

From: Glander, Nick
To: [Lauridsen, Keld B - DNR](#)
Cc: [Kozicki, Sharon V E](#)
Subject: Better Brite WTP End of Year Documentation
Date: Monday, April 30, 2018 9:59:28 AM
Attachments: [image001.png](#)
[Sept 2017 Better Brite Analytical Results.pdf](#)
[Feb 2018 Better Brite Analytical Results.pdf](#)
[Better Brite - 2017-18 Summary Packet.pdf](#)

Hello Keld;

In total, Foth processed 23 batches in the contract year - April 2017 through March 2018. 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 September and February Pace Laboratory Analytical Reports.

Thank you;

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>



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Better Brite 2017/2018 Treatment

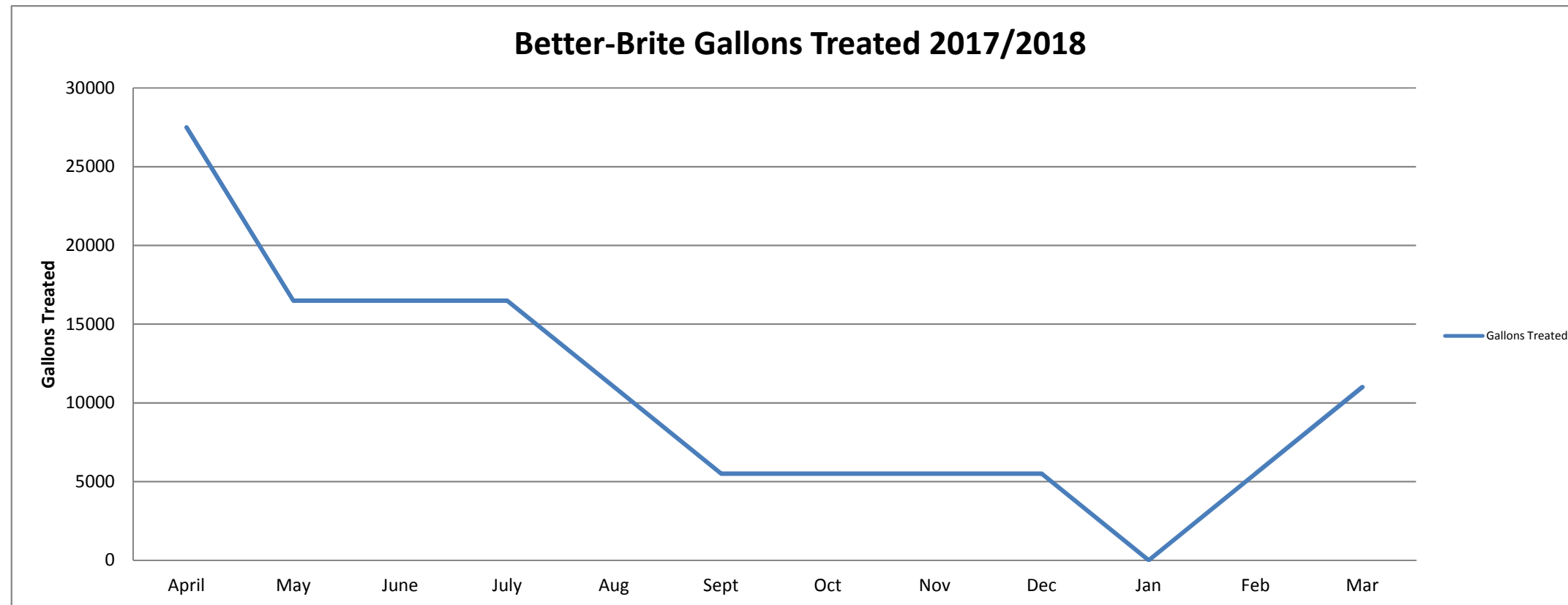
Month	Gallons Treated	Batches Ran
April	27500	5
May	16500	3
June	16500	3
July	16500	3
Aug	11000	2
Sept	5500	1
Oct	5500	1
Nov	5500	1
Dec	5500	1
Jan	0	
Feb	5500	1
Mar	11000	2
TOTAL		23

Drum #	Date Filled
1	10/13/2017
2	

*** 1 drum picked up on March 26, 2018**

Total Chrome Analytical Samples Collection Dates

Sample Rd	Date Collected
1	9/1/2017
2	2/6/2018



Better-Brite Sludge Generation Data
Calendar Year 2017

MONTH	Drum(s) Filled	Date Filled	Date Transported	Small Q + 180 days
January	0			
February	0			
March	0			
April	0			
May	0			
June	0			
July	0			
August	0			
September	0			
October	1	10/13/2017	3/26/2018	4/11/2018
November	0			
December	0			
TOTAL	1			

Notes - One drum filled on 10/13/2017 was transported for disposal on 3/26/2018 which was included in the 2017/2018 contract.

**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

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

September 12, 2017

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

RE: Project: 17W016 BETTER BRITE
Pace Project No.: 40156097

Dear Nick Glander:

Enclosed are the analytical results for sample(s) received by the laboratory on September 01, 2017. 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,



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

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 17W016 BETTER BRITE

Pace Project No.: 40156097

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

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SAMPLE SUMMARY

Project: 17W016 BETTER BRITE

Pace Project No.: 40156097

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40156097001	INFLUENT_201709	Water	09/01/17 12:50	09/01/17 16:14
40156097002	EFFLUENT_201709	Water	09/01/17 15:55	09/01/17 16:14

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 17W016 BETTER BRITE
Pace Project No.: 40156097

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40156097001	INFLUENT_201709	EPA 6010	DLB	1	PASI-G
40156097002	EFFLUENT_201709	EPA 6010	DLB	1	PASI-G

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 17W016 BETTER BRITE

Pace Project No.: 40156097

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40156097001	INFLUENT_201709					
EPA 6010	Chromium	6980	ug/L	10.0	09/07/17 14:27	
40156097002	EFFLUENT_201709					
EPA 6010	Chromium	2320	ug/L	10.0	09/07/17 14:29	

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PROJECT NARRATIVE

Project: 17W016 BETTER BRITE

Pace Project No.: 40156097

Method: EPA 6010

Description: 6010 MET ICP

Client: FOTH INFRASTRUCTURE & ENVIRONMENT

Date: September 12, 2017

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.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17W016 BETTER BRITE

Pace Project No.: 40156097

Sample: INFLUENT_201709 **Lab ID: 40156097001** Collected: 09/01/17 12:50 Received: 09/01/17 16:14 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	6980	ug/L	10.0	2.5	1	09/06/17 12:58	09/07/17 14:27	7440-47-3	

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ANALYTICAL RESULTS

Project: 17W016 BETTER BRITE

Pace Project No.: 40156097

Sample: EFFLUENT_201709 **Lab ID: 40156097002** Collected: 09/01/17 15:55 Received: 09/01/17 16:14 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	2320	ug/L	10.0	2.5	1	09/06/17 12:58	09/07/17 14:29	7440-47-3	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 17W016 BETTER BRITE

Pace Project No.: 40156097

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 and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 17W016 BETTER BRITE
Pace Project No.: 40156097

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40156097001	INFLUENT_201709	EPA 3010	266795	EPA 6010	266915
40156097002	EFFLUENT_201709	EPA 3010	266795	EPA 6010	266915

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(Please Print Clearly)

UPPER MIDWEST REGION

Page 1 of

MN: 612-607-1700 WI: 920-469-2436



SSM

40156097

Page 12 of 13

Company Name: **FOTH**
 Branch/Location: **GREEN BAY**
 Project Contact: **Nick Glander**
 Phone: **920/496-6758**
 Project Number: **17W016**
 Project Name: **Better Brite**
 Project State: **WISCONSIN**
 Sampled By (Print): **Nick Glander**
 Sampled By (Sign): *[Signature]*
 PO #:

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

FILTERED?
(YES/NO)
 PRESERVATION
(CODE)*

Analyses Requested	Y/N	Pick Letter																			
	Total Chloride	N	J																		

Quote #: **40156097**
 Mail To Contact: **Nick Glander**
 Mail To Company:
 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
 Sl = Sludge WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX
		DATE	TIME	
001	Influent-201709	9/11/17	1250	GW
002	Effluent-201709	9/11/17	1555	GW

CLIENT COMMENTS
LAB COMMENTS (Lab Use Only)
 Profile #

1-250mLp^D
 ↓

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:

Relinquished By: <i>[Signature]</i>	Date/Time: 9/11/17 1614	Received By: <i>[Signature]</i>	Date/Time: 9/11/17 1614
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
40156097
 Receipt Temp = **NA** °C
 Sample Receipt pH
 OK Adjusted
 Cooler Custody Seal
 Present / Not Present
 Intact / Not Intact



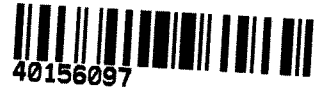
Sample Condition Upon Receipt

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

Client Name: Foth

Project #: **WO# : 40156097**

Courier: Fed Ex UPS 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: NA

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

Cooler Temperature: Uncorr: NA /Corr: _____

Biological Tissue is Frozen: yes no

Temp Blank Present: yes no

Person examining contents:
Date: 9-1-17
Initials: KR

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

Comments:

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 <input type="checkbox"/> N/A	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 <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8. <u>No MS/MSD vol.</u> <u>9-1-17 KR</u>
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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 <input type="checkbox"/> N/A	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>W</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input checked="" type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed: <u>KR</u> Lab Std #/ID of preservative: _____ Date/Time: _____
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
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:

Person Contacted: _____ Date/Time: _____ If checked, see attached form for additional comments
Comments/ Resolution: _____

Project Manager Review: RMA FOTW Date: 9/1/17

February 08, 2018

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

RE: Project: 17W016 BETTER BRITE
Pace Project No.: 40164367

Dear Nick Glander:

Enclosed are the analytical results for sample(s) received by the laboratory on February 06, 2018. 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@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Andrew Pierre, Foth Infrastructure & Environment



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

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

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SAMPLE SUMMARY

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40164367001	INFLUENT_201802	Water	02/06/18 08:00	02/06/18 12:46
40164367002	EFFLUENT_201802	Water	02/06/18 08:20	02/06/18 12:46

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40164367001	INFLUENT_201802	EPA 6010	JLD	1	PASI-G
40164367002	EFFLUENT_201802	EPA 6010	JLD	1	PASI-G

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
40164367001	INFLUENT_201802					
EPA 6010	Chromium	6810	ug/L	10.0	02/07/18 17:34	
40164367002	EFFLUENT_201802					
EPA 6010	Chromium	1160	ug/L	10.0	02/07/18 17:37	

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: 17W016 BETTER BRITE
Pace Project No.: 40164367

Method: EPA 6010
Description: 6010 MET ICP
Client: FOTH INFRASTRUCTURE & ENVIRONMENT
Date: February 08, 2018

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.

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

Sample: INFLUENT_201802 **Lab ID: 40164367001** Collected: 02/06/18 08:00 Received: 02/06/18 12:46 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	6810	ug/L	10.0	2.5	1	02/07/18 07:49	02/07/18 17:34	7440-47-3	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

Sample: EFFLUENT_201802 **Lab ID: 40164367002** Collected: 02/06/18 08:20 Received: 02/06/18 12:46 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	1160	ug/L	10.0	2.5	1	02/07/18 07:49	02/07/18 17:37	7440-47-3	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 17W016 BETTER BRITE
Pace Project No.: 40164367

QC Batch: 280679 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 40164367001, 40164367002

METHOD BLANK: 1646230 Matrix: Water
Associated Lab Samples: 40164367001, 40164367002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chromium	ug/L	<2.5	10.0	02/07/18 17:18	

LABORATORY CONTROL SAMPLE: 1646231

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chromium	ug/L	500	496	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1646232 1646233

Parameter	Units	40164370001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec	% Rec					
Chromium	ug/L	301	500	500	781	768	96	93	75-125	2	20		

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

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QUALIFIERS

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

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 and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40164367001	INFLUENT_201802	EPA 3010	280679	EPA 6010	280745
40164367002	EFFLUENT_201802	EPA 3010	280679	EPA 6010	280745

REPORT OF LABORATORY ANALYSIS

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(Please Print Clearly)



UPPER MIDWEST REGION

MN: 612-607-1700 WI: 920-469-2436

Company Name: **FOTH**
 Branch/Location: **De PERE**
 Project Contact: **Nick Glander**
 Phone: **920/496-6758**
 Project Number: **17W016**
 Project Name: **Better Beite**
 Project State: **WISCONSIN**
 Sampled By (Print): **Nick Glander**
 Sampled By (Sign): *[Signature]*
 PO #: _____ Regulatory Program: _____

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

FILTERED? (YES/NO)
 PRESERVATION (CODE)*

Y/N	Pick Letter	Analyses Requested	Matrix Codes																		
			A	B	C	D	E	F	G	H	I	J									
N	D	Total Chlorine																			

Quote #: _____
 Mail To Contact: _____
 Mail To Company: **Nick Glander@FOTH.com**
 Mail To Address: _____
 Invoice To Contact: _____
 Invoice To Company: _____
 Invoice To Address: _____
 Invoice To Phone: _____
 CLIENT COMMENTS: _____
 LAB COMMENTS (Lab Use Only): _____
 Profile #: _____

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

PACE LAB #	CLIENT FIELD ID	COLLECTION		MATRIX	Y/N	Pick Letter	Analyses Requested
		DATE	TIME				
001	Influent-201802	2/6/18	0800	GW	X		
002	Effluent-201802	2/6/18	0820	↓	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: <i>[Signature]</i>	Date/Time: 2/6/18 0900	Received By: <i>[Signature]</i>	Date/Time: 2/6/18 1225
Relinquished By: <i>[Signature]</i>	Date/Time: 2/6/18 1246	Received By: <i>[Signature]</i>	Date/Time: 2/6/18 1246
Relinquished By: _____	Date/Time: _____	Received By: _____	Date/Time: _____
Relinquished By: _____	Date/Time: _____	Received By: _____	Date/Time: _____

PACE Project No. **40164367**
 Receipt Temp = **ROT** °C
 Sample Receipt pH **OK** / Adjusted
 Cooler Custody Seal Present / **Not Present** Intact / Not Intact

Sample Condition Upon Receipt Form (SCUR)

Client Name: Foth

Project #: _____

WO#: 40164367

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

Cooler Temperature Uncorr: 3 / Corr: 3

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

Person examining contents:
Date: 2-6-18
Initials: SW

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

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 <input type="checkbox"/> N/A	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 <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A MS/MSD <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	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 <input type="checkbox"/> N/A	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>W</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: _____

Project Manager Review: AL for TM Date: 2/6/18