From: Glander, Nick

To: Lauridsen, Keld B - DNR Cc: Kozicki, Sharon V F

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

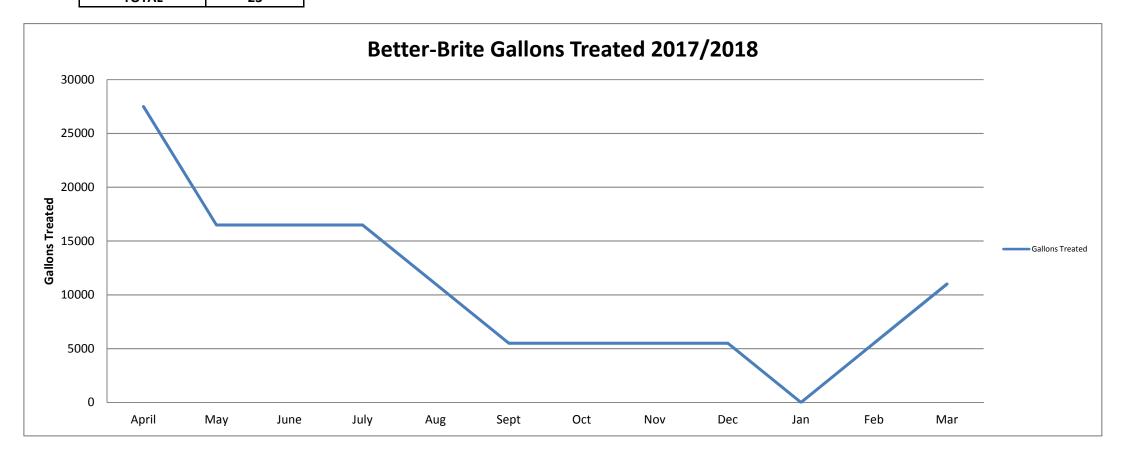
Month	Gallons Treated	Batches Ran
April	27500	5
May	16500	3
June	16500	3
July	16500	3
Aug	11000	2
Sept	5500	1
Oct	5500	1
Nov	5500	1
Dec	5500	1
Jan	0	
Feb	5500	1
Mar	11000	2
	TOTAL	23

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 WTP Processing Log 2017/2018 17W016

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
04/05/17	NMG1	1	5500	3.32	300	8.63	30	0.00	28	350	Clean Press
04/11/17	NMG1	2	5500	3.41	309	8.70	30	0.02	28	350	
04/17/17	NMG1	3	5500	3.30	304	8.58	30	0.01 30		350	Calibrated Sensors
04/24/17	NMG1	4	5500	3.26	300	8.64	30	0.02	30	350	
04/28/17	NMG1	5	5500	3.15	301	8.61	30	0.00	28	350	
05/04/17	NMG1	6	5500	3.26	300	8.50	30	0.01	24	350	Clean Press
05/11/17	AXP5	7	5500	3.09	300	8.66	30	0.01	26	350	
05/26/17	NMG1	8	5500	3.31	298	8.63	30	0.02	27	350	
06/02/17	NMG1	9	5500	3.09	300	8.58	30	0.00	30	350	Calibrated Sensors
06/16/17	NMG1	10	5500	3.00	301	8.51	30	0.01	30	350	
06/28/17	NMG1	11	5500	3.20	300	8.61	30	0.02	30	350	
07/10/17	NMG1	12	5500	3.09	289	8.68	30	0.00 30		350	Clean Press
07/21/17	NMG1	13	5500	3.23	297	8.61	30	0.01 28		350	
07/27/17	NMG1	14	5500	3.12	305	8.63	30	0.00	28	350	
08/14/17	NMG1	15	5500	3.01	299	8.54	30	0.03 30		350	
08/18/17	NMG1	16	5500	3.17	300	8.69	30	0.01 30		350	Calibrated Sensors
09/01/17	NMG1	17	5500	3.07	300	8.70	30	0.02	35	350	Collected T. Chrome Samples
10/13/17	NMG1	18	5500	3.01	300	8.67	30	0.02	28	350	Clean Press
11/02/17	NMG1	19	5500	3.21	294	8.61	30	0.01	30	350	
12/18/17	NMG1	20	5500	3.10	300	8.53	30	0.00	30	350	
02/06/18	NMG1	21	5500	3.29	303	8.70	30	0.03	30	350	Collected T. Chrome Samples
03/16/18	NMG1	22	5500	3.07	300	8.54	30	0.01	30	350	
03/23/18	NMG1	23	5500	3.10	300	8.60	30	0.00	28	350	Clean Press

Better-Brite Sludge Generation Data

Calendar Year 2017

MONTH	Drum(a) Filled	Date Filled	Date	Small Q +
WONTH	Drum(s) Filled	Date Filled	Transported	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	2/26/2010		

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

NS = No Sample

Prepared By: NMG1 Checked By: SVF

J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.



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

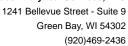
Lan Mileny

tod.noltemeyer@pacelabs.com

(920)469-2436 Project Manager

Enclosures







CERTIFICATIONS

Project: 17W016 BETTER BRITE

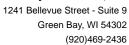
Pace Project No.: 40156097

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



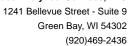


SAMPLE SUMMARY

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



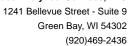


SAMPLE ANALYTE COUNT

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





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	



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

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:

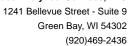
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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.





ANALYTICAL RESULTS

Project: 17W016 BETTER BRITE

Pace Project No.: 40156097

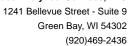
Date: 09/12/2017 01:49 PM

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





ANALYTICAL RESULTS

Project: 17W016 BETTER BRITE

Pace Project No.: 40156097

Date: 09/12/2017 01:49 PM

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



QUALITY CONTROL DATA

Project: 17W016 BETTER BRITE

Pace Project No.: 40156097

Date: 09/12/2017 01:49 PM

QC Batch: 266795 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET

Associated Lab Samples: 40156097001, 40156097002

METHOD BLANK: 1568072 Matrix: Water

Associated Lab Samples: 40156097001, 40156097002

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Chromium ug/L <2.5 10.0 09/07/17 13:39

LABORATORY CONTROL SAMPLE: 1568073

Spike LCS LCS % Rec Parameter Units Conc. Result % Rec Limits Qualifiers Chromium ug/L 500 517 103 80-120

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1568074 1568075

MS MSD 40156048001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual 500 75-125 20 Chromium ug/L <2.5 500 511 507 102 101

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.

(920)469-2436



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

Date: 09/12/2017 01:49 PM

PASI-G Pace Analytical Services - Green Bay

(920)469-2436



QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 17W016 BETTER BRITE

Pace Project No.: 40156097

Date: 09/12/2017 01:49 PM

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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Sample Condition Upon Receipt

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

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/ P	ace Analy	ytical"

Client Name: Foth		Project #:	WO# :	40156097
Courier: Fed Ex UPS / Client Pa			40156097	
Custody Seal on Cooler/Box Present: yes Custody Seal on Samples Present: yes Packing Material: Bubble Wrap Bull Thermometer Used	Z no Seals inta bble Bags ☑ No	ct: yes no		
Cooler Temperature Uncorr: NA /Corr:		et Blue Dry None logical Tissue is Fro	Samples of	n ice, cooling process has begun
Temp Blank Present: yes no		ogical Hissue is FIO.	zen: jyes i no	Person examining contents:
Temp should be above freezing to 6°C. Biota Samples may be received at ≤ 0°C.		Comments:		Date: <u>9-1-17</u> Initials: <i>KR</i>
Chain of Custody Present:	ØYes □No □N			maio. H
Chain of Custody Filled Out:	Yes DNo DN			
Chain of Custody Relinquished:	ØYes □No □N/	<u> </u>		
Sampler Name & Signature on COC:	Yes ONO ON			
Samples Arrived within Hold Time:	ØYes □No □N/			
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:		
Short Hold Time Analysis (<72hr):	□Yes ØNo □N/			
Rush Turn Around Time Requested:	□Yes ZÍNo □N//			
Sufficient Volume:	□Yes ⊅No □N/		90 val	011710
Correct Containers Used:	ØYes □No □N/A		201.	9-1-17KR
-Pace Containers Used:	Yes No N/			
-Pace IR Containers Used:	□Yes □No ØN/A			
ontainers Intact:	ZYes □No □N/A	 		
iltered volume received for Dissolved tests	□Yes □No ZÍN/A			
ample Labels match COC:	ZYes □No □N/A			
-Includes date/time/ID/Analysis Matrix:	W			
Il containers needing preservation have been checked. Jon-Compliance noted in 13.)	Yes □No □N/A	IZ HNO3	H2SO4 =	* NoOll *** NoOll **
Il containers needing preservation are found to be in ompliance with EPA recommendation. INO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	Yes ONO ON/A	13.	1 12304	NaOH NaOH +ZnAct
ceptions: VOA, coliform, TOC, TOX, TOH, &G, WIDROW, Phenolics, OTHER:	□Yes ØNo	1	b Std #ID of eservative	Date/ Time:
eadspace in VOA Vials (>6mm):	□Yes □No ØN/A			Time.
ip Blank Present:	□Yes □No ØN/A			
ip Blank Custody Seals Present	□Yes □No □N/A			
ace Trip Blank Lot # (if purchased):				
ient Notification/ Resolution: Person Contacted: Comments/ Resolution:	Date/	If che	cked, see attached	d form for additional comments
Project Manager Review:	Fol Tw		Date: 0	011117
GB-C-031-Rev.04 (12Dec2016) SCUR.xls				1////

(920)469-2436



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 nolteneya

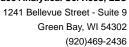
tod.noltemeyer@pacelabs.com (920)469-2436

Project Manager

Enclosures

cc: Andrew Pierre, Foth Infrastructure & Environment







CERTIFICATIONS

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

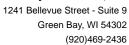
Green Bay Certification IDs

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



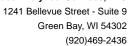


SAMPLE SUMMARY

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



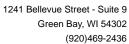


SAMPLE ANALYTE COUNT

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





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	



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

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:

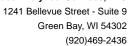
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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.





ANALYTICAL RESULTS

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

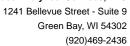
Date: 02/08/2018 10:15 AM

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





ANALYTICAL RESULTS

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

Date: 02/08/2018 10:15 AM

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



QUALITY CONTROL DATA

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

Date: 02/08/2018 10:15 AM

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

Blank Reporting
Parameter Units Result Limit Analyzed Qualifiers

Chromium ug/L <2.5 10.0 02/07/18 17:18

LABORATORY CONTROL SAMPLE: 1646231

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1646232 1646233

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

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.

(920)469-2436



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.

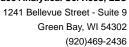
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

Date: 02/08/2018 10:15 AM

PASI-G Pace Analytical Services - Green Bay





QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 17W016 BETTER BRITE

Pace Project No.: 40164367

Date: 02/08/2018 10:15 AM

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

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	A Level II		(billable)	B = Biota C = Charc O = Oil	coal	DW = Drink GW = Grou SW = Surfa	nd Water	500	1	K							Invoice To Phone:				
	A Level I\		NOT needed on your sample	S = Soil SI = Sludg		WW = Wasi WP = Wipe	te Water	Analyses Requested		1							CLIENT	LAB C	OMMENTS	Profile #	1
PACE LAB#	(CLIEN	NT FIELD ID		COLLI ATE	ECTION TIME	MATRIX		1	9							COMMENTS	(Lab	Use Only)		1
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Sample Preservation Receipt Form
Project # 10164367 Client Name:

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

All containers needing preservation have been checked and noted below: 🖈 es 🗆 No 🗆 N/A Lab Std #ID of preservation (if pH adjusted): completed: Time: ŝ /OA Vials (>6mm) aOH+Zn Act pH after adjusted Glass Plastic Vials **Jars** General 12SO4 pH ≤2 aOH pH ≥12 Volume NO3 pH ≤2 (mL) AG1H AG40 AG5U AG2S WGFU AG10 BG3U BP1U **BP2N** BP3U ВРЗС BP3N DG9A VG9U VG9H VG9M WPFU **BP3S** DG9T VG9D JGFU BP2Z ZPLC **SP5T** Pace S Lab# 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 / 10 800 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 Exceptions to preservation check: VOA, Coliform, TOC, TOX, TOH, O&G, WI DRO, Phenolics, Other: Headspace in VOA Vials (>6mm): □Yes □No pN/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 ambér 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 AG45 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 BP3C 250 mL plastic NaOH VG9M 40 mL clear vial MeOH 120 mL plastic Na Thiosulfate SP5T 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*

Document Name: Sample Condition Upon Receipt (SCUR)

Document Revised: 31Jan2018

1241 Bellevue Street, Green Bay, WI 54302

Document No.: F-GB-C-031-rev.06 Issuing Authority: Pace Green Bay Quality Office

Sample Condition Upon Receipt Form (SCUR)

	6	Project #	<u>:</u>	
Client Name:	· /		` LIO# · ⁄A	0164367
Courier: ☐ CS Logistics ☐ Fed Ex ☐ Spee	edee 「UPS 「	Waltco	MOH	TOTOO!
Client Pace Other:				
Tracking #:			40164367	
Custody Seal on Cooler/Box Present: yes	no Seals int	act: Xyes no		
Custody Seal on Samples Present: Г்yes ரீ	no Seals int	act: yes no		
Packing Material: Bubble Wrap Bul		one Cother		
Thermometer Used SR - 60		(et) Blue Dry None	Samples or	n ice, cooling process has begun
Cooler Temperature Uncorr: 3 /Corr:		al Tissus is Erozon.		
Temp Blank Present: yes no Temp should be above freezing to 6°C.	Biologic	al Tissue is Frozen:	yes no	Person examining contents:
Biota Samples may be received at ≤ 0°C.				Initials:
Chain of Custody Present:	ØYes □No □	N/A 1.		
Chain of Custody Filled Out:	ØYes □No □	N/A 2.		
Chain of Custody Relinquished:	☑Yes □No □	N/A 3.		
Sampler Name & Signature on COC:	ØYes □No □I	N/A 4.		
Samples Arrived within Hold Time:	ØYes □No □I	N/A 5.		
- VOA Samples frozen upon receipt	Yes 🗆 No	Date/Time:		
Short Hold Time Analysis (<72hr):	□Yes ZNo □I	N/A 6.		
Rush Turn Around Time Requested:	□Yes ZîNo □I	ν/A 7.		
Sufficient Volume: □Yes ☑No □N/A MS/MS	SD 🗆 Yes 🗖 No 🖂 I	N/A 8.		
Correct Containers Used:	Yes 🗆 No 🗆 I	N/A 9.		
-Pace Containers Used:	Yes 🗆 No 🗆 t	N/A		
-Pace IR Containers Used:	□Yes □No □M	ŃΑ		
Containers Intact:	□Ves □No □r	√A 10.		
Filtered volume received for Dissolved tests	□Yes □No ☑1	√A 11.		
Sample Labels match COC:	ØYes □No □N	N/A 12.		
-Includes date/time/ID/Analysis Matrix:	· W			
Гrip Blank Present:	□Yes □No ØN	1/A 13.		
Trip Blank Custody Seals Present	□Yes □No □	V/A		
Pace Trip Blank Lot # (if purchased):				
Client Notification/ Resolution: Person Contacted:	Do		checked, see attach	ed form for additional comments
Comments/ Baselution:	Da	te/Time:		
				
Project Manager Review:	ILTOV	$\mathcal{T}_{\mathcal{M}}$	Date:	2/6/18