

March 29, 2022

Kevin McKnight
Hydrogeologist/Project Manager
Remediation & Redevelopment Program
Wisconsin Department of Natural Resources
Oshkosh Service Center
625 E Cth Y, Suite 700
Oshkosh, WI 54901

[sent electronically]

**Re: Pre-Remediation Soil Sample Data Submittal
Tecumseh Products Co – New Holstein, 1604 Michigan Ave, New Holstein
BRRTS 02-08-363333**

Dear Mr. McKnight:

This letter documents the pre-remediation soil sampling results from the northern plating line area collected in accordance with the WDNR request included in the July 2, 2021, *Remedial Action Plan* (RAP) approval. Attachments to this letter include a Site figure showing the pre-remediation soil sample locations, the soil boring logs and associated abandonment forms, a summary table of the analytical results, and the analytical laboratory report.

On April 27, 2021, TRC (on behalf of Tecumseh Products Company LLC [Tecumseh]) submitted the RAP to WDNR. As part of WDNR's July 2, 2021, RAP approval and as reiterated in the August 13, 2021, WDNR response to Tecumseh's questions regarding the RAP approval, WDNR requested pre-remedial soil sampling in the northern plating area. Prior to remediation activities on October 15, 2021, TRC completed the requested soil sampling. Five soil borings were installed utilizing a Geoprobe® 6712 DT equipped with direct-push technology. A 5-foot long, 2.125-inch outside diameter Macrocore sampler was used to collect continuous soil samples to depths to 10 feet below ground surface at each soil boring. Locations of the soil borings are illustrated on the attached figure. During completion of the soil borings, TRC staff continuously characterized and logged the soil geology and screened the soil using a photoionization detector (PID) equipped with a 10.6 electron-volt lamp. Soil boring and abandonment logs are provided with this letter.

Two soil samples were collected from each soil boring from the: 1) interval exhibiting the highest PID reading; 2) the interval that exhibited visual or olfactory impacts; or 3) a sample interval above the inferred perched groundwater table. The soil samples were analyzed for total chromium, hexavalent chromium and trivalent chromium and the results are summarized in the attached table.

As documented in the *Remedial Action Documentation Report*, dated January 3, 2022, the remediation activities consisting of in-situ chemical reduction (ISCR) via injection wells and soil mixing were conducted from October 25 to November 10, 2021. The remedy was implemented to address hexavalent chromium impacts observed at the Site. The first round of post-remedial groundwater monitoring is expected to be completed in May 2022. Post-remedial soil sampling will be conducted in conjunction with site closure monitoring.

If you have any questions, please contact me at 312.800.5910 or via e-mail at charvey@trccompanies.com.

Mr. Kevin McKnight
March 29, 2022
Page 2

Sincerely,

TRC

A handwritten signature in black ink, appearing to be 'CH' followed by a long, sweeping horizontal line.

Chris Harvey, PE
Principal

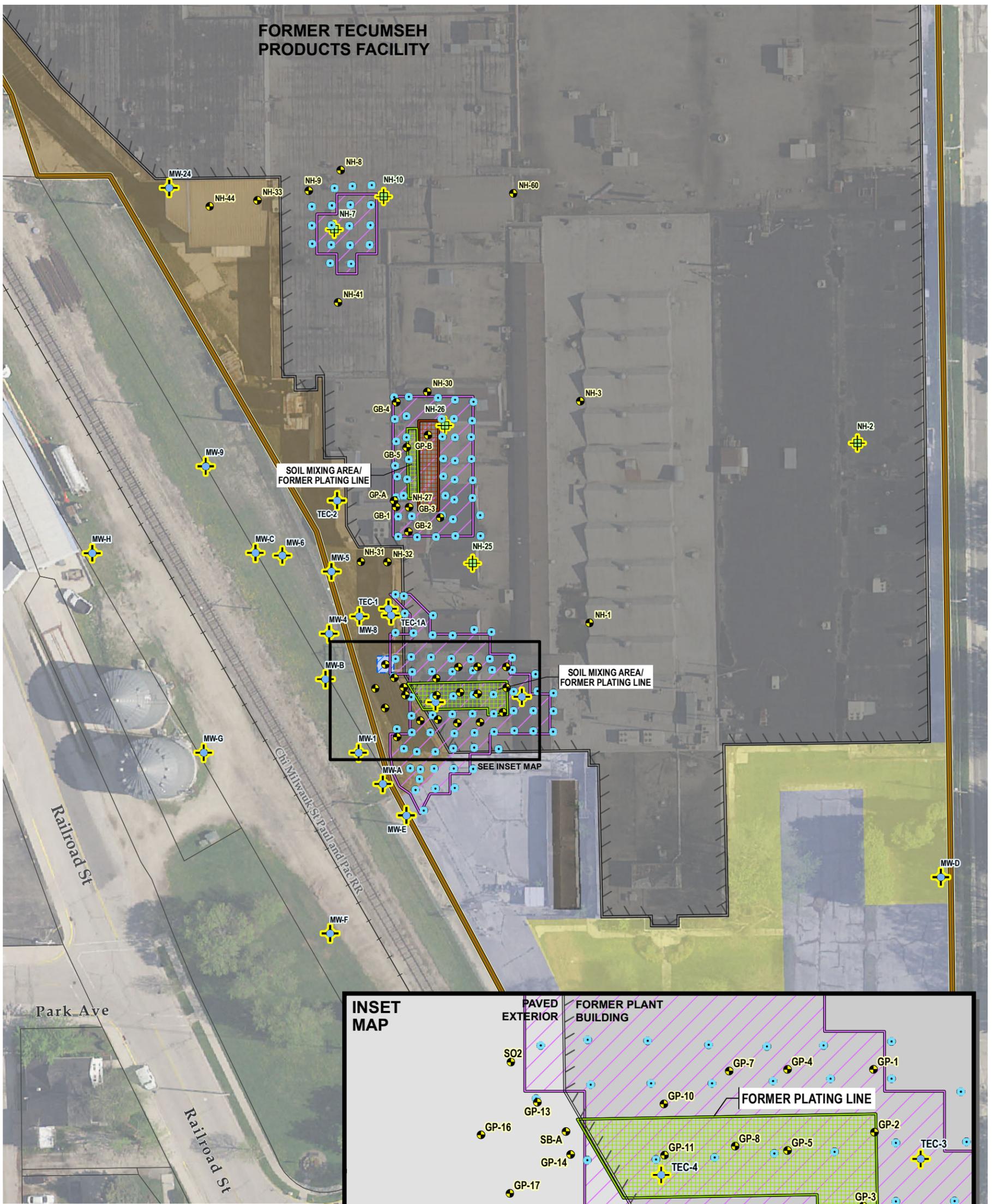
cc: S. Jason Smith/Tecumseh Products Company LLC – Paris, TN
Curtis Toll/Greenberg Traurig LLP – Philadelphia, PA
Ronald Bock/TRC – Irvine, CA

Attachment 1
Figure



TRC

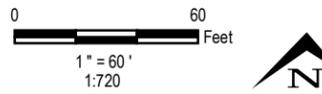
FORMER TECUMSEH PRODUCTS FACILITY



- NOTES**
1. BASE MAP IMAGERY FROM CALUMET COUNTY, 2018.
 2. DEPTH OF INJECTION POINTS WILL BE AT FOUR DEPTHS BEGINNING APPROXIMATELY TWO FEET BELOW GROUNDWATER LEVEL AND AT FIVE-FOOT INTERVALS BELOW THAT DEPTH.
 3. SOIL MIXING AREAS WILL HAVE CONCRETE SAWCUT AND THEN SOIL MIXED WITH AN EXCAVATOR TO APPROXIMATELY SIX FT BGS.

LEGEND

	PARCEL BOUNDARY		CAP COVER TYPES
	SOIL BORING		EXISTING BUILDING CAP (STRUCTURAL IMPEDIMENT)
	INJECTION WELL		GRASS CAP
	MONITORING WELL (TRC)		GRAVEL/GRASS CAP
	MONITORING WELL (R.E. LEE)		PAVEMENT CAP
	WELL TO BE PROTECTED DURING DEMOLITION ACTIVITIES		BUILDING
	INJECTION AREA		FORMER SOIL EXCAVATION AREA (CLEAN BACKFILL)
	SOIL MIXING AREA		
	OPEN PIT		



PROJECT: BRRTS #02-08-363333		TECUMSEH PRODUCTS CO. (FORMER) - CHROMIUM LINE NEW HOLSTEIN, WISCONSIN	
SHEET TITLE: SITE MAP			
DRAWN BY: R. SUENICHT	SCALE: 1:720	PROJ. NO. 107927-200-9300	
CHECKED BY: B. WACHHOLZ		FILE NO. 107927-200-020.mxd	
APPROVED BY: C. HARVEY	DATE PRINTED:	FIGURE 2	
DATE: MARCH 2022			
		708 Heartland Trail, Suite 3000 Madison, WI 53717 Phone: 608.826.3600 www.trcsolutions.com	

**Attachment 2
Summary Table**



TRC

Table 1
 Pre-remedial Soil Analytical Results - Chromium and Lead
 Tecumseh Products Co. (Former)-Chromium Line
 New Holstein, Wisconsin

Sample ID	GB-1 4-6	GB-1 8-10	GB-2 2-4	GB-2 6-8	GB-3 2-4	GB-3 6-8	GB-4 4-6	GB-4 6-8	GB-5 4-6	GB-5 6-8
Sample Depth (ft bgs)	4-6	8-10	2-4	6-8	2-4	6-8	4-6	6-8	4-6	6-8
Sample Date	10/15/2021	10/15/2021	10/15/2021	10/15/2021	10/15/2021	10/15/2021	10/15/2021	10/15/2021	10/15/2021	10/15/2021
Data Source	TRC	TRC	TRC	TRC	TRC	TRC	TRC	TRC	TRC	TRC
Metals (mg/kg)										
Chromium	8.38	13.2	20.4	125	13.6	523	14.2	82.3	126	174
Chromium (VI)	0.489 J	1.20	0.480 J	9.29	0.744 J	27.6 R1	1.79	4.27	31.8	11.3
Chromium (III) ¹	7.89	12.0	20.0	116	12.8	496	12.4	78.0	93.7	163

Notes:

ft bgs = feet below ground surface

All results shown in milligrams per kilogram (mg/kg)

Bold = Exceeds the NR 720 industrial direct contact RCL

J = Analyte detected below the reporting limit, therefore result is an estimate.

R1 = Relative percent difference (RPD) value was outside control limits.

Footnotes:

1 = Trivalent chromium is the difference between total chromium and hexavalent chromium concentrations.

Soil RCLs from NR 720

Compound	Groundwater Pathway	Industrial Direct Contact Pathway	Background Threshold Value
Chromium (total)	360,000	-	44
Chromium (VI)	-	6.36	-
Chromium (III)	-	100,000	-

Attachment 3
Boring Logs



TRC

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

Facility/Project Name Former Tecumseh New Holstein Facility			License/Permit/Monitoring Number		Boring Number GB-1		
Boring Drilled By: Name of crew chief (first, last) and Firm Gage Kapugi On-site Environmental			Date Drilling Started 10/15/2021		Date Drilling Completed 10/15/2021		
WI Unique Well No.			DNR Well ID No.		Common Well Name		
Final Static Water Level Feet MSL			Surface Elevation Feet MSL		Borehole Diameter 2.0 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 43° 57' 10.112"		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
SE 1/4 of SE 1/4 of Section 10, T 17 N, R 20 E			Long 88° 5' 10.010"				
Facility ID		County Calumet		County Code 8		Civil Town/City/ or Village New Holstein	

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 GP	60 30		0.5	CONCRETE AND GRAVEL				0						
			1.0	POORLY GRADED SAND (SP), fine-grained, brown (7.5YR 5/4), no odor, moist				0						
2 GP	60 12		2.0	Same as above, with little silt	SP			0						
			4.0											
			7.0	CONCRETE AND GRAVEL				0						
			8.0	LEAN CLAY (CL), medium plasticity, gray (7.5YR 6/1), petroleum odor, very moist to wet	CL			115.9					Sampled 4-6 @ 12:40	
			10.0	EOB @ 10' bgs									Sampled 8-10 @ 12:45	

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

Signature	Firm TRC 708 Heartland Trail Suite 3000 Madison	Tel: (608) 826-3600 Fax: (608) 826-3941
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Former Tecumseh New Holstein Facility			License/Permit/Monitoring Number		Boring Number GB-2		
Boring Drilled By: Name of crew chief (first, last) and Firm Gage Kapugi On-site Environmental			Date Drilling Started 10/15/2021		Date Drilling Completed 10/15/2021		
Drilling Method direct push			Final Static Water Level Feet MSL		Surface Elevation Feet MSL		
WI Unique Well No.		DNR Well ID No.	Common Well Name		Borehole Diameter 2.0 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 43° 57' 9.961"		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
SE 1/4 of SE 1/4 of Section 10, T 17 N, R 20 E			Long 88° 5' 9.913"				
Facility ID		County Calumet		County Code 8		Civil Town/City/ or Village New Holstein	

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 GP	60 30		0.5	CONCRETE AND GRAVEL				25.5							
			1.0	SILT (ML), strong brown (7.5YR 5/6), cleaning chemical odor, moist											
2 GP	60 54		2.0		ML			14.2							Sampled 2-4 @ 12:47
			4.0	SILTY CLAY (CL), medium plasticity, medium density, brown (7.5YR 5/4), no odor, moist				5.0	1						
			7.0	POORLY GRADED GRAVEL (GP), pink (7.5YR 7/4), no odor, moist			GP		1.8						Sampled 6-8 @ 12:51
			8.0	POORLY GRADED SAND (SP), fine-grained, reddish yellow (7.5YR 7/6), no odor, moist to wet				3.8							
			10.0	EOB @ 10' bgs											

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

Signature	Firm TRC 708 Heartland Trail Suite 3000 Madison	Tel: (608) 826-3600 Fax: (608) 826-3941
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Former Tecumseh New Holstein Facility			License/Permit/Monitoring Number		Boring Number GB-3		
Boring Drilled By: Name of crew chief (first, last) and Firm Gage Kapugi On-site Environmental			Date Drilling Started 10/15/2021		Date Drilling Completed 10/15/2021		
WI Unique Well No.			DNR Well ID No.		Common Well Name		
Final Static Water Level Feet MSL			Surface Elevation Feet MSL		Borehole Diameter 2.0 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 43° 57' 10.044"		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W		
SE 1/4 of SE 1/4 of Section 10, T 17 N, R 20 E			Long 88° 5' 9.646"				
Facility ID		County Calumet		County Code 8		Civil Town/City/ or Village New Holstein	

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 GP	60 30		0.5	CONCRETE AND GRAVEL				3.4						
			1.0	SILT (ML), pink (7.5YR 7/4), slight cleaning chemical odor, moist				3.2					Sampled 2-4 @ 12:53	
2 GP	60 42		4.0	LEAN CLAY (CL), medium plasticity, very stiff, yellowish brown (10YR 5/6), no odor, moist				3.8	2.5					
			6.0	Same as above, medium density				0.75						
			7.0	Same as above, dark grayish brown (10YR 4/2)				3.0	0.5			Sampled 6-8 @ 12:55		
			8.5	POORLY GRADED SAND (SP), coarse-grained, brownish yellow (10YR 6/6), no odor, moist to wet				2.6						
			10.0	Same as above, with little coarse gravel										
				EOB @ 10' bgs										

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

Signature	Firm TRC 708 Heartland Trail Suite 3000 Madison	Tel: (608) 826-3600 Fax: (608) 826-3941
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Former Tecumseh New Holstein Facility		License/Permit/Monitoring Number		Boring Number GB-4	
Boring Drilled By: Name of crew chief (first, last) and Firm Gage Kapugi On-site Environmental		Date Drilling Started 10/15/2021		Date Drilling Completed 10/15/2021	
Drilling Method direct push		Final Static Water Level Feet MSL		Surface Elevation Feet MSL	
WI Unique Well No.	DNR Well ID No.	Common Well Name	Borehole Diameter 2.0 inches		
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/>		State Plane N, E S/C/N		Local Grid Location	
SE 1/4 of SE 1/4 of Section 10, T 17 N, R 20 E		Lat 43° 57' 10.735"		<input type="checkbox"/> N <input type="checkbox"/> E	
		Long 88° 5' 9.985"		<input type="checkbox"/> S <input type="checkbox"/> W	
Facility ID	County Calumet	County Code 8	Civil Town/City/ or Village New Holstein		

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 GP	60 32		0.5	CONCRETE AND GRAVEL				2.6						
			1.0	WELL-GRADED SAND (SW), pink (7.5YR 7/4), no odor, moist				3.0						
2 GP	60 30		5.5	LEAN CLAY (CL), low to medium plasticity, medium density, light yellowish brown (10YR 6/4), no odor, moist				0.75						Sampled 4-6 @ 12:58
			6.0	Same as above, wet				4.1						Sampled 6-8 @ 13:01
			10.0	EOB @ 10' bgs				4.1	1					

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

Signature	Firm TRC 708 Heartland Trail Suite 3000 Madison	Tel: (608) 826-3600 Fax: (608) 826-3941
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Route To: Watershed/Wastewater Waste Management
Remediation/Redevelopment Other

Facility/Project Name Former Tecumseh New Holstein Facility			License/Permit/Monitoring Number		Boring Number GB-5	
Boring Drilled By: Name of crew chief (first, last) and Firm Gage Kapugi On-site Environmental			Date Drilling Started 10/15/2021		Date Drilling Completed 10/15/2021	
Drilling Method direct push			Final Static Water Level Feet MSL		Surface Elevation Feet MSL	
WI Unique Well No.		DNR Well ID No.	Common Well Name		Borehole Diameter 2.0 inches	
Local Grid Origin <input type="checkbox"/> (estimated: <input type="checkbox"/>) or Boring Location <input checked="" type="checkbox"/> State Plane N, E S/C/N			Lat 43° 57' 10.465"		Local Grid Location <input type="checkbox"/> N <input type="checkbox"/> E <input type="checkbox"/> S <input type="checkbox"/> W	
SE 1/4 of SE 1/4 of Section 10, T 17 N, R 20 E			Long 88° 5' 9.909"			
Facility ID		County Calumet		County Code 8	Civil Town/City/ or Village New Holstein	

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 GP	60 28		0.5	CONCRETE AND GRAVEL				4.0						
			1.0	POORLY GRADED SAND (SP), fine-grained, pink (7.5YR 8/4), no odor, moist	SP									
2 GP	60 32		2.0	LEAN CLAY (CL), low to medium plasticity, strong brown (7.5YR 5/6), no odor, moist	CL			3.6						
			3.0	Same as above, light brown (7.5YR 6/4)				3.2						
			4.0					3.9						
			5.0					3.7						
			8.0	POORLY GRADED SAND (SP), few gravel, light brown (7.5YR 6/4), no odor, moist to wet	SP									
			10.0	EOB @ 10' bgs										

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

Signature	Firm TRC 708 Heartland Trail Suite 3000 Madison	Tel: (608) 826-3600 Fax: (608) 826-3941
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Attachment 4
Abandonment Forms



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 this form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

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

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

County Calumet		WI Unique Well # of Removed Well (GB-1)		Hicap #		Facility Name Former Tecumseh New Holstein Facility			
Latitude / Longitude (see instructions) 43.95281 ° N 88.08611 ° W		Format Code <input checked="" type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input checked="" type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS)			
1/4 / 1/4 SE or Gov't Lot #		Section 10		Township 17		Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W		License/Permit/Monitoring #	
Well Street Address 1604 Michigan Avenue						Original Well Owner Tecumseh Products Company			
Well City, Village or Town New Holstein						Present Well Owner City of New Holstein			
Subdivision Name						Mailing Address of Present Owner 2110 Washington Street			
Well ZIP Code 53061						City of Present Owner New Holstein		State WI	ZIP Code 53061
Reason For Removal From Service soil sampling only						4. Pump, Liner, Screen, Casing & Sealing Material			
WI Unique Well # of Replacement Well						Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
3. Filled & Sealed Well / Drillhole / Borehole Information						Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input type="checkbox"/> Monitoring Well		Original Construction Date (mm/dd/yyyy) 10/15/2021				Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input type="checkbox"/> Water Well		If a Well Construction Report is available, please attach.				Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input checked="" type="checkbox"/> Borehole / Drillhole		Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) direct push				Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock		Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A				Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Total Well Depth From Ground Surface (ft)		Casing Diameter (in.)				Did material settle after 24 hours? If yes, was hole retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Lower Drillhole Diameter (in.) 2.0		Casing Depth (ft.)				If bentonite chips were used, were they hydrated with water from a known safe source <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Was well annular space grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain)				Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input checked="" type="checkbox"/> Bentonite Chips			
If yes, to what depth (feet)?		Depth to Water (feet)				For Monitoring Wells and Monitoring Well Boreholes Only: <input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> 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
3/8" bentonite chips				Surface	10.0	0.33 sacks	

6. Comments
concrete was used to seal borehole and match surrounding concrete cap

7. Supervision of Work				DNR Use Only	
Name of Person or Firm Doing Filling & Sealing On-Site Environmental		License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10/15/2021	Date Received	Noted By
Street or Route PO BOX 280			Telephone Number 608-837-8992	Comments	
City Sun Prairie		State WI	ZIP Code 53590	Signature of Person Doing Work	
				Date Signed	

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 this form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

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

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

County Calumet		WI Unique Well # of Removed Well (GB-2)		Hicap #		Facility Name Former Tecumseh New Holstein Facility			
Latitude / Longitude (see instructions) 43.95277 ° N 88.08609 ° W		Format Code <input checked="" type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input checked="" type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS)			
1/4 / 1/4 SE or Gov't Lot #		Section 10		Township 17		Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W		License/Permit/Monitoring #	
Well Street Address 1604 Michigan Avenue						Original Well Owner Tecumseh Products Company			
Well City, Village or Town New Holstein						Present Well Owner City of New Holstein			
Well ZIP Code 53061						Mailing Address of Present Owner 2110 Washington Street			
Subdivision Name New Holstein						City of Present Owner New Holstein		State WI	ZIP Code 53061

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

Reason For Removal From Service soil sampling only		WI Unique Well # of Replacement Well		Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A					
<input type="checkbox"/> Monitoring Well		Original Construction Date (mm/dd/yyyy) 10/15/2021		Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Did material settle after 24 hours? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A If yes, was hole retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A If bentonite chips were used, were they hydrated with water from a known safe source <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A					
<input type="checkbox"/> Water Well		If a Well Construction Report is available, please attach.		Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain)					
<input checked="" type="checkbox"/> Borehole / Drillhole				Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input checked="" type="checkbox"/> Bentonite Chips					
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) direct push				For Monitoring Wells and Monitoring Well Boreholes Only: <input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry					
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock									
Total Well Depth From Ground Surface (ft)		Casing Diameter (in.)							
Lower Drillhole Diameter (in.) 2.0		Casing Depth (ft.)							
Was well annular space grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Depth to Water (feet)							
If yes, to what depth (feet)?									

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
3/8" bentonite chips	Surface	10.0	0.33 sacks	

6. Comments
concrete was used to seal borehole and match surrounding concrete cap

7. Supervision of Work				DNR Use Only	
Name of Person or Firm Doing Filling & Sealing On-Site Environmental		License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10/15/2021	Date Received	Noted By
Street or Route PO BOX 280			Telephone Number 608-837-8992	Comments	
City Sun Prairie		State WI	ZIP Code 53590	Signature of Person Doing Work	
				Date Signed	

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 this form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

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

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

County Calumet		WI Unique Well # of Removed Well (GB-3)		Hicap #		Facility Name Former Tecumseh New Holstein Facility			
Latitude / Longitude (see instructions) 43.95279 ° N 88.08601 ° W		Format Code <input checked="" type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input checked="" type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS)			
1/4 / 1/4 SE or Gov't Lot #		Section 10		Township 17		Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W		License/Permit/Monitoring #	
Well Street Address 1604 Michigan Avenue						Original Well Owner Tecumseh Products Company			
Well City, Village or Town New Holstein						Present Well Owner City of New Holstein			
Well ZIP Code 53061						Mailing Address of Present Owner 2110 Washington Street			
Subdivision Name						City of Present Owner New Holstein		State WI	ZIP Code 53061

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

Reason For Removal From Service soil sampling only		WI Unique Well # of Replacement Well		Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A					
<input type="checkbox"/> Monitoring Well		Original Construction Date (mm/dd/yyyy) 10/15/2021		Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A Did material settle after 24 hours? If yes, was hole retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A If bentonite chips were used, were they hydrated with water from a known safe source <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A					
<input type="checkbox"/> Water Well		If a Well Construction Report is available, please attach.		Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain)					
<input checked="" type="checkbox"/> Borehole / Drillhole				Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input checked="" type="checkbox"/> Bentonite Chips					
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) direct push				For Monitoring Wells and Monitoring Well Boreholes Only: <input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry					
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock									
Total Well Depth From Ground Surface (ft)		Casing Diameter (in.)							
Lower Drillhole Diameter (in.) 2.0		Casing Depth (ft.)							
Was well annular space grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Depth to Water (feet)							
If yes, to what depth (feet)?									

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
3/8" bentonite chips	Surface	10.0	0.33 sacks	

6. Comments
concrete was used to seal borehole and match surrounding concrete cap

7. Supervision of Work				DNR Use Only	
Name of Person or Firm Doing Filling & Sealing On-Site Environmental		License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10/15/2021	Date Received	Noted By
Street or Route PO BOX 280			Telephone Number 608-837-8992	Comments	
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work	Date Signed	

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 this form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

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

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

County Calumet		WI Unique Well # of Removed Well (GB-4)		Hicap #		Facility Name Former Tecumseh New Holstein Facility			
Latitude / Longitude (see instructions) 43.95298 ° N 88.08611 ° W		Format Code <input checked="" type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input checked="" type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS)			
1/4 / 1/4 SE or Gov't Lot #		Section 10		Township 17		Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W		License/Permit/Monitoring #	
Well Street Address 1604 Michigan Avenue						Original Well Owner Tecumseh Products Company			
Well City, Village or Town New Holstein						Present Well Owner City of New Holstein			
Subdivision Name						Mailing Address of Present Owner 2110 Washington Street			
Well ZIP Code 53061						City of Present Owner New Holstein		State WI	ZIP Code 53061
Reason For Removal From Service soil sampling only						4. Pump, Liner, Screen, Casing & Sealing Material			
WI Unique Well # of Replacement Well						Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
3. Filled & Sealed Well / Drillhole / Borehole Information						Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input type="checkbox"/> Monitoring Well		Original Construction Date (mm/dd/yyyy) 10/15/2021				Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input type="checkbox"/> Water Well		If a Well Construction Report is available, please attach.				Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
<input checked="" type="checkbox"/> Borehole / Drillhole		Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) direct push				Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock		Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A				Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Total Well Depth From Ground Surface (ft)		Casing Diameter (in.)				Did material settle after 24 hours? If yes, was hole retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Lower Drillhole Diameter (in.) 2.0		Casing Depth (ft.)				If bentonite chips were used, were they hydrated with water from a known safe source <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Was well annular space grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown		Required Method of Placing Sealing Material <input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain)				Sealing Materials <input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input checked="" type="checkbox"/> Bentonite Chips			
If yes, to what depth (feet)?		Depth to Water (feet)				For Monitoring Wells and Monitoring Well Boreholes Only: <input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> 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
3/8" bentonite chips		Surface	10.0	0.33 sacks	

6. Comments
concrete was used to seal borehole and match surrounding concrete cap

7. Supervision of Work				DNR Use Only	
Name of Person or Firm Doing Filling & Sealing On-Site Environmental		License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10/15/2021	Date Received	Noted By
Street or Route PO BOX 280			Telephone Number 608-837-8992	Comments	
City Sun Prairie		State WI	ZIP Code 53590	Signature of Person Doing Work	
				Date Signed	

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 this form to the appropriate DNR office and bureau. See instructions on reverse for more information.

Verification Only of Fill and Seal

Route to DNR Bureau:

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

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

County Calumet		WI Unique Well # of Removed Well (GB-5)		Hicap #		Facility Name Former Tecumseh New Holstein Facility			
Latitude / Longitude (see instructions) 43.95291 ° N 88.08609 ° W		Format Code <input checked="" type="checkbox"/> DD <input type="checkbox"/> DDM		Method Code <input checked="" type="checkbox"/> GPS008 <input type="checkbox"/> SCR002 <input type="checkbox"/> OTH001		Facility ID (FID or PWS)			
1/4 / 1/4 SE or Gov't Lot #		Section 10		Township 17		Range <input checked="" type="checkbox"/> E <input type="checkbox"/> W		License/Permit/Monitoring #	
Well Street Address 1604 Michigan Avenue						Original Well Owner Tecumseh Products Company			
Well City, Village or Town New Holstein						Present Well Owner City of New Holstein			
Subdivision Name						Mailing Address of Present Owner 2110 Washington Street			
Well ZIP Code 53061						City of Present Owner New Holstein		State WI	ZIP Code 53061
Reason For Removal From Service soil sampling only						4. Pump, Liner, Screen, Casing & Sealing Material			
WI Unique Well # of Replacement Well						Pump and piping removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Original Construction Date (mm/dd/yyyy) 10/15/2021						Liner(s) removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
If a Well Construction Report is available, please attach.						Liner(s) perforated? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Construction Type: <input type="checkbox"/> Drilled <input type="checkbox"/> Driven (Sandpoint) <input type="checkbox"/> Dug <input checked="" type="checkbox"/> Other (Specify) direct push						Screen removed? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Formation Type: <input checked="" type="checkbox"/> Unconsolidated Formation <input type="checkbox"/> Bedrock						Casing left in place? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Total Well Depth From Ground Surface (ft)						Was casing cut off below surface? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Casing Diameter (in.)						Did sealing material rise to surface? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Lower Drillhole Diameter (in.) 2.0						Did material settle after 24 hours? If yes, was hole retopped? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
Casing Depth (ft.)						If bentonite chips were used, were they hydrated with water from a known safe source <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
Was well annular space grouted? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown						Required Method of Placing Sealing Material			
If yes, to what depth (feet)?						<input type="checkbox"/> Conductor Pipe-Gravity <input type="checkbox"/> Conductor Pipe-Pumped <input checked="" type="checkbox"/> Screened & Poured (Bentonite Chips) <input type="checkbox"/> Other (Explain)			
Depth to Water (feet)						Sealing Materials			
						<input type="checkbox"/> Neat Cement Grout <input type="checkbox"/> Concrete <input type="checkbox"/> Sand-Cement (Concrete) Grout <input checked="" type="checkbox"/> Bentonite Chips			
						For Monitoring Wells and Monitoring Well Boreholes Only:			
						<input type="checkbox"/> Bentonite Chips <input type="checkbox"/> Bentonite - Cement Grout <input type="checkbox"/> Granular Bentonite <input type="checkbox"/> Bentonite - Sand Slurry			

3. Filled & Sealed Well / Drillhole / Borehole Information

<input type="checkbox"/> Monitoring Well		Original Construction Date (mm/dd/yyyy) 10/15/2021	
<input type="checkbox"/> Water Well		If a Well Construction Report is available, please attach.	
<input checked="" type="checkbox"/> Borehole / Drillhole			

5. Material Used to Fill Well / Drillhole	From (ft.)	To (ft.)	No. Yards, Sacks Sealant or Volume (circle one)	Mix Ratio or Mud Weight
3/8" bentonite chips	Surface	10.0	0.33 sacks	

6. Comments
concrete was used to seal borehole and match surrounding concrete cap

7. Supervision of Work				DNR Use Only	
Name of Person or Firm Doing Filling & Sealing On-Site Environmental		License #	Date of Filling & Sealing or Verification (mm/dd/yyyy) 10/15/2021	Date Received	Noted By
Street or Route PO BOX 280			Telephone Number 608-837-8992	Comments	
City Sun Prairie	State WI	ZIP Code 53590	Signature of Person Doing Work	Date Signed	

**Attachment 5
Analytical Data**



TRC

November 01, 2021

Ben Wachholz
TRC Madison
708 Heartland Trail
Suite 3000
Madison, WI 53717

RE: Project: 449343 NEW HOLSTEIN PRE-REMED
Pace Project No.: 40235277

Dear Ben Wachholz:

Enclosed are the analytical results for sample(s) received by the laboratory on October 16, 2021. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace National - Mt. Juliet

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

Sincerely,



Tod Noltemeyer
tod.noltemeyer@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Peggy Popp, TRC - Madison



REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Pace Analytical Services National

12065 Lebanon Road, Mt. Juliet, TN 37122

Alabama Certification #: 40660

Alaska Certification 17-026

Arizona Certification #: AZ0612

Arkansas Certification #: 88-0469

California Certification #: 2932

Canada Certification #: 1461.01

Colorado Certification #: TN00003

Connecticut Certification #: PH-0197

DOD Certification: #1461.01

EPA# TN00003

Florida Certification #: E87487

Georgia DW Certification #: 923

Georgia Certification: NELAP

Idaho Certification #: TN00003

Illinois Certification #: 200008

Indiana Certification #: C-TN-01

Iowa Certification #: 364

Kansas Certification #: E-10277

Kentucky UST Certification #: 16

Kentucky Certification #: 90010

Louisiana Certification #: AI30792

Louisiana DW Certification #: LA180010

Maine Certification #: TN0002

Maryland Certification #: 324

Massachusetts Certification #: M-TN003

Michigan Certification #: 9958

Minnesota Certification #: 047-999-395

Mississippi Certification #: TN00003

Missouri Certification #: 340

Montana Certification #: CERT0086

Nebraska Certification #: NE-OS-15-05

Nevada Certification #: TN-03-2002-34

New Hampshire Certification #: 2975

New Jersey Certification #: TN002

New Mexico DW Certification

New York Certification #: 11742

North Carolina Aquatic Toxicity Certification #: 41

North Carolina Drinking Water Certification #: 21704

North Carolina Environmental Certificate #: 375

North Dakota Certification #: R-140

Ohio VAP Certification #: CL0069

Oklahoma Certification #: 9915

Oregon Certification #: TN200002

Pennsylvania Certification #: 68-02979

Rhode Island Certification #: LAO00356

South Carolina Certification #: 84004

South Dakota Certification

Tennessee DW/Chem/Micro Certification #: 2006

Texas Certification #: T 104704245-17-14

Texas Mold Certification #: LAB0152

USDA Soil Permit #: P330-15-00234

Utah Certification #: TN00003

Virginia Certification #: VT2006

Vermont Dept. of Health: ID# VT-2006

Virginia Certification #: 460132

Washington Certification #: C847

West Virginia Certification #: 233

Wisconsin Certification #: 998093910

Wyoming UST Certification #: via A2LA 2926.01

A2LA-ISO 17025 Certification #: 1461.01

A2LA-ISO 17025 Certification #: 1461.02

AIHA-LAP/LLC EMLAP Certification #:100789

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40235277001	GB-1 4-6	Solid	10/15/21 12:40	10/16/21 08:35
40235277002	GB-1 8-10	Solid	10/15/21 12:45	10/16/21 08:35
40235277003	GB-2 2-4	Solid	10/15/21 12:47	10/16/21 08:35
40235277004	GB-2 6-8	Solid	10/15/21 12:51	10/16/21 08:35
40235277005	GB-3 2-4	Solid	10/15/21 12:53	10/16/21 08:35
40235277006	GB-3 6-8	Solid	10/15/21 12:55	10/16/21 08:35
40235277007	GB-4 4-6	Solid	10/15/21 12:58	10/16/21 08:35
40235277008	GB-4 6-8	Solid	10/15/21 13:01	10/16/21 08:35
40235277009	GB-5 4-6	Solid	10/15/21 13:05	10/16/21 08:35
40235277010	GB-5 6-8	Solid	10/15/21 13:07	10/16/21 08:35

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 449343 NEW HOLSTEIN PRE-REMEDI
Pace Project No.: 40235277

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40235277001	GB-1 4-6	EPA 6010D	KMG	1	PAN
		SM 2540G	KDW	1	PAN
		EPA 7199	JER	1	PAN
		Calculated	KMG	1	PAN
40235277002	GB-1 8-10	EPA 6010D	KMG	1	PAN
		SM 2540G	KDW	1	PAN
		EPA 7199	JER	1	PAN
		Calculated	KMG	1	PAN
40235277003	GB-2 2-4	EPA 6010D	KMG	1	PAN
		SM 2540G	KDW	1	PAN
		EPA 7199	JER	1	PAN
		Calculated	KMG	1	PAN
40235277004	GB-2 6-8	EPA 6010D	KMG	1	PAN
		SM 2540G	KDW	1	PAN
		EPA 7199	JER	1	PAN
		Calculated	KMG	1	PAN
40235277005	GB-3 2-4	EPA 6010D	KMG	1	PAN
		SM 2540G	KDW	1	PAN
		EPA 7199	JER	1	PAN
		Calculated	KMG	1	PAN
40235277006	GB-3 6-8	EPA 6010D	KMG	1	PAN
		SM 2540G	KDW	1	PAN
		EPA 7199	JER	1	PAN
		Calculated	KMG	1	PAN
40235277007	GB-4 4-6	EPA 6010D	KMG	1	PAN
		SM 2540G	KDW	1	PAN
		EPA 7199	JER	1	PAN
		Calculated	KMG	1	PAN
40235277008	GB-4 6-8	EPA 6010D	KMG	1	PAN
		SM 2540G	KDW	1	PAN
		EPA 7199	JER	1	PAN
		Calculated	KMG	1	PAN
40235277009	GB-5 4-6	EPA 6010D	KMG	1	PAN
		SM 2540G	KDW	1	PAN
		EPA 7199	JER	1	PAN
		Calculated	KMG	1	PAN
40235277010	GB-5 6-8	EPA 6010D	KMG	1	PAN

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM 2540G	KDW	1	PAN
		EPA 7199	JER	1	PAN
		Calculated	KMG	1	PAN

PAN = Pace National - Mt. Juliet

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 449343 NEW HOLSTEIN PRE-REMEDIAL

Pace Project No.: 40235277

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40235277001	GB-1 4-6					
EPA 6010D	Chromium	8.38	mg/kg	1.10	10/29/21 11:06	
SM 2540G	Total Solids	90.6	%		10/22/21 14:14	
EPA 7199	Chromium, Hexavalent	0.489J	mg/kg	1.10	10/22/21 14:12	J
Calculated	Chromium, Trivalent	7.89	mg/kg	1.10	10/29/21 11:06	
40235277002	GB-1 8-10					
EPA 6010D	Chromium	13.2	mg/kg	1.15	10/29/21 11:09	
SM 2540G	Total Solids	86.9	%		10/22/21 14:14	
EPA 7199	Chromium, Hexavalent	1.20	mg/kg	1.15	10/22/21 14:38	
Calculated	Chromium, Trivalent	12.0	mg/kg	1.15	10/29/21 11:09	
40235277003	GB-2 2-4					
EPA 6010D	Chromium	20.4	mg/kg	1.22	10/29/21 11:12	
SM 2540G	Total Solids	82.1	%		10/22/21 14:14	
EPA 7199	Chromium, Hexavalent	0.480J	mg/kg	1.22	10/22/21 14:43	J
Calculated	Chromium, Trivalent	20.0	mg/kg	1.22	10/29/21 11:12	
40235277004	GB-2 6-8					
EPA 6010D	Chromium	125	mg/kg	1.25	10/29/21 11:21	
SM 2540G	Total Solids	79.8	%		10/22/21 13:37	
EPA 7199	Chromium, Hexavalent	9.29	mg/kg	1.25	10/22/21 14:59	
Calculated	Chromium, Trivalent	116	mg/kg	1.25	10/29/21 11:21	
40235277005	GB-3 2-4					
EPA 6010D	Chromium	13.6	mg/kg	1.14	10/29/21 11:24	
SM 2540G	Total Solids	87.9	%		10/22/21 13:37	
EPA 7199	Chromium, Hexavalent	0.744J	mg/kg	1.14	10/22/21 15:04	J
Calculated	Chromium, Trivalent	12.8	mg/kg	1.14	10/29/21 11:24	
40235277006	GB-3 6-8					
EPA 6010D	Chromium	523	mg/kg	1.33	10/29/21 11:26	
SM 2540G	Total Solids	75.1	%		10/22/21 13:37	
EPA 7199	Chromium, Hexavalent	27.6	mg/kg	1.33	10/22/21 15:09	R1
Calculated	Chromium, Trivalent	496	mg/kg	1.33	10/29/21 11:26	
40235277007	GB-4 4-6					
EPA 6010D	Chromium	14.2	mg/kg	1.16	10/29/21 11:29	
SM 2540G	Total Solids	86.3	%		10/22/21 13:37	
EPA 7199	Chromium, Hexavalent	1.79	mg/kg	1.16	10/22/21 15:20	
Calculated	Chromium, Trivalent	12.4	mg/kg	1.16	10/29/21 11:29	
40235277008	GB-4 6-8					
EPA 6010D	Chromium	82.3	mg/kg	1.28	10/29/21 11:32	
SM 2540G	Total Solids	78.3	%		10/22/21 13:37	
EPA 7199	Chromium, Hexavalent	4.27	mg/kg	1.28	10/22/21 15:25	
Calculated	Chromium, Trivalent	78.0	mg/kg	1.28	10/29/21 11:32	
40235277009	GB-5 4-6					
EPA 6010D	Chromium	126	mg/kg	1.25	10/29/21 11:36	
SM 2540G	Total Solids	79.8	%		10/22/21 13:37	

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SUMMARY OF DETECTION

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40235277009	GB-5 4-6					
EPA 7199	Chromium, Hexavalent	31.8	mg/kg	1.25	10/22/21 15:30	
Calculated	Chromium, Trivalent	93.7	mg/kg	1.25	10/29/21 11:36	
40235277010	GB-5 6-8					
EPA 6010D	Chromium	174	mg/kg	1.27	10/29/21 11:39	
SM 2540G	Total Solids	78.7	%		10/22/21 13:37	
EPA 7199	Chromium, Hexavalent	11.3	mg/kg	1.27	10/22/21 15:35	
Calculated	Chromium, Trivalent	163	mg/kg	1.27	10/29/21 11:39	

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PROJECT NARRATIVE

Project: 449343 NEW HOLSTEIN PRE-REMED

Pace Project No.: 40235277

Method: EPA 6010D

Description: Metals (ICP) 6010D

Client: TRC - MADISON

Date: November 01, 2021

General Information:

10 samples were analyzed for EPA 6010D by Pace National Mt. Juliet. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:

All criteria were within method requirements with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Method: SM 2540G

Description: Total Solids 2540 G-2011

Client: TRC - MADISON

Date: November 01, 2021

General Information:

10 samples were analyzed for SM 2540G by Pace National Mt. Juliet. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Method: EPA 7199

Description: Wet Chemistry 7199

Client: TRC - MADISON

Date: November 01, 2021

General Information:

10 samples were analyzed for EPA 7199 by Pace National Mt. Juliet. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 1761389

R1: RPD value was outside control limits.

- DUP (Lab ID: R3720240-8)
- Chromium, Hexavalent

Additional Comments:

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PROJECT NARRATIVE

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Method: Calculated

Description: Calculated Results

Client: TRC - MADISON

Date: November 01, 2021

General Information:

10 samples were analyzed for Calculated by Pace National Mt. Juliet. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Sample: GB-1 4-6 **Lab ID: 40235277001** Collected: 10/15/21 12:40 Received: 10/16/21 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
Metals (ICP) 6010D									
Analytical Method: EPA 6010D Preparation Method: 3050B Pace National - Mt. Juliet									
Chromium	8.38	mg/kg	1.10	0.147	1	10/27/21 07:06	10/29/21 11:06	7440-47-3	
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	90.6	%			1	10/22/21 14:00	10/22/21 14:14		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet									
Chromium, Hexavalent	0.489J	mg/kg	1.10	0.281	1	10/21/21 19:00	10/22/21 14:12		J
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc. Pace National - Mt. Juliet									
Chromium, Trivalent	7.89	mg/kg	1.10	0.147	1	10/27/21 07:06	10/29/21 11:06	16065-83-1	

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ANALYTICAL RESULTS

Project: 449343 NEW HOLSTEIN PRE-REMEDIAL

Pace Project No.: 40235277

Sample: GB-1 8-10 **Lab ID: 40235277002** Collected: 10/15/21 12:45 Received: 10/16/21 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
Metals (ICP) 6010D									
Analytical Method: EPA 6010D Preparation Method: 3050B Pace National - Mt. Juliet									
Chromium	13.2	mg/kg	1.15	0.153	1	10/27/21 07:06	10/29/21 11:09	7440-47-3	
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	86.9	%			1	10/22/21 14:00	10/22/21 14:14		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet									
Chromium, Hexavalent	1.20	mg/kg	1.15	0.294	1	10/21/21 19:00	10/22/21 14:38		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc. Pace National - Mt. Juliet									
Chromium, Trivalent	12.0	mg/kg	1.15	0.153	1	10/27/21 07:06	10/29/21 11:09	16065-83-1	

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ANALYTICAL RESULTS

Project: 449343 NEW HOLSTEIN PRE-REMED
Pace Project No.: 40235277

Sample: GB-2 2-4 **Lab ID: 40235277003** Collected: 10/15/21 12:47 Received: 10/16/21 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
Metals (ICP) 6010D									
Analytical Method: EPA 6010D Preparation Method: 3050B Pace National - Mt. Juliet									
Chromium	20.4	mg/kg	1.22	0.162	1	10/27/21 07:06	10/29/21 11:12	7440-47-3	
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	82.1	%			1	10/22/21 14:00	10/22/21 14:14		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet									
Chromium, Hexavalent	0.480J	mg/kg	1.22	0.311	1	10/21/21 19:00	10/22/21 14:43		J
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc. Pace National - Mt. Juliet									
Chromium, Trivalent	20.0	mg/kg	1.22	0.162	1	10/27/21 07:06	10/29/21 11:12	16065-83-1	

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ANALYTICAL RESULTS

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Sample: GB-2 6-8 **Lab ID: 40235277004** Collected: 10/15/21 12:51 Received: 10/16/21 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
Metals (ICP) 6010D									
Analytical Method: EPA 6010D Preparation Method: 3050B									
Pace National - Mt. Juliet									
Chromium	125	mg/kg	1.25	0.167	1	10/27/21 07:06	10/29/21 11:21	7440-47-3	
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G									
Pace National - Mt. Juliet									
Total Solids	79.8	%			1	10/22/21 13:22	10/22/21 13:37		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A									
Pace National - Mt. Juliet									
Chromium, Hexavalent	9.29	mg/kg	1.25	0.320	1	10/21/21 19:00	10/22/21 14:59		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc.									
Pace National - Mt. Juliet									
Chromium, Trivalent	116	mg/kg	1.25	0.167	1	10/27/21 07:06	10/29/21 11:21	16065-83-1	

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ANALYTICAL RESULTS

Project: 449343 NEW HOLSTEIN PRE-REMED
Pace Project No.: 40235277

Sample: GB-3 2-4 **Lab ID: 40235277005** Collected: 10/15/21 12:53 Received: 10/16/21 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
Metals (ICP) 6010D									
Analytical Method: EPA 6010D Preparation Method: 3050B Pace National - Mt. Juliet									
Chromium	13.6	mg/kg	1.14	0.151	1	10/27/21 07:06	10/29/21 11:24	7440-47-3	
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	87.9	%			1	10/22/21 13:22	10/22/21 13:37		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet									
Chromium, Hexavalent	0.744J	mg/kg	1.14	0.290	1	10/21/21 19:00	10/22/21 15:04		J
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc. Pace National - Mt. Juliet									
Chromium, Trivalent	12.8	mg/kg	1.14	0.151	1	10/27/21 07:06	10/29/21 11:24	16065-83-1	

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ANALYTICAL RESULTS

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Sample: GB-3 6-8 **Lab ID: 40235277006** Collected: 10/15/21 12:55 Received: 10/16/21 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
Metals (ICP) 6010D									
Analytical Method: EPA 6010D Preparation Method: 3050B Pace National - Mt. Juliet									
Chromium	523	mg/kg	1.33	0.177	1	10/27/21 07:06	10/29/21 11:26	7440-47-3	
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	75.1	%			1	10/22/21 13:22	10/22/21 13:37		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet									
Chromium, Hexavalent	27.6	mg/kg	1.33	0.339	1	10/21/21 19:00	10/22/21 15:09		R1
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc. Pace National - Mt. Juliet									
Chromium, Trivalent	496	mg/kg	1.33	0.177	1	10/27/21 07:06	10/29/21 11:26	16065-83-1	

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ANALYTICAL RESULTS

Project: 449343 NEW HOLSTEIN PRE-REMED
Pace Project No.: 40235277

Sample: GB-4 4-6 **Lab ID: 40235277007** Collected: 10/15/21 12:58 Received: 10/16/21 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
Metals (ICP) 6010D									
Analytical Method: EPA 6010D Preparation Method: 3050B Pace National - Mt. Juliet									
Chromium	14.2	mg/kg	1.16	0.154	1	10/27/21 07:06	10/29/21 11:29	7440-47-3	
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	86.3	%			1	10/22/21 13:22	10/22/21 13:37		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet									
Chromium, Hexavalent	1.79	mg/kg	1.16	0.295	1	10/21/21 19:00	10/22/21 15:20		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc. Pace National - Mt. Juliet									
Chromium, Trivalent	12.4	mg/kg	1.16	0.154	1	10/27/21 07:06	10/29/21 11:29	16065-83-1	

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ANALYTICAL RESULTS

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Sample: GB-4 6-8 **Lab ID: 40235277008** Collected: 10/15/21 13:01 Received: 10/16/21 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
Metals (ICP) 6010D									
Analytical Method: EPA 6010D Preparation Method: 3050B Pace National - Mt. Juliet									
Chromium	82.3	mg/kg	1.28	0.170	1	10/27/21 07:06	10/29/21 11:32	7440-47-3	
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	78.3	%			1	10/22/21 13:22	10/22/21 13:37		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet									
Chromium, Hexavalent	4.27	mg/kg	1.28	0.326	1	10/21/21 19:00	10/22/21 15:25		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc. Pace National - Mt. Juliet									
Chromium, Trivalent	78.0	mg/kg	1.28	0.170	1	10/27/21 07:06	10/29/21 11:32	16065-83-1	

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ANALYTICAL RESULTS

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Sample: GB-5 4-6 **Lab ID: 40235277009** Collected: 10/15/21 13:05 Received: 10/16/21 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
Metals (ICP) 6010D									
Analytical Method: EPA 6010D Preparation Method: 3050B Pace National - Mt. Juliet									
Chromium	126	mg/kg	1.25	0.167	1	10/27/21 07:06	10/29/21 11:36	7440-47-3	
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	79.8	%			1	10/22/21 13:22	10/22/21 13:37		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet									
Chromium, Hexavalent	31.8	mg/kg	1.25	0.320	1	10/21/21 19:00	10/22/21 15:30		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc. Pace National - Mt. Juliet									
Chromium, Trivalent	93.7	mg/kg	1.25	0.167	1	10/27/21 07:06	10/29/21 11:36	16065-83-1	

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ANALYTICAL RESULTS

Project: 449343 NEW HOLSTEIN PRE-REMEDI

Pace Project No.: 40235277

Sample: GB-5 6-8 **Lab ID: 40235277010** Collected: 10/15/21 13:07 Received: 10/16/21 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
Metals (ICP) 6010D									
Analytical Method: EPA 6010D Preparation Method: 3050B Pace National - Mt. Juliet									
Chromium	174	mg/kg	1.27	0.169	1	10/27/21 07:06	10/29/21 11:39	7440-47-3	
Total Solids 2540 G-2011									
Analytical Method: SM 2540G Preparation Method: SM 2540 G Pace National - Mt. Juliet									
Total Solids	78.7	%			1	10/22/21 13:22	10/22/21 13:37		
Wet Chemistry 7199									
Analytical Method: EPA 7199 Preparation Method: 3060A Pace National - Mt. Juliet									
Chromium, Hexavalent	11.3	mg/kg	1.27	0.324	1	10/21/21 19:00	10/22/21 15:35		
Calculated Results									
Analytical Method: Calculated Preparation Method: Calc. Pace National - Mt. Juliet									
Chromium, Trivalent	163	mg/kg	1.27	0.169	1	10/27/21 07:06	10/29/21 11:39	16065-83-1	

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QUALITY CONTROL DATA

Project: 449343 NEW HOLSTEIN PRE-REMED
Pace Project No.: 40235277

QC Batch:	1761980	Analysis Method:	EPA 6010D
QC Batch Method:	3050B	Analysis Description:	Metals (ICP) 6010D
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 40235277001, 40235277002, 40235277003, 40235277004, 40235277005, 40235277006, 40235277007, 40235277008, 40235277009, 40235277010

METHOD BLANK: R3723281-1 Matrix: Solid
Associated Lab Samples: 40235277001, 40235277002, 40235277003, 40235277004, 40235277005, 40235277006, 40235277007, 40235277008, 40235277009, 40235277010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium	mg/kg	<0.133	1.00	10/29/21 10:47	

LABORATORY CONTROL SAMPLE: R3723281-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium	mg/kg	100	101	101	80.0-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3723281-5 R3723281-6

Parameter	Units	L1419913-07 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	mg/kg	14.1	100	100	108	111	93.9	96.9	75.0-125	2.79	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: 449343 NEW HOLSTEIN PRE-REMED
Pace Project No.: 40235277

QC Batch: 1760421	Analysis Method: SM 2540G
QC Batch Method: SM 2540 G	Analysis Description: Total Solids 2540 G-2011
	Laboratory: Pace National - Mt. Juliet

Associated Lab Samples: 40235277004, 40235277005, 40235277006, 40235277007, 40235277008, 40235277009, 40235277010

METHOD BLANK: R3720384-1 Matrix: Solid
Associated Lab Samples: 40235277004, 40235277005, 40235277006, 40235277007, 40235277008, 40235277009, 40235277010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Solids	%	0.00100		10/22/21 13:37	

LABORATORY CONTROL SAMPLE: R3720384-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	%	50.0	50.0	100	85.0-115	

SAMPLE DUPLICATE: R3720384-3

Parameter	Units	40235277007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	%	86.3	78.8	9.10	10	

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QUALITY CONTROL DATA

Project: 449343 NEW HOLSTEIN PRE-REMED
Pace Project No.: 40235277

QC Batch:	1761389	Analysis Method:	EPA 7199
QC Batch Method:	3060A	Analysis Description:	Wet Chemistry 7199
		Laboratory:	Pace National - Mt. Juliet

Associated Lab Samples: 40235277001, 40235277002, 40235277003, 40235277004, 40235277005, 40235277006, 40235277007, 40235277008, 40235277009, 40235277010

METHOD BLANK: R3720240-1 Matrix: Solid
Associated Lab Samples: 40235277001, 40235277002, 40235277003, 40235277004, 40235277005, 40235277006, 40235277007, 40235277008, 40235277009, 40235277010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium, Hexavalent	mg/kg	<0.255	1.00	10/22/21 12:52	

LABORATORY CONTROL SAMPLE: R3720240-2

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	10.0	10.2	102	80.0-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: R3720240-4 R3720240-5

Parameter	Units	40235277001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium, Hexavalent	mg/kg	0.489	22.1	22.1	19.4	20.6	85.7	91.1	75.0-125	5.95	20	

MATRIX SPIKE SAMPLE: R3720240-6

Parameter	Units	40235277001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chromium, Hexavalent	mg/kg	0.489	776	856	110	75.0-125	

SAMPLE DUPLICATE: R3720240-3

Parameter	Units	L1418667-05 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	mg/kg	ND	<0.255	0.00	20	

SAMPLE DUPLICATE: R3720240-8

Parameter	Units	40235277006 Result	Dup Result	RPD	Max RPD	Qualifiers
Chromium, Hexavalent	mg/kg	20.7	8.61	82.6	20	R1

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.

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QUALIFIERS

Project: 449343 NEW HOLSTEIN PRE-REMEDIATION

Pace Project No.: 40235277

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.

ANALYTE QUALIFIERS

J Analyte detected below the reporting limit, therefore result is an estimate. This qualifier is also used for all TICs.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 449343 NEW HOLSTEIN PRE-REMED
Pace Project No.: 40235277

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40235277001	GB-1 4-6	3050B	1761980	EPA 6010D	1761980
40235277002	GB-1 8-10	3050B	1761980	EPA 6010D	1761980
40235277003	GB-2 2-4	3050B	1761980	EPA 6010D	1761980
40235277004	GB-2 6-8	3050B	1761980	EPA 6010D	1761980
40235277005	GB-3 2-4	3050B	1761980	EPA 6010D	1761980
40235277006	GB-3 6-8	3050B	1761980	EPA 6010D	1761980
40235277007	GB-4 4-6	3050B	1761980	EPA 6010D	1761980
40235277008	GB-4 6-8	3050B	1761980	EPA 6010D	1761980
40235277009	GB-5 4-6	3050B	1761980	EPA 6010D	1761980
40235277010	GB-5 6-8	3050B	1761980	EPA 6010D	1761980
40235277001	GB-1 4-6	SM 2540 G	1760415	SM 2540G	1760415
40235277002	GB-1 8-10	SM 2540 G	1760415	SM 2540G	1760415
40235277003	GB-2 2-4	SM 2540 G	1760415	SM 2540G	1760415
40235277004	GB-2 6-8	SM 2540 G	1760421	SM 2540G	1760421
40235277005	GB-3 2-4	SM 2540 G	1760421	SM 2540G	1760421
40235277006	GB-3 6-8	SM 2540 G	1760421	SM 2540G	1760421
40235277007	GB-4 4-6	SM 2540 G	1760421	SM 2540G	1760421
40235277008	GB-4 6-8	SM 2540 G	1760421	SM 2540G	1760421
40235277009	GB-5 4-6	SM 2540 G	1760421	SM 2540G	1760421
40235277010	GB-5 6-8	SM 2540 G	1760421	SM 2540G	1760421
40235277001	GB-1 4-6	3060A	1761389	EPA 7199	1761389
40235277002	GB-1 8-10	3060A	1761389	EPA 7199	1761389
40235277003	GB-2 2-4	3060A	1761389	EPA 7199	1761389
40235277004	GB-2 6-8	3060A	1761389	EPA 7199	1761389
40235277005	GB-3 2-4	3060A	1761389	EPA 7199	1761389
40235277006	GB-3 6-8	3060A	1761389	EPA 7199	1761389
40235277007	GB-4 4-6	3060A	1761389	EPA 7199	1761389
40235277008	GB-4 6-8	3060A	1761389	EPA 7199	1761389
40235277009	GB-5 4-6	3060A	1761389	EPA 7199	1761389
40235277010	GB-5 6-8	3060A	1761389	EPA 7199	1761389
40235277001	GB-1 4-6	Calc.	1761980	Calculated	1761980
40235277002	GB-1 8-10	Calc.	1761980	Calculated	1761980
40235277003	GB-2 2-4	Calc.	1761980	Calculated	1761980
40235277004	GB-2 6-8	Calc.	1761980	Calculated	1761980
40235277005	GB-3 2-4	Calc.	1761980	Calculated	1761980
40235277006	GB-3 6-8	Calc.	1761980	Calculated	1761980
40235277007	GB-4 4-6	Calc.	1761980	Calculated	1761980
40235277008	GB-4 6-8	Calc.	1761980	Calculated	1761980
40235277009	GB-5 4-6	Calc.	1761980	Calculated	1761980
40235277010	GB-5 6-8	Calc.	1761980	Calculated	1761980

REPORT OF LABORATORY ANALYSIS

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Sample Preservation Receipt Form

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

Client Name: TRC

Project # 40235277

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

Initial when completed:

Date/Time:

Lab Lot# of pH paper:

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

Pace Lab #	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)							
	AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP3U	BP3B	BP3N	BP3S	VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	JG9U	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
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014																																				2.5 / 5 / 10
015																																				2.5 / 5 / 10
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017																																				2.5 / 5 / 10
018																																				2.5 / 5 / 10
019																																				2.5 / 5 / 10
020																																				2.5 / 5 / 10

W/C 10/16/21

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	VG9A 40 mL clear ascorbic	JGFU 4 oz amber jar unpres
BG1U 1 liter clear glass	BP3U 250 mL plastic unpres	DG9T 40 mL amber Na Thio	JG9U 9 oz amber jar unpres
AG1H 1 liter amber glass HCL	BP3B 250 mL plastic NaOH	VG9U 40 mL clear vial unpres	WGFU 4 oz clear jar unpres
AG4S 125 mL amber glass H2SO4	BP3N 250 mL plastic HNO3	VG9H 40 mL clear vial HCL	WPFU 4 oz plastic jar unpres
AG4U 120 mL amber glass unpres	BP3S 250 mL plastic H2SO4	VG9M 40 mL clear vial MeOH	SP5T 120 mL plastic Na Thiosulfate
AG5U 100 mL amber glass unpres		VG9D 40 mL clear vial DI	ZPLC ziploc bag
AG2S 500 mL amber glass H2SO4			GN
BG3U 250 mL clear glass unpres			



Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
ENV-FRM-GBAY-0014-Rev.00

Document Revised: 26Mar2020
 Author:
 Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

Project #: _____

Client Name: TRC

Courier: CS Logistics Fed Ex Speedee UPS Waltco
 Client Pace Other: _____

Tracking #: _____

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 - 111 Type of Ice: Wet Blue Dry None

Cooler Temperature Uncorr: 3 /Corr: _____

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 if shipped on Dry Ice.

WO# : 40235277



40235277

Samples on ice, cooling process has begun

Person examining contents:

Date: 10/16/21 Initials: HC

Labeled By Initials: MP

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>		
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

PM Review is documented electronically in LIMs. By releasing the project, the PM acknowledges they have reviewed the sample logir