Lauridsen, Keld B - DNR

From: Glander, Nick <Nick.Glander@foth.com>
Sent: Tuesday, April 14, 2020 2:52 PM
To: Lauridsen, Keld B - DNR
Subject: Better Brite WTP End of Year Documentation
Attachments: Better Brite - 2019-20 Summary Packet.pdf; Sept. 2019 Better Brite Analytical Results.pdf; Feb. 2020 Better Brite Anaytical Results.pdf

Hello Keld;

In total, Foth processed 38 batches in the contract year - April 2019 through March 2020. An attached Better Brite WTP Summary Packet contains the following:

- A summary page showing the total volume of water treated per month in table & graph format with drum fill and analytical sample collection dates
- The tabulated WTP Process Log provides the individual batch detail
- Table showing when drums were filled and disposed of
- Summary table of the analytical results

Also attached are both the October and March Pace Laboratory Analytical Reports.

Thank you;

P.S. I was able to reinstall the fixed parts for the filter press yesterday. The system is in operational again.

Nick Glander, Project Environmental Scientist
Foth Infrastructure & Environment, LLC
2121 Innovation Court, Suite 300
P.O. Box 5126
De Pere, WI 54115-5126
Ph: (920) 496-6758 / Fax (920) 497-8516
Cell: (920) 362-8744
http://www.foth.com

Better Brite 2018/2019 Treatment

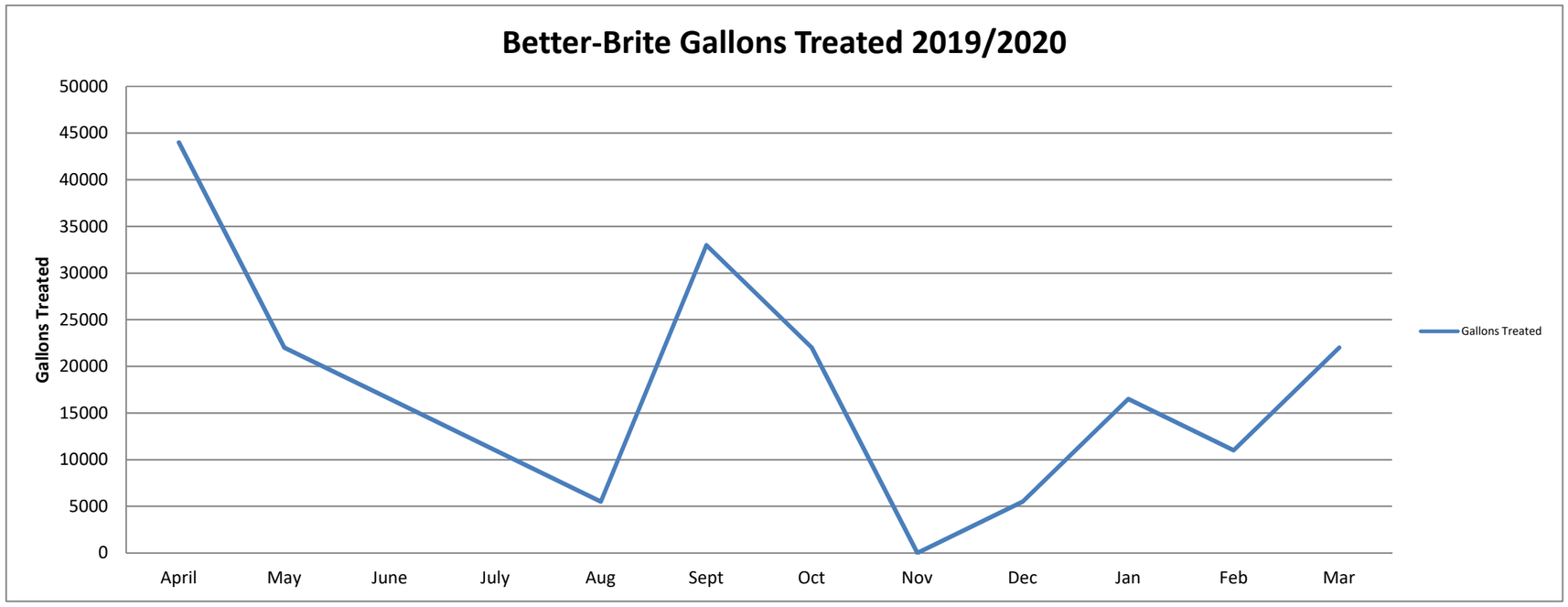
Month	Gallons Treated	Batches Ran
April	44000	8
May	22000	4
June	16500	3
July	11000	2
Aug	5500	1
Sept	33000	6
Oct	22000	4
Nov	0	0
Dec	5500	1
Jan	16500	3
Feb	11000	2
Mar	22000	4
	TOTAL	**38**

Drum #	Date Filled
1	5/19/2019
2	

*** A second drum contained old filter press screens and seals was disposed of.**

Total Chrome Analytical Samples Collection Dates

Sample Rd	Date Collected
1	9/12/2019
2	2/27/2020



Foth

Better-Brite WTP Processing Log 2019/2020

19W016

Date	Operator	Batch #	Gal Processed	H2SO4 - pH reduction to (s.u.)	NaHSO3 - ORP reduction to (mv)	Mg(OH)2/NaOH - pH raised to (s.u.)	Polymer feed (sec)	Batch Test Results Cr+6	Press Run Time (min)	Recycled Water (gal)	Sludge drum fille or Press cleaned / Comments
04/07/19	AXP5	1	5500	3.05	301	8.55	30	0.03	30	350	
04/08/19	AXP5	2	5500	3.30	300	8.68	30	0.03	30	350	
04/19/19	AXP5	3	5500	3.01	298	8.52	30	0.01	30	350	
04/23/19	AXP5	4	5500	3.20	302	8.60	30	0.02	30	350	
04/24/19	AXP5	5	5500	3.10	301	8.62	30	0.03	30	350	Calibrated Sensors
04/25/19	AXP5	6	5500	3.05	300	8.66	30	0.02	30	350	
04/26/19	AXP5	7	5500	3.01	302	8.54	30	0.00	29	350	
04/30/19	AXP5	8	5500	3.00	304	8.68	30	0.00	29	350	cleaned press
05/01/19	AXP5	9	5500	3.06	301	8.70	30	0.00	30	350	
05/13/19	AXP5	10	5500	3.27	303	8.66	30	0.00	30	350	EPA 5-Yr review
05/20/19	AXP5	11	5500	3.24	302	8.59	30	0.00	30	350	Cleaned Ball Valve.
05/31/19	AXP5	12	5500	3.02	300	8.67	30	0.00	30	350	
06/06/19	BLK	13	5500	3.50	302	8.57	30	0.00	32	350	
06/10/19	BLK	14	5500	3.29	300	8.60	30	0.10	35	350	
06/24/19	AXP5	15	5500	3.23	300	8.70	30	0.00	35	350	Cleaned Press
07/01/19	AXP5	16	5500	3.13	301	8.64	30	0.00	29	350	
07/22/19	AXP5	17	5500	3.21	300	8.61	30	0.00	29	350	
08/07/19	BLK	18	5500	3.36	300	8.60	30	0.00	30	350	Calibrated Sensors
09/10/19	AXP5	19	5500	3.13	301	8.65	30	0.00	30	350	
09/11/19	AXP5	20	5500	3.20	300	8.62	30	0.00	30	350	
09/12/19	AXP5	21	5500	3.05	300	8.69	30	0.00	30	350	Cleaned Press / T. Chrome Sample Collected
09/13/19	AXP5	22	5500	3.13	300	8.65	30	0.00	30	350	
09/26/19	AXP5	23	5500	3.15	301	8.70	30	0.00	30	350	
09/27/19	AXP5	24	5500	3.02	300	8.58	30	0.00	30	350	
10/01/19	AXP5	25	5500	3.05	302	8.60	30	0.00	30	350	Calibrated Sensors
10/03/19	AXP5	26	5500	3.12	300	8.67	30	0.00	30	350	
10/12/19	AXP5	27	5500	3.04	301	8.69	30	0.00	30	350	Cleaned Press
10/30/19	NMG1	28	5500	3.49	295	8.58	30	0.01	30	350	
12/16/19	NMG1	29	5500	3.07	300.00	8.54	30	0.02	30	350	Calibrated Sensors

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Better-Brite WTP Processing Log 2019/2020

19W016

Date	Operator	Batch #	Gal Processed	H2SO4 - pH reduction to (s.u.)	NaHSO3 - ORP reduction to (mv)	Mg(OH)2/NaOH - pH raised to (s.u.)	Polymer feed (sec)	Batch Test Results Cr+6	Press Run Time (min)	Recycled Water (gal)	Sludge drum fille or Press cleaned / Comments
01/10/20	NMG1	30	5500	3.25	299	8.70	30	0.01	30	350	
01/14/20	AXP5	31	5500	3.15	300	8.68	30	0.00	30	350	Calibrated Sensors
01/31/20	NMG1	32	5500	3.33	289	8.53	30	0.02	30	350	Cleaned Press
02/07/20	NMG1	33	5500	3.00	303	8.54	30	0.00	30	350	
02/27/20	NMG1	34	5500	3.10	300	8.65	30	0.01	30	350	T. Chrome Sample Collected.
03/04/20	NMG1	35	5500	3.38	304	8.58	30	0.02	30	350	
03/13/20	NMG1	36	5500	3.20	299	8.61	30	0.02	30	350	
03/20/20	NMG1	37	5500	3.00	300	8.70	30	0.01	30	350	
03/24/20	NMG1	38	5500	3.06	303	8.62	30	0.00	30	350	

Better-Brite Sludge Generation Data

Calendar Year 2019

MONTH	Drum(s) Filled	Date Filled	Date Transported	Small Q + 180 days
January	0			
February	0			
March	0			
April	0			
May	2 *	5/19/2019		11/15/2019
June	0			
July	0			
August	0			
September	0			
October	0			
November	0		11/14/2019	
December	0			
TOTAL	2			

Notes - * - One drum was filled on 5/19/19 with filter cake from the press. The second drum contained old filter press screens and seals that were replaced.

Summary of Effluent and Influent Analytical Data
Better Brite Waste Treatment Plant
De Pere, WI 54115

Sample ID	Date	Total Chromium (ug/L)	Total Zinc (ug/L)	Total Cyanide (mg/L)	Hexavalent Chromium (mg/L)
Lot Trench	11/12/2010	4,380	NS	NS	NS
Grass Trench	11/12/2010	17,100	NS	NS	NS
Influent	06/23/2011	4,520	34.0 J	0.34	4.4
Effluent	06/23/2011	231	1.8 J	0.32	<0.0039
Influent	06/27/2011	4,810	21.2 J	0.30	4.4
Effluent	06/27/2011	974	2.5 J	0.21	<0.0039
Influent	06/28/2011	4,460	16.9 J	0.31	4.1
Effluent	06/28/2011	1,070	<1.6	0.25	<0.0039
Influent	06/29/2011	4,230	10.7 J	0.29	3.9
Effluent	06/29/2011	998	<1.6	0.23	<0.039
Influent	12/23/2011	6,850	NS	NS	NS
Effluent	12/23/2011	765	NS	NS	NS
Influent	08/03/2012	7,220	NS	NS	NS
Effluent	08/03/2012	513	NS	NS	NS
Influent	02/08/2013	7,140	NS	NS	NS
Effluent	02/08/2013	876	NS	NS	NS
Influent	08/29/2013	5,810	NS	NS	NS
Effluent	08/29/2013	1,190	NS	NS	NS
Influent	03/03/2014	9,050	NS	NS	NS
Effluent	03/03/2014	901	NS	NS	NS
Influent	08/07/2014	8,190	NS	NS	NS
Effluent	08/07/2014	1,110	NS	NS	NS
Influent	03/11/2015	7,430	NS	NS	NS
Effluent	03/11/2015	900	NS	NS	NS
Influent	07/30/2015	10,300	NS	NS	NS
Effluent	07/30/2015	934	NS	NS	NS
Influent	02/03/2016	7,050	NS	NS	NS
Effluent	02/03/2016	1,310	NS	NS	NS
Influent	08/30/2016	7,580	NS	NS	NS
Effluent	08/30/2016	1,910	NS	NS	NS
Influent	03/07/2017	4,150	NS	NS	NS
Effluent	03/07/2017	727	NS	NS	NS
Influent	09/01/2017	6,980	NS	NS	NS
Effluent	09/01/2017	2,320	NS	NS	NS
Influent	02/06/2018	6,810	NS	NS	NS
Effluent	02/06/2018	1,160	NS	NS	NS
Influent	10/02/2018	4,670	NS	NS	NS
Effluent	10/02/2018	1,120	NS	NS	NS
Influent	03/14/2019	5,060	NS	NS	NS
Effluent	03/14/2019	369	NS	NS	NS
Influent	09/09/2019	2,220	NS	NS	NS
Effluent	09/09/2019	1,100	NS	NS	NS
Influent	2/27/2020	3,920	NS	NS	NS
Effluent	2/27/2020	1,000	NS	NS	NS

Notes:
J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
NS = No Sample

Prepared By: NMG1
Checked By: SVF

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

March 10, 2020

Nick Glander
Foth Infrastructure & Environment, LLC
2121 Innovation Court
Suite 300
De Pere, WI 54115

RE: Project: 19W016 BETTER BRITE
Pace Project No.: 40204031

Dear Nick Glander:
Enclosed are the analytical results for sample(s) received by the laboratory on March 02, 2020. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Tod Noltemeyer

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

Enclosures

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

CERTIFICATIONS

Project: 19W016 BETTER BRITE
Pace Project No.: 40204031

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 19W016 BETTER BRITE
Pace Project No.: 40204031

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40204031001	**INFLUENT _20200227**	Water	02/27/20 13:30	03/02/20 11:18
40204031002	**EFFLUENT _20200227**	Water	02/27/20 14:45	03/02/20 11:18

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Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 19W016 BETTER BRITE
Pace Project No.: 40204031

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40204031001	**INFLUENT _20200227**	EPA 6010	TXW	1	PASI-G
40204031002	**EFFLUENT _20200227**	EPA 6010	TXW	1	PASI-G

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SUMMARY OF DETECTION

Project: 19W016 BETTER BRITE
Pace Project No.: 40204031

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40204031001	**INFLUENT _20200227**					
EPA 6010	Chromium	3920	ug/L	10.0	03/05/20 15:15	
40204031002	**EFFLUENT _20200227**					
EPA 6010	Chromium	1000	ug/L	10.0	03/05/20 15:17	

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PROJECT NARRATIVE

Project: 19W016 BETTER BRITE
Pace Project No.: 40204031

Method: **EPA 6010**
Description: 6010 MET ICP
Client: FOTH INFRASTRUCTURE & ENVIRONMENT
Date: March 10, 2020

General Information:
2 samples were analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 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:

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

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

ANALYTICAL RESULTS

Project: 19W016 BETTER BRITE
Pace Project No.: 40204031

Sample: INFLUENT _20200227 **Lab ID: 40204031001** Collected: 02/27/20 13:30 Received: 03/02/20 11:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Chromium	**3920**	ug/L	10.0	2.5	1	03/05/20 06:46	03/05/20 15:15	7440-47-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19W016 BETTER BRITE
Pace Project No.: 40204031

Sample: EFFLUENT _20200227 **Lab ID: 40204031002** Collected: 02/27/20 14:45 Received: 03/02/20 11:18 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Chromium	**1000**	ug/L	10.0	2.5	1	03/05/20 06:46	03/05/20 15:17	7440-47-3	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 19W016 BETTER BRITE
Pace Project No.: 40204031

QC Batch: 349216 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 40204031001, 40204031002

METHOD BLANK: 2023420 Matrix: Water
Associated Lab Samples: 40204031001, 40204031002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium	ug/L	<2.5	10.0	03/05/20 14:58	

LABORATORY CONTROL SAMPLE: 2023421

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium	ug/L	500	511	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2023422 2023423

Parameter	Units	40204068001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	<2.5	500	500	520	515	104	103	75-125	1	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 19W016 BETTER BRITE
Pace Project No.: 40204031

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.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 19W016 BETTER BRITE
Pace Project No.: 40204031

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40204031001	**INFLUENT _20200227**	EPA 3010	349216	EPA 6010	349314
40204031002	**EFFLUENT _20200227**	EPA 3010	349216	EPA 6010	349314

Pace Analytical
www.pacelabs.com

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

Page 1 of 1

CHAIN OF CUSTODY

4QU4631

(Please Print Clearly)	
Company Name:	Foth
Branch/Location:	De Pere
Project Contact:	Nick Glander
Phone:	920/362-8744
Project Number:	19W016
Project Name:	Better Brite
Project State:	WI
Sampled By (Print):	Nick Glander
Sampled By (Sign):	
PO #:	Regulatory Program:

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

Quote #:	
Mail To Contact:	Nick Glander
Mail To Company:	Foth Corp
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

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

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

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: Total Cr	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	Influent_20200227	2/27/20	1330	GW		N	D			
002	Effluent_20200227	2/27/20	1415	GW			X			
							X			

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
(Foth)	3/2/20 800		3/2/20 857
	3/2/20 1118		3/2/20 1118

PACE Project No.: 4QU4631
Receipt Temp = ROI °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present
Intact / Not Intact

C019a(27Jun2006)
Version 6.0 06/14/06
ORIGINAL

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

Sample Preservation Receipt Form

Client Name: Foth

Project # 46004631

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

Lab Lot# of pH paper: 10152791

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

Initial when completed: KW

Date/ Time:

Pace Lab #	Glass: AG1U	BG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	Plastic: BP1U	BP3U	BP3B	BP3N	BP3S	Vials: VG9A	DG9T	VG9U	VG9H	VG9M	VG9D	Jars: JGFU	JG9U	WGFU	WPFU	General: SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001																														X		2.5 / 5 / 10
002																														X		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																												3/2/20			KW	2.5 / 5 / 10

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
BG1U	1 liter clear glass
AG1H	1 liter amber glass HCL
AG4S	125 mL amber glass H2SO4
AG4U	120 mL amber glass unpres
AG5U	100 mL amber glass unpres
AG2S	500 mL amber glass H2SO4
BG3U	250 mL clear glass unpres

BP1U	1 liter plastic unpres
BP3U	250 mL plastic unpres
BP3B	250 mL plastic NaOH
BP3N	250 mL plastic HNO3
BP3S	250 mL plastic H2SO4

VG9A	40 mL clear ascorbic
DG9T	40 mL amber Na Thio
VG9U	40 mL clear vial unpres
VG9H	40 mL clear vial HCL
VG9M	40 mL clear vial MeOH
VG9D	40 mL clear vial DI

JGFU	4 oz amber jar unpres
JG9U	9 oz amber jar unpres
WGFU	4 oz clear jar unpres
WPFU	4 oz plastic jar unpres
SP5T	120 mL plastic Na Thiosulfate
ZPLC	ziploc bag
GN	

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

Sample Condition Upon Receipt Form (SCUR)

Project #: WO# : 40204031

40204031

Client Name: Foth

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

Cooler Temperature Uncorr: N/A /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.

Person examining contents:
Date: 3-2-20
Initials: [signature]

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [signature] for TR Date: 3/2/20

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

September 23, 2019

JEFF VANDENBUSCH
Foth Infrastructure & Environment, LLC
2121 Innovation Court
Suite 300
De Pere, WI 54115

RE: Project: 19W BETTER-BRITE
Pace Project No.: 40194928

Dear JEFF VANDENBUSCH:
Enclosed are the analytical results for sample(s) received by the laboratory on September 12, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Tod Noltemeyer

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

Enclosures

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

CERTIFICATIONS

Project: 19W BETTER-BRITE
Pace Project No.: 40194928

Green Bay Certification IDs

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 19W BETTER-BRITE
Pace Project No.: 40194928

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40194928001	**INFLUENT-201909**	Water	09/12/19 13:00	09/12/19 13:40
40194928002	**EFFLUENT-201909**	Water	09/12/19 13:05	09/12/19 13:40

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(920)469-2436

SAMPLE ANALYTE COUNT

Project: 19W BETTER-BRITE
Pace Project No.: 40194928

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40194928001	**INFLUENT-201909**	EPA 6010	TXW	1	PASI-G
40194928002	**EFFLUENT-201909**	EPA 6010	TXW	1	PASI-G

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SUMMARY OF DETECTION

Project: 19W BETTER-BRITE
Pace Project No.: 40194928

Lab Sample ID / Method	Client Sample ID / Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40194928001	**INFLUENT-201909**					
EPA 6010	Chromium	2220	ug/L	10.0	09/17/19 14:11	
40194928002	**EFFLUENT-201909**					
EPA 6010	Chromium	1100	ug/L	10.0	09/17/19 14:14	

REPORT OF LABORATORY ANALYSIS

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

PROJECT NARRATIVE

Project: 19W BETTER-BRITE
Pace Project No.: 40194928

Method: **EPA 6010**
Description: 6010 MET ICP
Client: FOTH INFRASTRUCTURE & ENVIRONMENT
Date: September 23, 2019

General Information:
2 samples were analyzed for EPA 6010. 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.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 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:

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

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

ANALYTICAL RESULTS

Project: 19W BETTER-BRITE
Pace Project No.: 40194928

Sample: INFLUENT-201909 **Lab ID: 40194928001** Collected: 09/12/19 13:00 Received: 09/12/19 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Chromium	**2220**	ug/L	10.0	2.5	1	09/16/19 13:32	09/17/19 14:11	7440-47-3	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 19W BETTER-BRITE
Pace Project No.: 40194928

Sample: EFFLUENT-201909 **Lab ID: 40194928002** Collected: 09/12/19 13:05 Received: 09/12/19 13:40 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Chromium	**1100**	ug/L	10.0	2.5	1	09/16/19 13:32	09/17/19 14:14	7440-47-3	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 19W BETTER-BRITE
Pace Project No.: 40194928

QC Batch: 334083 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 40194928001, 40194928002

METHOD BLANK: 1939989 Matrix: Water
Associated Lab Samples: 40194928001, 40194928002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium	ug/L	<2.5	10.0	09/17/19 13:34	

LABORATORY CONTROL SAMPLE: 1939990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium	ug/L	500	500	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1939991 1939992

Parameter	Units	40194898001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chromium	ug/L	6.7J	500	500	539	519	106	102	75-125	4	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 19W BETTER-BRITE
Pace Project No.: 40194928

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.

LABORATORIES

PASI-G Pace Analytical Services - Green Bay

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 19W BETTER-BRITE
Pace Project No.: 40194928

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40194928001	**INFLUENT-201909**	EPA 3010	334083	EPA 6010	334231
40194928002	**EFFLUENT-201909**	EPA 3010	334083	EPA 6010	334231

Pace Analytical
www.pacelabs.com

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

Page 1 of 1

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	FOTH
Branch/Location:	DE PERE
Project Contact:	NICK GLANDER
Phone:	920-362-8744
Project Number:	19W
Project Name:	BETTER-BRITE
Project State:	WI
Sampled By (Print):	ANDY PIERRE
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	NICK GLANDER
Mail To Company:	FOTH
Mail To Address:	2121 INNOVATION CT. DE PERE WI 54115
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	SAME AS ABOVE
Invoice To Phone:	

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

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

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Analyses Requested: TOTAL Cr
001	INFLUENT_201909	9/12/19	1300	GW	X
002	EFFLUENT_201909	9/12/19	1305	GW	X

FILTERED? (YES/NO): Y/N = N
PRESERVATION (CODE)*: Pick Letter = D

CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #

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

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
	9/12/19 13:40	Susan K Wyld	9/12/19 1340

PACE Project No.: 40194928

Receipt Temp = 1.0 °C

Sample Receipt pH OK / Adjusted

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

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

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

Sample Preservation Receipt Form

Client Name: Poth Project # 40194928

All containers needing preservation have been checked and noted below: ☑Yes ☐No ☐N/A Initial when completed: nH Date/ Time:

Lab Lot# of pH paper: 10J0891 Lab Std #ID of preservation (if pH adjusted):

Pace Lab #	Glass: AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	Plastic: BP1U	BP2N	BP2Z	BP3U	BP3B	BP3N	BP3S	Vials: DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	Jars: JGFU	WGFU	WPFU	General: SP5T	ZPLC	GN	VOA Vials (>6mm) *	H2SO4 pH ≤2	NaOH+Zn Act pH ≥9	NaOH pH ≥12	HNO3 pH ≤2	pH after adjusted	Volume (mL)
001													1																		X		2.5 / 5 / 10
002													1																		X		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

nH 9/12/24

Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: _____ Headspace in VOA Vials (>6mm) : ☐Yes ☐No ☑N/A ***If yes look in headspace column**

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

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

Sample Condition Upon Receipt Form (SCUR)

Project #:

WO#: 40194928

Client Name: Foth

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 - 78 **Type of Ice:** (Wet) Blue Dry None ☒ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 4 /Corr: 4

Temp Blank Present: ☐ yes ☒ no **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp should be above freezing to 6°C.
Biota Samples may be received at ≤ 0°C.

Person examining contents:
Date: 9/12/19
Initials: MH

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

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: for TN **Date:** 9-12-19