		
40202429010	**B-17 (1-2)**	ASTM D2974-87	346498		
40202429011	**B-18B (1-2)**	ASTM D2974-87	346498		
40202429012	**B-18D (1-2)**	ASTM D2974-87	346498		
40202429013	**B-20 (1-2)**	ASTM D2974-87	346498		
40202429014	**B-21 (1-2)**	ASTM D2974-87	346498		
40202429015	**B-11A (1-2)**	ASTM D2974-87	346498		

(Please Print Clearly)	
Company Name:	RAMBOLL
Branch/Location:	BROOKFIELD
Project Contact:	ADAM STREIFFER
Phone:	504 723 0980
Project Number:	16900 12791
Project Name:	HARTMEYER
Project State:	WISCONSIN
Sampled By (Print):	DUNCAN GLASFORD
Sampled By (Sign):	
PO #:	Regulatory Program:

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www.pacelabs.com

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

A

Page 1 of 2

40202429

CHAIN OF CUSTODY

*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

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	ADAM STREIFFER
Invoice To Company:	RAMBOLL
Invoice To Address:	175 N CORPORATE DR BROOKFIELD, WI 53045
Invoice To Phone:	564 723 0980

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

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: Arsenic	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	B-9D (1-2)	01/16/2020	1610	S	N	A	X			
002	B-10E (1-2)	01/15/2020	1035	S			X			
003	B-11C (1-2)	01/15/2020	1140	S			X			
004	B-11E (1-2)	01/15/2020	1240	S			X			
005	B-12A (1-2)	01/15/2020	1325	S			X			
006	B-13A (1-2)	01/15/2020	1350	S			X			
007	B-14A (1-2)	01/15/2020	1440	S			X			
008	B-15A (1-2)	01/15/2020	1515	S			X			
009	B-16 (1-2)	01/15/2020	1610	S			X			
010	B-17 (1-2)	01/16/2020	740	S			X			
011	B-18B (1-2)	01/16/2020	945	S			X			
012	B-18D (1-2)	01/16/2020	1320	S			X			
013	B-20 (1-2)	01/16/2020	1000	S			X			

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: 5 DAY TAT

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	01/22/2020 1300	Mary Jamin	1/23/20 1310
Mary Jamin	1/23/20 1415		1-24-20 BR
FedEx	1/24/20 093	Brandon Dahlke PACE	1/24/20 093
US Logistics	1/24/20 0835	Brandon Dahlke PACE	1/24/20 0835

PACE Project No.: 40202429

Receipt Temp = 1.0 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal: Present / Not Present; Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

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Page 2 of 2

A
#40202429

CHAIN OF CUSTODY

*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

(Please Print Clearly)	
Company Name:	RAMBOLL
Branch/Location:	BROOKFIELD
Project Contact:	ADAM STREIFFER
Phone:	504 723 0980
Project Number:	1690012791
Project Name:	HARTMEYER
Project State:	WISCONSIN
Sampled By (Print):	DUNCAN GLASFORD
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	ADAM STREIFFER
Invoice To Company:	RAMBOLL
Invoice To Address:	175 N CORPORATE DR BROOKFIELD, WI 53045
Invoice To Phone:	504 723 0980

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

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: ARSENIC	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
014	B-21 (1-2)	01/16/2020	1030	S	N	A	X			
015	B-11A (1-2)	01/15/2020	1110	S	N	A	X			

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed: 5 DAY TAT

Transmit Prelim Rush Results by (complete what you want):
Email #1:
Email #2:
Telephone:
Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
Duncan Glasford	01/22/2020 1300	Mary Jamin	1/23/20 1310
Mary Jamin	1/23/20 1415		1-24-20 RC
[illegible]	1/24/20 0935	Burlington Logistics Inc	1/24/20 0835
CS Logistics	1/24/20 0835	Burlington Logistics Inc	1/24/20 0835

PACE Project No.
40202429
Receipt Temp = Rot °C
Sample Receipt pH
OK / Adjusted
Cooler Custody Seal
Present / Not Present
Intact / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

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

Sample Preservation Receipt Form

Client Name: Rumpke

Project # 4020429

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

Lab Lot# of pH paper:

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

Initial when completed:

Date/ Time:

	Glass							Plastic							Vials						Jars			General			VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
Pace Lab #	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	GN						
001																																2.5 / 5 / 10
002																																2.5 / 5 / 10
003																																2.5 / 5 / 10
004																																2.5 / 5 / 10
005																																2.5 / 5 / 10
006																																2.5 / 5 / 10
007																																2.5 / 5 / 10
008																																2.5 / 5 / 10
009																																2.5 / 5 / 10
010																																2.5 / 5 / 10
011																																2.5 / 5 / 10
012																																2.5 / 5 / 10
013																																2.5 / 5 / 10
014																																2.5 / 5 / 10
015																																2.5 / 5 / 10
016																																2.5 / 5 / 10
017																																2.5 / 5 / 10
018																																2.5 / 5 / 10
019																																2.5 / 5 / 10
020																																2.5 / 5 / 10

1-25-20 BAC

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____

Headspace in VOA Vials (>6mm) : □Yes □No ☒N/A *If yes look in headspace column

AG1U	1 liter amber glass	BP1U	1 liter plastic unpres	DG9A	40 mL amber ascorbic	JGFU	4 oz amber jar unpres
AG1H	1 liter amber glass HCL	BP2N	500 mL plastic HNO3	DG9T	40 mL amber Na Thio	WGFU	4 oz clear jar unpres
AG4S	125 mL amber glass H2SO4	BP2Z	500 mL plastic NaOH, Znact	VG9U	40 mL clear vial unpres	WPFU	4 oz plastic jar unpres
AG4U	120 mL amber glass unpres	BP3U	250 mL plastic unpres	VG9H	40 mL clear vial HCL		
AG5U	100 mL amber glass unpres	BP3B	250 mL plastic NaOH	VG9M	40 mL clear vial MeOH	SP5T	120 mL plastic Na Thiosulfate
AG2S	500 mL amber glass H2SO4	BP3N	250 mL plastic HNO3	VG9D	40 mL clear vial DI	ZPLC	ziploc bag
BG3U	250 mL clear glass unpres	BP3S	250 mL plastic H2SO4			GN:	

Pace Analytical™ 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 25Apr2018
	Document No.: F-GB-C-031-Rev.07	Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #: WO# : 40202429

Client Name: Rambo II

Courier: ~~CS Logistics~~ ~~Fed Ex~~ Speedee UPS Waltco Client Pace Other: 1-24-20 BR

Tracking #: ~~4325 1899 1314~~ 1-24-20 BR

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 - 90 **Type of Ice:** Wet Blue Dry None ~~Samples on ice, cooling process has begun~~

Cooler Temperature Uncorr: ROT /Corr: ROT

Temp Blank Present: ~~yes~~ ~~no~~ **Biological Tissue is Frozen:** yes no

Temp should be above freezing to 6°C. 1-24-20 BR
Biota Samples may be received at ≤ 0°C.

Person examining contents: Date: 1-24-20 Initials: BR

Chain of Custody Present:	~~Yes~~ No N/A	1. 1-24-20 BR
Chain of Custody Filled Out:	Yes ~~No~~ N/A	2. NO mail information
Chain of Custody Relinquished:	~~Yes~~ No N/A	3.
Sampler Name & Signature on COC:	~~Yes~~ No N/A	4.
Samples Arrived within Hold Time:	~~Yes~~ No	5.
- VOA Samples frozen upon receipt	Yes No	Date/Time:
Short Hold Time Analysis (<72hr):	Yes ~~No~~	6.
Rush Turn Around Time Requested:	Yes ~~No~~	7.
Sufficient Volume: For Analysis: ~~Yes~~ No MS/MSD: No N/A		8.
Correct Containers Used:	~~Yes~~ No	9.
-Pace Containers Used:	~~Yes~~ No N/A	
-Pace IR Containers Used:	Yes No ~~N/A~~	
Containers Intact:	~~Yes~~ No	10.
Filtered volume received for Dissolved tests	Yes No ~~N/A~~	11.
Sample Labels match COC:	~~Yes~~ No N/A	12.
-Includes date/time/ID/Analysis Matrix: S		
Trip Blank Present:	Yes No ~~N/A~~	13.
Trip Blank Custody Seals Present	Yes No ~~N/A~~	
Pace Trip Blank Lot # (if purchased):		

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

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: **Date:** 1/24/2020

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

February 10, 2020

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

RE: Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Dear Adam Streiffer:
Enclosed are the analytical results for sample(s) received by the laboratory on January 24, 2020. 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

cc: Kyle Heimstead, Ramboll

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

CERTIFICATIONS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

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

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

SAMPLE SUMMARY

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40202424001	**B-9A (1-2)**	Solid	01/15/20 09:05	01/24/20 08:35
40202424002	**B-11B (1-2)**	Solid	01/15/20 11:30	01/24/20 08:35
40202424003	**B-11D (1-2)**	Solid	01/15/20 11:50	01/24/20 08:35
40202424004	**B-12B (1-2)**	Solid	01/15/20 13:20	01/24/20 08:35
40202424005	**B-13B (1-2)**	Solid	01/15/20 13:40	01/24/20 08:35
40202424006	**B-18A (1-2)**	Solid	01/16/20 09:00	01/24/20 08:35
40202424007	**B-21A (1-2)**	Solid	01/16/20 10:40	01/24/20 08:35
40202424008	**B-21B (1-2)**	Solid	01/16/20 11:00	01/24/20 08:35

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

SAMPLE ANALYTE COUNT

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40202424001	**B-9A (1-2)**	ASTM D2974-87	MMX	1
40202424002	**B-11B (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	MMX	1
40202424003	**B-11D (1-2)**	EPA 6010	TXW	1
		ASTM D2974-87	MMX	1
40202424004	**B-12B (1-2)**	ASTM D2974-87	MMX	1
40202424005	**B-13B (1-2)**	ASTM D2974-87	MMX	1
40202424006	**B-18A (1-2)**	ASTM D2974-87	MMX	1
40202424007	**B-21A (1-2)**	ASTM D2974-87	MMX	1
40202424008	**B-21B (1-2)**	ASTM D2974-87	MMX	1

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ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Sample: B-9A (1-2) **Lab ID: 40202424001** Collected: 01/15/20 09:05 Received: 01/24/20 08:35 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**28.8**	%	0.10	0.10	1		01/28/20 09:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Sample: B-11B (1-2) **Lab ID: 40202424002** Collected: 01/15/20 11:30 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**2.0J**	mg/kg	6.3	1.9	1	02/06/20 06:23	02/06/20 14:29	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**26.3**	%	0.10	0.10	1		01/28/20 09:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Sample: B-11D (1-2) **Lab ID: 40202424003** Collected: 01/15/20 11:50 Received: 01/24/20 08:35 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
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Arsenic	**6.4J**	mg/kg	6.4	1.9	1	02/06/20 06:23	02/06/20 14:32	7440-38-2	
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**26.4**	%	0.10	0.10	1		01/28/20 09:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Sample: B-12B (1-2) **Lab ID: 40202424004** Collected: 01/15/20 13:20 Received: 01/24/20 08:35 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**24.7**	%	0.10	0.10	1		01/28/20 09:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Sample: B-13B (1-2) **Lab ID: 40202424005** Collected: 01/15/20 13:40 Received: 01/24/20 08:35 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**32.7**	%	0.10	0.10	1		01/28/20 09:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Sample: B-18A (1-2) **Lab ID: 40202424006** Collected: 01/16/20 09:00 Received: 01/24/20 08:35 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**21.3**	%	0.10	0.10	1		01/28/20 09:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Sample: B-21A (1-2) **Lab ID: 40202424007** Collected: 01/16/20 10:40 Received: 01/24/20 08:35 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**15.3**	%	0.10	0.10	1		01/28/20 09:25		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Sample: B-21B (1-2) **Lab ID: 40202424008** Collected: 01/16/20 11:00 Received: 01/24/20 08:35 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
Percent Moisture	Analytical Method: ASTM D2974-87								
Percent Moisture	**17.4**	%	0.10	0.10	1		01/28/20 09:25		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

QC Batch: 347100 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 40202424002, 40202424003

METHOD BLANK: 2013335 Matrix: Solid
Associated Lab Samples: 40202424002, 40202424003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	<1.5	4.9	02/06/20 14:15	

LABORATORY CONTROL SAMPLE: 2013336

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	50	49.5	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2013337 2013338

Parameter	Units	10507204001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	71.4	49.9	49.8	121	123	99	104	75-125	2	20	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

QC Batch: 346446 Analysis Method: ASTM D2974-87
QC Batch Method: ASTM D2974-87 Analysis Description: Dry Weight/Percent Moisture
Associated Lab Samples: 40202424001, 40202424002, 40202424003, 40202424004, 40202424005, 40202424006, 40202424007, 40202424008

SAMPLE DUPLICATE: 2009433

Parameter	Units	40202303006 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	24.0	23.2	4	10	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

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.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1690012791 HARTMEYER
Pace Project No.: 40202424

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40202424002	**B-11B (1-2)**	EPA 3050	347100	EPA 6010	347198
40202424003	**B-11D (1-2)**	EPA 3050	347100	EPA 6010	347198
40202424001	**B-9A (1-2)**	ASTM D2974-87	346446		
40202424002	**B-11B (1-2)**	ASTM D2974-87	346446		
40202424003	**B-11D (1-2)**	ASTM D2974-87	346446		
40202424004	**B-12B (1-2)**	ASTM D2974-87	346446		
40202424005	**B-13B (1-2)**	ASTM D2974-87	346446		
40202424006	**B-18A (1-2)**	ASTM D2974-87	346446		
40202424007	**B-21A (1-2)**	ASTM D2974-87	346446		
40202424008	**B-21B (1-2)**	ASTM D2974-87	346446		