

From: Donald P. Gallo <DGallo@axley.com>
Sent: Wednesday, December 16, 2020 1:11 PM
To: Schultz, Josie M - DNR
Subject: FW: Results & Invoice - 20-937 Bay Towel (40219800)
Attachments: 2020_1215 sample locations.pdf; 40219800_frc.pdf; 2020_1104 20-261 F2 Proposed Rev Dig.pdf

Donald P. Gallo

Phone: 262.409.2283 | Cell: 414.507.6350

Axley Brynelson, LLP

From: Donald P. Gallo <DGallo@axley.com>
Sent: Tuesday, December 15, 2020 11:15 PM
To: Silje Roalsvik <sroalsvik@resolutemgmt.com>; Nancy Reid <nreid@resolutemgmt.com>; Jeanne Tarvin <jtarkin@ramboll.com>; Frances Ackerman <Frances.Ackerman@ramboll.com>
Cc: Matt Dahlem <mdahlem@fehr-graham.com>; Dillon Plamann <DPlamann@fehr-graham.com>; John Butz <jbutz@baytowel.com>
Subject: FW: Results & Invoice - 20-937 Bay Towel (40219800)

Silje, Nancy, Jeanne, Frances, Matt and Dillion;

We need to make some decisions on additional excavation in the vicinity of SW-21 and SW-22. I think that we should proceed to conduct the additional excavation now, before we backfill this hole as it will most likely need to be excavated to obtain WDNR case closure. We are running out of time; however, we are looking at above normal temperatures from now until Christmas (12-25-2020). To do this additional excavation we need to schedule Orion and order more chemical now or we will be pushed in to the week between Christmas and New Years. Let's find a time to discuss on Wednesday after Nancy and Jeanne have had an opportunity to review this data.

In the meantime, Fehr Graham should prepare an estimate of costs on Wednesday also.

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Axley Brynelson, LLP

From: Dillon Plamann <DPlamann@fehr-graham.com>
Sent: Tuesday, December 15, 2020 4:16 PM
To: Donald P. Gallo <DGallo@axley.com>
Cc: Matt Dahlem <mdahlem@fehr-graham.com>
Subject: FW: Results & Invoice - 20-937 Bay Towel (40219800)

Don,

See the attached lab report with the soil sample results from yesterday, and the map with the soil sample locations. I also attached in older map that shows a wider view of the site with all of the soil chemistry surrounding these current excavations.

There are still two samples with high levels of PCE, SW-21 25' (143,000 ug/kg) and SW-22 25' (210,000 ug/kg). The PCE concentrations in the other 4 samples are relatively low.

Orin treated the soil in the roll off boxes today and used the remainder of the hydrogen peroxide (Fentons) chemical that was onsite. If we want to excavate and treat these other two "hot spot" areas, they would need to order more of this chemical which takes about a week. I would also need to check with them on their schedule to see when they would be available to come back to do this. I would also need to submit another change order for the additional work.

In addition for addressing the hot spot areas, the location of MW-2R on the older map is slightly off. It is located a few feet north of SW-21. If we do want to excavate further at SW-21, we would likely need to abandon MW-2R and reinstall during backfilling as is will likely be damaged or destroyed.

Since it is starting to get colder too, and weather will start being an issue, I wanted to put this out as well. If we did not want to excavate further, we are leaving soil in place that have higher concentrations of PCE (SW-9A 20', 293,000; SW-9B 20', 229,000; SW-10 20', 344,000; and SW-10B 20', 222,000) than the concentrations in SW-21 and SW-22. And the horizontal extent of this contamination has been defined by the delineation borings that were completed over the summer. Vertically, contamination is generally defined at 30' below grade across the site. However, we do not have 30' samples in the specific locations at SW-21 and SW-22. If we do not want to excavate further, we should complete borings at these locations after backfilling to define vertically.

Let us know how you want to move forward, and feel free to call me to discuss.

Thank you!

DILLON PLAMANN | Project Hydrogeologist
Fehr Graham | Engineering & Environmental

909 North 8th Street, Suite 101
Sheboygan, WI 53081
P: 920.453.0700
C: 920.946.2407
fehr-graham.com

From: Christopher Hyska <Christopher.Hyska@pacelabs.com>
Sent: Tuesday, December 15, 2020 3:10 PM
To: Dillon Plamann <DPlamann@fehr-graham.com>
Cc: Matt Dahlem <mdahlem@fehr-graham.com>; AP <ap@fehr-graham.com>
Subject: Results & Invoice - 20-937 Bay Towel (40219800)

Good Afternoon Dillon,

Attached are final results for Bay Towel rush cVOC samples received yesterday (12/14).
Please feel free to let us know if any questions.

Thanks!



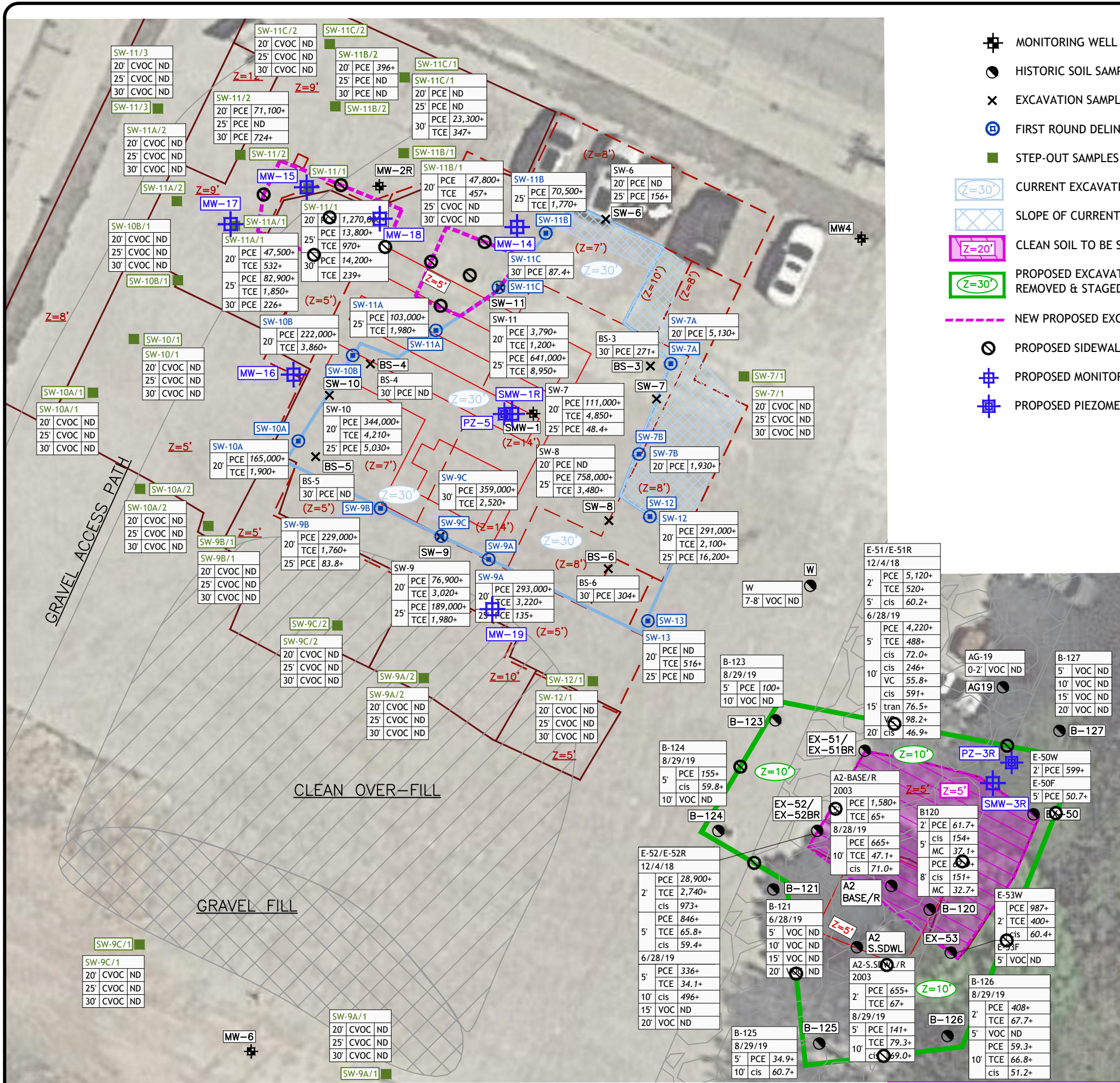
Chris Hyska

Project Manager | Environmental Sciences
1241 Bellevue St, STE 9, Green Bay, WI 54302
d: [920.321.9405](tel:920.321.9405) | o: [920.469.2436](tel:920.469.2436) | pacelabs.com



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LEGEND

- ⊕ MONITORING WELL
- HISTORIC SOIL SAMPLES
- × EXCAVATION SAMPLES (JULY 29-31)
- ⊕ FIRST ROUND DELINEATION SAMPLES (AUG. 11-14)
- STEP-OUT SAMPLES (AUG. 18-19)
- (Z=30) CURRENT EXCAVATION LIMITS
- (Z=20) CLEAN SOIL TO BE STAGED & DEPTH
- (Z=30) PROPOSED EXCAVATION & DEPTH AFTER CLEAN SOIL REMOVED & STAGED
- NEW PROPOSED EXCAVATION LIMIT
- ⊕ PROPOSED SIDEWALL & BACKFILL SAMPLES
- ⊕ PROPOSED MONITORING WELL
- ⊕ PROPOSED PIEZOMETER AFTER BACKFILLING
- 0-2' SAMPLE DEPTH
- PCE TETRACHLOROETHENE (ug/kg)
- TCE TRICHLOROETHENE (ug/kg)
- CVOC CHLORINATED VOLATILE ORGANIC COMPOUNDS
- ND NO DETECT
- DBS DETECTIONS BELOW STANDARDS
- ITALICS+* EXCEEDS GROUNDWATER PATHWAY RCL
- BOLD++** EXCEEDS NON-INDUSTRIAL DIRECT CONTACT (0-4') RCL
- ITALICS/ BOLD++* EXCEEDS BOTH GROUNDWATER & DIRECT CONTACT RCL
- 2003 ARCADIS EXCAVATION LIMITS
- (Z=5') 2016 FEHR GRAHAM EXCAVATION & DEPTH
- Z=5' 2018 FEHR GRAHAM EXCAVATION & DEPTH

- WELLS TO 25' (5' SCREEN)
 - MW-15
 - MW-18
 - SMW-1R
 - MW-16
 - MW-19
- WELL TO 30' (5' SCREEN)
 - MW-14
- PIEZOMETER TO 40' (5' SCREEN)
 - PZ-5 (NESTED WITH SMW-1R)
- PIEZOMETER TO 30' (5' SCREEN)
 - PZ-3 (NESTED WITH MW-3R)
- WELL TO 15' (10' SCREEN)
 - MW-3R
- WELL TO 30' (10' SCREEN)
 - MW-17

NOTES: MONITORING WELLS/PIEZOMETERS TO BE COMPLETED AS TWO (2) INCH NR141 WELLS WITH SAND TO ONE (1) FOOT ABOVE SCREEN AND BENTONITE 0.5 FEET BELOW GRADE; FLUSH MOUNT COVERS WILL BE USED

MONITORING WELLS/PIEZOMETERS TO BE INSTALLED FOLLOWING COMPLETION OF BACKFILLING ACTIVITIES

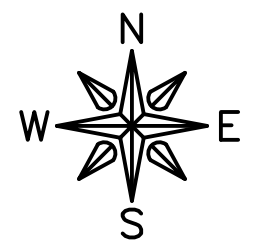
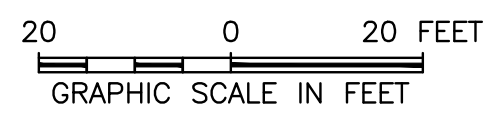
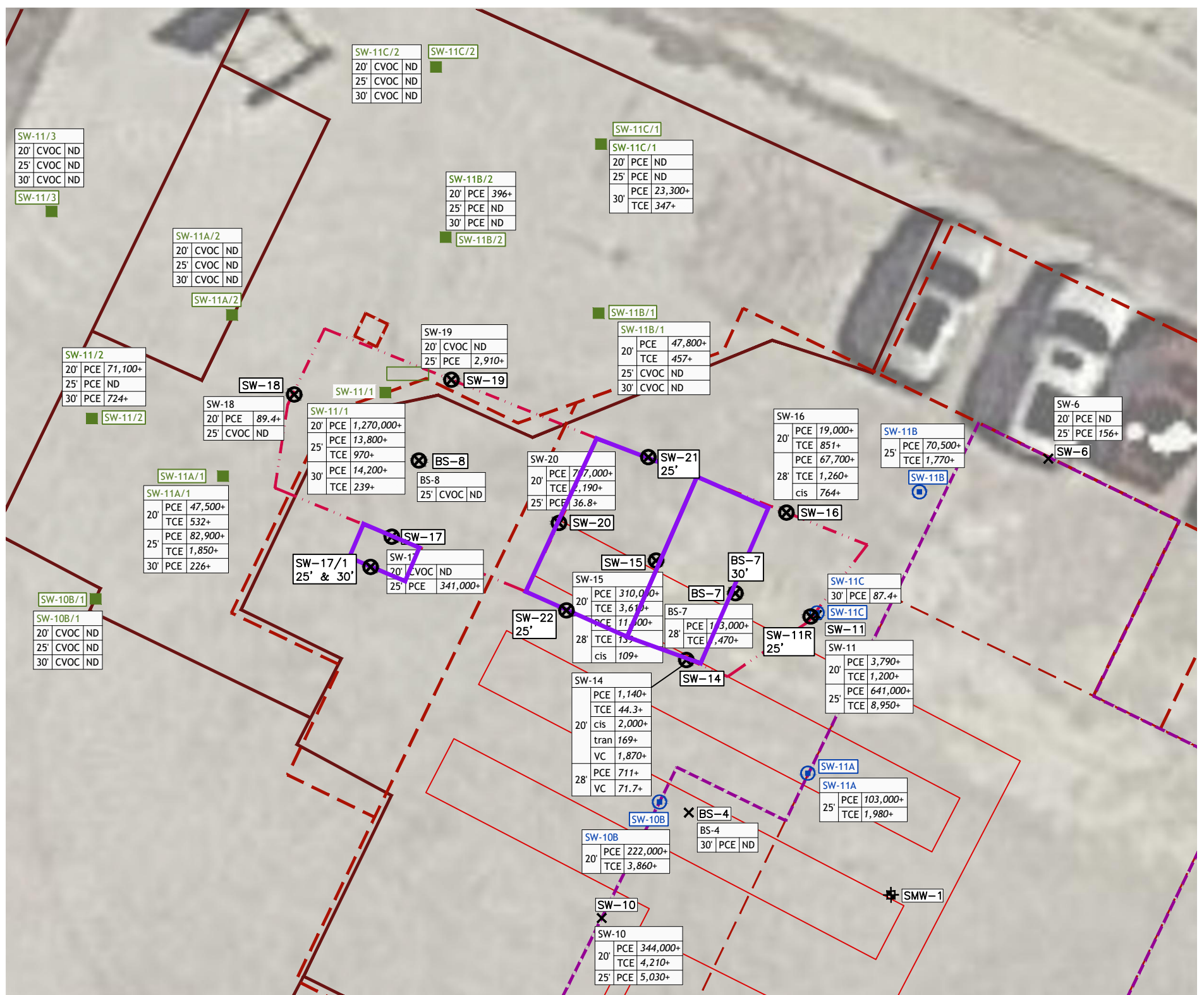


FIGURE 2
PROPOSED REVISED ADDITIONAL REMEDIAL EXCAVATION
BAY TOWEL – SOLVENT INVESTIGATION
501 S. ADAMS ST.
GREEN BAY, WI 54301
BRRTS NO.: 02-50-237064

11/4/20

FEHR GRAHAM
 ENGINEERING & ENVIRONMENTAL
 ILLINOIS DESIGN FIRM NO. 194-003525

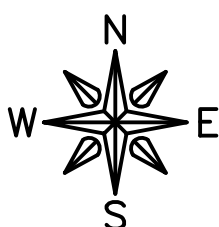
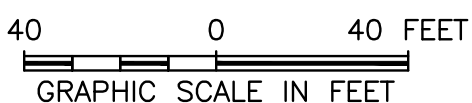
ILLINOIS
 IOWA
 WISCONSIN



LEGEND

⊕	MONITORING WELL	0-2'	SAMPLE DEPTH		
×	EXCAVATION SAMPLES (JULY 29-31)	PCE	TETRACHLOROETHENE (ug/kg)	 	2003 ARCADIS EXCAVATION LIMITS
⊕	FIRST ROUND DELINEATION SAMPLES (AUG. 11-14)	TCE	TRICHLOROETHENE (ug/kg)	(Z=5')	2016 FEHR GRAHAM EXCAVATION & DEPTH
■	STEP-OUT SAMPLES (AUG. 18-19)	cis	cis-1,2-DICHLOROETHENE (ug/kg)	Z=5'	2018 FEHR GRAHAM EXCAVATION & DEPTH
⊗	ADDITIONAL EXCAVATION SAMPLES (FALL 2020)	tran	trans-1,2-DICHLOROETHENE (ug/kg)	---	2020 FEHR GRAHAM LEACHATE EXCAVATION
○	PROPOSED ADDITIONAL EXCAVATION SAMPLES	VC	VINYL CHLORIDE (ug/kg)		
		CVOC	CHLORINATED VOLATILE ORGANIC COMPOUNDS		
		ND	NO DETECT		
		DBS	DETECTIONS BELOW STANDARDS		
		<i>ITALICS+</i>	EXCEEDS GROUNDWATER PATHWAY RCL		
		BOLD++	EXCEEDS NON-INDUSTRIAL DIRECT CONTACT (0-4') RCL		
		<i>ITALICS/ BOLD++</i>	EXCEEDS BOTH GROUNDWATER & DIRECT CONTACT RCL		

FIGURE 1
 SELECT SAMPLE CHEMISTRY & PROPOSED
 ADDITIONAL EXCAVATION SAMPLES
 BAY TOWEL-SOLVENT INGESTION
 501 S. ADAMS ST.
 GREEN BAY, WI 54301
 BRRTS NO.: 02-50-237064



12/10/20

FEHR GRAHAM
 ENGINEERING & ENVIRONMENTAL

ILLINOIS
 IOWA
 WISCONSIN

December 15, 2020

Dillon Plamann
Fehr Graham Engineering & Environmental
909 N. 8th Street
Suite 101
Sheboygan, WI 53081

RE: Project: 20-937 BAY TOWEL
Pace Project No.: 40219800

Dear Dillon Plamann:

Enclosed are the analytical results for sample(s) received by the laboratory on December 14, 2020. 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 Analytical Services - Green Bay

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

Sincerely,



Christopher Hyska
christopher.hyska@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Matt Dahlem, Fehr Graham Engineering and
Environmental



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 20-937 BAY TOWEL

Pace Project No.: 40219800

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

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SAMPLE SUMMARY

Project: 20-937 BAY TOWEL

Pace Project No.: 40219800

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40219800001	SW-11R 25'	Solid	12/14/20 07:45	12/14/20 13:00
40219800002	SW-17/1 25'	Solid	12/14/20 08:45	12/14/20 13:00
40219800003	SW-17/1 30'	Solid	12/14/20 08:50	12/14/20 13:00
40219800004	BS-7 30'	Solid	12/14/20 09:10	12/14/20 13:00
40219800005	SW-21 25'	Solid	12/14/20 12:15	12/14/20 13:00
40219800006	SW-22 25'	Solid	12/14/20 12:20	12/14/20 13:00

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SAMPLE ANALYTE COUNT

Project: 20-937 BAY TOWEL
Pace Project No.: 40219800

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40219800001	SW-11R 25'	EPA 8260	ALD	8	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40219800002	SW-17/1 25'	EPA 8260	ALD	8	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40219800003	SW-17/1 30'	EPA 8260	ALD	8	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40219800004	BS-7 30'	EPA 8260	ALD	8	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40219800005	SW-21 25'	EPA 8260	ALD	8	PASI-G
		ASTM D2974-87	AH	1	PASI-G
40219800006	SW-22 25'	EPA 8260	ALD	8	PASI-G
		ASTM D2974-87	AH	1	PASI-G

PASI-G = Pace Analytical Services - Green Bay

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SUMMARY OF DETECTION

Project: 20-937 BAY TOWEL
Pace Project No.: 40219800

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40219800001	SW-11R 25'					
EPA 8260	cis-1,2-Dichloroethene	17.9J	ug/kg	59.0	12/15/20 09:29	
EPA 8260	Tetrachloroethene	5290	ug/kg	59.0	12/15/20 09:29	
EPA 8260	Trichloroethene	424	ug/kg	59.0	12/15/20 09:29	
ASTM D2974-87	Percent Moisture	15.2	%	0.10	12/14/20 15:30	
40219800002	SW-17/1 25'					
ASTM D2974-87	Percent Moisture	14.2	%	0.10	12/14/20 15:30	
40219800003	SW-17/1 30'					
EPA 8260	Tetrachloroethene	237	ug/kg	59.3	12/15/20 10:08	
ASTM D2974-87	Percent Moisture	15.7	%	0.10	12/14/20 15:30	
40219800004	BS-7 30'					
EPA 8260	cis-1,2-Dichloroethene	124J	ug/kg	152	12/15/20 11:26	
EPA 8260	Tetrachloroethene	26700	ug/kg	152	12/15/20 11:26	
EPA 8260	Trichloroethene	1160	ug/kg	152	12/15/20 11:26	
ASTM D2974-87	Percent Moisture	17.8	%	0.10	12/14/20 15:30	
40219800005	SW-21 25'					
EPA 8260	cis-1,2-Dichloroethene	273J	ug/kg	466	12/15/20 11:07	
EPA 8260	Tetrachloroethene	143000	ug/kg	1460	12/15/20 12:44	
EPA 8260	Trichloroethene	1900	ug/kg	466	12/15/20 11:07	
ASTM D2974-87	Percent Moisture	14.2	%	0.10	12/14/20 15:30	
40219800006	SW-22 25'					
EPA 8260	Tetrachloroethene	210000	ug/kg	2330	12/15/20 12:25	
EPA 8260	Trichloroethene	1490	ug/kg	727	12/15/20 10:47	
ASTM D2974-87	Percent Moisture	14.0	%	0.10	12/14/20 15:30	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 20-937 BAY TOWEL
Pace Project No.: 40219800

Sample: SW-11R 25' **Lab ID: 40219800001** Collected: 12/14/20 07:45 Received: 12/14/20 13:00 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
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
cis-1,2-Dichloroethene	17.9J	ug/kg	59.0	12.6	1	12/15/20 08:00	12/15/20 09:29	156-59-2	
trans-1,2-Dichloroethene	<12.7	ug/kg	59.0	12.7	1	12/15/20 08:00	12/15/20 09:29	156-60-5	
Tetrachloroethene	5290	ug/kg	59.0	22.9	1	12/15/20 08:00	12/15/20 09:29	127-18-4	
Trichloroethene	424	ug/kg	59.0	22.1	1	12/15/20 08:00	12/15/20 09:29	79-01-6	
Vinyl chloride	<11.9	ug/kg	59.0	11.9	1	12/15/20 08:00	12/15/20 09:29	75-01-4	
Surrogates									
Toluene-d8 (S)	96	%	56-140		1	12/15/20 08:00	12/15/20 09:29	2037-26-5	
4-Bromofluorobenzene (S)	97	%	52-137		1	12/15/20 08:00	12/15/20 09:29	460-00-4	
1,2-Dichlorobenzene-d4 (S)	95	%	50-150		1	12/15/20 08:00	12/15/20 09:29	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	15.2	%	0.10	0.10	1		12/14/20 15:30		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 20-937 BAY TOWEL
Pace Project No.: 40219800

Sample: SW-17/1 25' **Lab ID: 4021980002** Collected: 12/14/20 08:45 Received: 12/14/20 13:00 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
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
cis-1,2-Dichloroethene	<12.5	ug/kg	58.2	12.5	1	12/15/20 08:00	12/15/20 12:05	156-59-2	
trans-1,2-Dichloroethene	<12.6	ug/kg	58.2	12.6	1	12/15/20 08:00	12/15/20 12:05	156-60-5	
Tetrachloroethene	<22.6	ug/kg	58.2	22.6	1	12/15/20 08:00	12/15/20 12:05	127-18-4	
Trichloroethene	<21.8	ug/kg	58.2	21.8	1	12/15/20 08:00	12/15/20 12:05	79-01-6	
Vinyl chloride	<11.8	ug/kg	58.2	11.8	1	12/15/20 08:00	12/15/20 12:05	75-01-4	
Surrogates									
Toluene-d8 (S)	95	%	56-140		1	12/15/20 08:00	12/15/20 12:05	2037-26-5	
4-Bromofluorobenzene (S)	89	%	52-137		1	12/15/20 08:00	12/15/20 12:05	460-00-4	
1,2-Dichlorobenzene-d4 (S)	93	%	50-150		1	12/15/20 08:00	12/15/20 12:05	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	14.2	%	0.10	0.10	1		12/14/20 15:30		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 20-937 BAY TOWEL

Pace Project No.: 40219800

Sample: SW-17/1 30' **Lab ID: 40219800003** Collected: 12/14/20 08:50 Received: 12/14/20 13:00 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
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
cis-1,2-Dichloroethene	<12.7	ug/kg	59.3	12.7	1	12/15/20 08:00	12/15/20 10:08	156-59-2	
trans-1,2-Dichloroethene	<12.8	ug/kg	59.3	12.8	1	12/15/20 08:00	12/15/20 10:08	156-60-5	
Tetrachloroethene	237	ug/kg	59.3	23.0	1	12/15/20 08:00	12/15/20 10:08	127-18-4	
Trichloroethene	<22.2	ug/kg	59.3	22.2	1	12/15/20 08:00	12/15/20 10:08	79-01-6	
Vinyl chloride	<12.0	ug/kg	59.3	12.0	1	12/15/20 08:00	12/15/20 10:08	75-01-4	
Surrogates									
Toluene-d8 (S)	97	%	56-140		1	12/15/20 08:00	12/15/20 10:08	2037-26-5	
4-Bromofluorobenzene (S)	94	%	52-137		1	12/15/20 08:00	12/15/20 10:08	460-00-4	
1,2-Dichlorobenzene-d4 (S)	97	%	50-150		1	12/15/20 08:00	12/15/20 10:08	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	15.7	%	0.10	0.10	1		12/14/20 15:30		

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ANALYTICAL RESULTS

Project: 20-937 BAY TOWEL
Pace Project No.: 40219800

Sample: BS-7 30' **Lab ID: 40219800004** Collected: 12/14/20 09:10 Received: 12/14/20 13:00 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
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
cis-1,2-Dichloroethene	124J	ug/kg	152	32.5	2.5	12/15/20 08:00	12/15/20 11:26	156-59-2	
trans-1,2-Dichloroethene	<32.8	ug/kg	152	32.8	2.5	12/15/20 08:00	12/15/20 11:26	156-60-5	
Tetrachloroethene	26700	ug/kg	152	59.0	2.5	12/15/20 08:00	12/15/20 11:26	127-18-4	
Trichloroethene	1160	ug/kg	152	56.8	2.5	12/15/20 08:00	12/15/20 11:26	79-01-6	
Vinyl chloride	<30.7	ug/kg	152	30.7	2.5	12/15/20 08:00	12/15/20 11:26	75-01-4	
Surrogates									
Toluene-d8 (S)	98	%	56-140		2.5	12/15/20 08:00	12/15/20 11:26	2037-26-5	
4-Bromofluorobenzene (S)	100	%	52-137		2.5	12/15/20 08:00	12/15/20 11:26	460-00-4	
1,2-Dichlorobenzene-d4 (S)	101	%	50-150		2.5	12/15/20 08:00	12/15/20 11:26	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	17.8	%	0.10	0.10	1		12/14/20 15:30		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 20-937 BAY TOWEL
Pace Project No.: 40219800

Sample: SW-21 25' **Lab ID: 40219800005** Collected: 12/14/20 12:15 Received: 12/14/20 13:00 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
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
cis-1,2-Dichloroethene	273J	ug/kg	466	99.7	8	12/15/20 08:00	12/15/20 11:07	156-59-2	
trans-1,2-Dichloroethene	<101	ug/kg	466	101	8	12/15/20 08:00	12/15/20 11:07	156-60-5	
Tetrachloroethene	143000	ug/kg	1460	565	25	12/15/20 08:00	12/15/20 12:44	127-18-4	
Trichloroethene	1900	ug/kg	466	174	8	12/15/20 08:00	12/15/20 11:07	79-01-6	
Vinyl chloride	<94.1	ug/kg	466	94.1	8	12/15/20 08:00	12/15/20 11:07	75-01-4	
Surrogates									
Toluene-d8 (S)	101	%	56-140		8	12/15/20 08:00	12/15/20 11:07	2037-26-5	
4-Bromofluorobenzene (S)	104	%	52-137		8	12/15/20 08:00	12/15/20 11:07	460-00-4	
1,2-Dichlorobenzene-d4 (S)	104	%	50-150		8	12/15/20 08:00	12/15/20 11:07	2199-69-1	
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	14.2	%	0.10	0.10	1		12/14/20 15:30		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 20-937 BAY TOWEL

Pace Project No.: 40219800

Sample: SW-22 25' **Lab ID: 40219800006** Collected: 12/14/20 12:20 Received: 12/14/20 13:00 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
8260 MSV Med Level Normal List									
Analytical Method: EPA 8260 Preparation Method: EPA 5035/5030B									
Pace Analytical Services - Green Bay									
cis-1,2-Dichloroethene	<156	ug/kg	727	156	12.5	12/15/20 08:00	12/15/20 10:47	156-59-2	
trans-1,2-Dichloroethene	<157	ug/kg	727	157	12.5	12/15/20 08:00	12/15/20 10:47	156-60-5	
Tetrachloroethene	210000	ug/kg	2330	903	40	12/15/20 08:00	12/15/20 12:25	127-18-4	
Trichloroethene	1490	ug/kg	727	272	12.5	12/15/20 08:00	12/15/20 10:47	79-01-6	
Vinyl chloride	<147	ug/kg	727	147	12.5	12/15/20 08:00	12/15/20 10:47	75-01-4	
Surrogates									
Toluene-d8 (S)	0	%	56-140		12.5	12/15/20 08:00	12/15/20 10:47	2037-26-5	S4
4-Bromofluorobenzene (S)	0	%	52-137		12.5	12/15/20 08:00	12/15/20 10:47	460-00-4	S4
1,2-Dichlorobenzene-d4 (S)	0	%	50-150		12.5	12/15/20 08:00	12/15/20 10:47	2199-69-1	S4
Percent Moisture									
Analytical Method: ASTM D2974-87									
Pace Analytical Services - Green Bay									
Percent Moisture	14.0	%	0.10	0.10	1		12/14/20 15:30		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 20-937 BAY TOWEL

Pace Project No.: 40219800

QC Batch:	373787	Analysis Method:	EPA 8260
QC Batch Method:	EPA 5035/5030B	Analysis Description:	8260 MSV Med Level Normal List
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40219800001, 40219800002, 40219800003, 40219800004, 40219800005, 40219800006

METHOD BLANK: 2160209 Matrix: Solid

Associated Lab Samples: 40219800001, 40219800002, 40219800003, 40219800004, 40219800005, 40219800006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
cis-1,2-Dichloroethene	ug/kg	<10.7	50.0	12/15/20 09:09	
Tetrachloroethene	ug/kg	<19.4	50.0	12/15/20 09:09	
trans-1,2-Dichloroethene	ug/kg	<10.8	50.0	12/15/20 09:09	
Trichloroethene	ug/kg	<18.7	50.0	12/15/20 09:09	
Vinyl chloride	ug/kg	<10.1	50.0	12/15/20 09:09	
1,2-Dichlorobenzene-d4 (S)	%	88	50-150	12/15/20 09:09	
4-Bromofluorobenzene (S)	%	84	52-137	12/15/20 09:09	
Toluene-d8 (S)	%	89	56-140	12/15/20 09:09	

LABORATORY CONTROL SAMPLE: 2160210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
cis-1,2-Dichloroethene	ug/kg	2500	1990	79	69-130	
Tetrachloroethene	ug/kg	2500	2180	87	70-130	
trans-1,2-Dichloroethene	ug/kg	2500	2100	84	70-130	
Trichloroethene	ug/kg	2500	2270	91	70-130	
Vinyl chloride	ug/kg	2500	2190	88	53-110	
1,2-Dichlorobenzene-d4 (S)	%			87	50-150	
4-Bromofluorobenzene (S)	%			86	52-137	
Toluene-d8 (S)	%			87	56-140	

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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QUALITY CONTROL DATA

Project: 20-937 BAY TOWEL

Pace Project No.: 40219800

QC Batch:	373732	Analysis Method:	ASTM D2974-87
QC Batch Method:	ASTM D2974-87	Analysis Description:	Dry Weight/Percent Moisture
		Laboratory:	Pace Analytical Services - Green Bay

Associated Lab Samples: 40219800001, 40219800002, 40219800003, 40219800004, 40219800005, 40219800006

SAMPLE DUPLICATE: 2160007

Parameter	Units	40219800001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	15.2	15.1	1	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: 20-937 BAY TOWEL

Pace Project No.: 40219800

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

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 20-937 BAY TOWEL
Pace Project No.: 40219800

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40219800001	SW-11R 25'	EPA 5035/5030B	373787	EPA 8260	373789
40219800002	SW-17/1 25'	EPA 5035/5030B	373787	EPA 8260	373789
40219800003	SW-17/1 30'	EPA 5035/5030B	373787	EPA 8260	373789
40219800004	BS-7 30'	EPA 5035/5030B	373787	EPA 8260	373789
40219800005	SW-21 25'	EPA 5035/5030B	373787	EPA 8260	373789
40219800006	SW-22 25'	EPA 5035/5030B	373787	EPA 8260	373789
40219800001	SW-11R 25'	ASTM D2974-87	373732		
40219800002	SW-17/1 25'	ASTM D2974-87	373732		
40219800003	SW-17/1 30'	ASTM D2974-87	373732		
40219800004	BS-7 30'	ASTM D2974-87	373732		
40219800005	SW-21 25'	ASTM D2974-87	373732		
40219800006	SW-22 25'	ASTM D2974-87	373732		

REPORT OF LABORATORY ANALYSIS

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Sample Preservation Receipt Form

Pace Analytical Services, LLC
1241 Bellevue Street, Suite 408
Green Bay, WI 54302

Page 17

Client Name: Fehr Graham Project # 40249800

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:

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
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

12/14/20 *[Signature]*

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			


 1241 Bellevue Street, Green Bay, WI 54302	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: 26Mar2020
	Document No.: ENV-FRM-GBAY-0014-Rev.00	Author: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

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

Project #: _____

WO#: 40219800



40219800

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 - N/A **Type of Ice:** Wet Blue Dry None Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI 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.

Person examining contents: <u>12-14-20</u> Date: _____ / Initials: <u>SKW</u>
Labeled By Initials: <u>KB/SKW</u>

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 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No	7.
Sufficient Volume:		8.
For Analysis: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No MS/MSD: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix: <u>S</u>		<u>all WPFU no date, & time</u> <u>12-14-20</u> <u>SKW</u>
Trip Blank Present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input 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