

July 08, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-006  
Pace Project No.: 60148135

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 03, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-006

Pace Project No.: 60148135

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-006

Pace Project No.: 60148135

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148135001	316-006	Water	07/01/13 15:13	07/03/13 01:45

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-006

Pace Project No.: 60148135

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148135001	316-006	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-006

Pace Project No.: 60148135

Sample: 316-006	Lab ID: 60148135001	Collected: 07/01/13 15:13	Received: 07/03/13 01:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>28900</b>	mg/L	2.0	1	07/03/13 12:42	07/08/13 09:07		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148135

QC Batch: WET/42192

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148135001

METHOD BLANK: 1215283

Matrix: Water

Associated Lab Samples: 60148135001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/08/13 09:02	

LABORATORY CONTROL SAMPLE: 1215284

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	203	103	85-115	

SAMPLE DUPLICATE: 1215285

Parameter	Units	60148135001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	28900	32200	11	17	

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## QUALIFIERS

Project: BRIDGETON LF 316-006

Pace Project No.: 60148135

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-006

Pace Project No.: 60148135

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148135001	316-006	SM 5210B	WET/42192	SM 5210B	WET/42235

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**Sample Condition Upon Receipt**

WO#: 60148135



Client Name: BARR

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice:  Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.4

Date and initials of person examining contents: [Signature] 7/3/12

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>800</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/5/12



July 11, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-006  
Pace Project No.: 60148136

Dear Ed Galbraith:

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Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

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Pace Project No.: 60148136

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148136001	316-006	Water	07/01/13 15:13	07/03/13 01:45
60148136002	TRIP BLANK	Water	07/01/13 15:13	07/03/13 01:45

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148136001	316-006	EPA 200.7	TDS	15
		EPA 200.7	TDS	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148136002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

Sample: 316-006	Lab ID: 60148136001	Collected: 07/01/13 15:13	Received: 07/03/13 01:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum	9680 ug/L		150	2	07/03/13 10:00	07/09/13 14:42	7429-90-5	
Antimony	68.7 ug/L		50.0	5	07/03/13 10:00	07/09/13 14:45	7440-36-0	
Arsenic	616 ug/L		50.0	5	07/03/13 10:00	07/09/13 14:45	7440-38-2	
Beryllium	ND ug/L		2.0	2	07/03/13 10:00	07/09/13 14:42	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/03/13 10:00	07/09/13 14:45	7440-43-9	D3
Chromium	243 ug/L		25.0	5	07/03/13 10:00	07/09/13 14:45	7440-47-3	
Cobalt	55.0 ug/L		25.0	5	07/03/13 10:00	07/09/13 14:45	7440-48-4	
Copper	ND ug/L		50.0	5	07/03/13 10:00	07/09/13 14:45	7440-50-8	D3
Iron	787000 ug/L		100	2	07/03/13 10:00	07/09/13 14:42	7439-89-6	
Lead	180 ug/L		25.0	5	07/03/13 10:00	07/09/13 14:45	7439-92-1	
Nickel	162 ug/L		25.0	5	07/03/13 10:00	07/09/13 14:45	7440-02-0	
Selenium	143 ug/L		75.0	5	07/03/13 10:00	07/09/13 14:45	7782-49-2	
Silver	ND ug/L		35.0	5	07/03/13 10:00	07/09/13 14:45	7440-22-4	D3
Thallium	ND ug/L		100	5	07/03/13 10:00	07/09/13 14:45	7440-28-0	D3
Zinc	13100 ug/L		250	5	07/03/13 10:00	07/09/13 14:45	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum, Dissolved	2960 ug/L		150	2	07/03/13 10:00	07/09/13 15:17	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/03/13 10:00	07/09/13 15:24	7440-36-0	D3
Arsenic, Dissolved	476 ug/L		50.0	5	07/03/13 10:00	07/09/13 15:24	7440-38-2	
Beryllium, Dissolved	ND ug/L		2.0	2	07/03/13 10:00	07/09/13 15:17	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/03/13 10:00	07/09/13 15:24	7440-43-9	D3
Chromium, Dissolved	178 ug/L		10.0	2	07/03/13 10:00	07/09/13 15:17	7440-47-3	
Cobalt, Dissolved	38.8 ug/L		25.0	5	07/03/13 10:00	07/09/13 15:24	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/03/13 10:00	07/09/13 15:17	7440-50-8	D3
Iron, Dissolved	442000 ug/L		100	2	07/03/13 10:00	07/09/13 15:17	7439-89-6	M1
Lead, Dissolved	54.7 ug/L		25.0	5	07/03/13 10:00	07/09/13 15:24	7439-92-1	
Nickel, Dissolved	128 ug/L		25.0	5	07/03/13 10:00	07/09/13 15:24	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/03/13 10:00	07/09/13 15:24	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/03/13 10:00	07/09/13 15:17	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/03/13 10:00	07/09/13 15:24	7440-28-0	D3
Zinc, Dissolved	11500 ug/L		250	5	07/03/13 10:00	07/09/13 15:24	7440-66-6	M1
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury	0.75 ug/L		0.20	1	07/08/13 10:30	07/08/13 14:58	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND ug/L		0.20	1	07/08/13 10:30	07/09/13 09:27	7439-97-6	
<b>625 MSSV</b>								
Analytical Method: EPA 625 Preparation Method: EPA 625								
Acenaphthene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 15:48	83-32-9	
Acenaphthylene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 15:48	208-96-8	
Anthracene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 15:48	120-12-7	
Benzidine	ND ug/L		10000	20	07/05/13 00:00	07/08/13 15:48	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 15:48	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 15:48	50-32-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

Sample: 316-006		Lab ID: 60148136001	Collected: 07/01/13 15:13	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	101-55-3	
Butylbenzylphthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1200	20	07/05/13 00:00	07/08/13 15:48	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1200	20	07/05/13 00:00	07/08/13 15:48	39638-32-9	
2-Chloronaphthalene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	91-58-7	
2-Chlorophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	7005-72-3	
Chrysene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	4000	20	07/05/13 00:00	07/08/13 15:48	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	120-83-2	
Diethylphthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	105-67-9	
Dimethylphthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	131-11-3	
Di-n-butylphthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	20	07/05/13 00:00	07/08/13 15:48	534-52-1	
2,4-Dinitrophenol	ND	ug/L	10000	20	07/05/13 00:00	07/08/13 15:48	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	1200	20	07/05/13 00:00	07/08/13 15:48	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	606-20-2	
Di-n-octylphthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	117-81-7	
Fluoranthene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	206-44-0	
Fluorene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	87-68-3	
Hexachlorobenzene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	77-47-4	
Hexachloroethane	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	193-39-5	
Isophorone	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	78-59-1	
Naphthalene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	91-20-3	
Nitrobenzene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	98-95-3	
2-Nitrophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	88-75-5	
4-Nitrophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	86-30-6	
Pentachlorophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	87-86-5	
Phenanthrene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	85-01-8	
Phenol	<b>12100</b>	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	108-95-2	
Pyrene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 15:48	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

Sample: 316-006		Lab ID: 60148136001	Collected: 07/01/13 15:13	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/05/13 00:00	07/08/13 15:48	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/05/13 00:00	07/08/13 15:48	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/05/13 00:00	07/08/13 15:48	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/05/13 00:00	07/08/13 15:48	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/05/13 00:00	07/08/13 15:48	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/05/13 00:00	07/08/13 15:48	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/08/13 13:02	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/08/13 13:02	75-27-4	
Bromoform	ND ug/L		200	200		07/08/13 13:02	75-25-2	
Bromomethane	ND ug/L		1000	200		07/08/13 13:02	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/08/13 13:02	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/08/13 13:02	108-90-7	
Chloroethane	ND ug/L		200	200		07/08/13 13:02	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/08/13 13:02	110-75-8	
Chloroform	ND ug/L		200	200		07/08/13 13:02	67-66-3	
Chloromethane	ND ug/L		200	200		07/08/13 13:02	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/08/13 13:02	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/08/13 13:02	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/08/13 13:02	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/08/13 13:02	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/08/13 13:02	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/08/13 13:02	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/08/13 13:02	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/08/13 13:02	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/08/13 13:02	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/08/13 13:02	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/08/13 13:02	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/08/13 13:02	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/08/13 13:02	100-41-4	
Methylene chloride	ND ug/L		200	200		07/08/13 13:02	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/08/13 13:02	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/08/13 13:02	127-18-4	
Toluene	ND ug/L		200	200		07/08/13 13:02	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/08/13 13:02	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/08/13 13:02	79-00-5	
Trichloroethene	ND ug/L		200	200		07/08/13 13:02	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/08/13 13:02	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/08/13 13:02	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/08/13 13:02	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102 %		80-120	200		07/08/13 13:02	1868-53-7	D3
4-Bromofluorobenzene (S)	97 %		80-120	200		07/08/13 13:02	460-00-4	
Toluene-d8 (S)	97 %		80-120	200		07/08/13 13:02	2037-26-5	
1,2-Dichloroethane-d4 (S)	101 %		80-120	200		07/08/13 13:02	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

<b>Sample: 316-006</b>		<b>Lab ID: 60148136001</b>	Collected: 07/01/13 15:13	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/08/13 13:02		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>287</b>	mg/L	5.0	1		07/05/13 07:26		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>8.3</b>	mg/L	5.0	1		07/08/13 06:51		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>171</b>	mg/L	5.0	1		07/05/13 09:39		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.4</b>	Std. Units	0.10	1		07/05/13 10:44		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>581</b>	mg/L	20.0	200		07/09/13 18:01	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>44100</b>	mg/L	5000	500		07/10/13 10:01		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

Sample: TRIP BLANK		Lab ID: 60148136002	Collected: 07/01/13 15:13	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/08/13 11:16	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/08/13 11:16	75-27-4	
Bromoform	ND ug/L		1.0	1		07/08/13 11:16	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/08/13 11:16	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/08/13 11:16	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/08/13 11:16	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/08/13 11:16	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/08/13 11:16	110-75-8	
Chloroform	ND ug/L		1.0	1		07/08/13 11:16	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/08/13 11:16	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/08/13 11:16	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 11:16	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 11:16	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 11:16	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/08/13 11:16	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/08/13 11:16	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/08/13 11:16	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/08/13 11:16	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/08/13 11:16	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/08/13 11:16	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/08/13 11:16	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/08/13 11:16	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/08/13 11:16	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/08/13 11:16	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/08/13 11:16	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/08/13 11:16	127-18-4	
Toluene	ND ug/L		1.0	1		07/08/13 11:16	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/08/13 11:16	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/08/13 11:16	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/08/13 11:16	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/08/13 11:16	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/08/13 11:16	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/08/13 11:16	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		80-120	1		07/08/13 11:16	1868-53-7	
4-Bromofluorobenzene (S)	95 %		80-120	1		07/08/13 11:16	460-00-4	
Toluene-d8 (S)	101 %		80-120	1		07/08/13 11:16	2037-26-5	
1,2-Dichloroethane-d4 (S)	100 %		80-120	1		07/08/13 11:16	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/08/13 11:16		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006  
Pace Project No.: 60148136

QC Batch: MERP/7484 Analysis Method: EPA 245.1  
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury  
Associated Lab Samples: 60148136001

METHOD BLANK: 1216523 Matrix: Water  
Associated Lab Samples: 60148136001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/08/13 14:30	

LABORATORY CONTROL SAMPLE: 1216524

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216525 1216526

Parameter	Units	60147147001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L	ND	5	5	4.3	5.7	84	112	70-130	29	20	R1

MATRIX SPIKE SAMPLE: 1216527

Parameter	Units	60148080001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	4.2	84	70-130	

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

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QC Batch:	MERP/7483	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60148136001		

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METHOD BLANK: 1216519 Matrix: Water

Associated Lab Samples: 60148136001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/08/13 15:31	

LABORATORY CONTROL SAMPLE: 1216520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.8	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216521 1216522

Parameter	Units	60148080001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Mercury, Dissolved	ug/L	ND	5	4.7	5	4.8	95	96	70-130	1	20	

**REPORT OF LABORATORY ANALYSIS**

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

QC Batch: MPRP/23356 Analysis Method: EPA 200.7  
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
 Associated Lab Samples: 60148136001

METHOD BLANK: 1215129 Matrix: Water

Associated Lab Samples: 60148136001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/09/13 14:38	
Antimony	ug/L	ND	10.0	07/09/13 14:38	
Arsenic	ug/L	ND	10.0	07/09/13 14:38	
Beryllium	ug/L	ND	1.0	07/09/13 14:38	
Cadmium	ug/L	ND	5.0	07/09/13 14:38	
Chromium	ug/L	ND	5.0	07/09/13 14:38	
Cobalt	ug/L	ND	5.0	07/09/13 14:38	
Copper	ug/L	ND	10.0	07/09/13 14:38	
Iron	ug/L	ND	50.0	07/09/13 14:38	
Lead	ug/L	ND	5.0	07/09/13 14:38	
Nickel	ug/L	ND	5.0	07/09/13 14:38	
Selenium	ug/L	ND	15.0	07/09/13 14:38	
Silver	ug/L	ND	7.0	07/09/13 14:38	
Thallium	ug/L	ND	20.0	07/09/13 14:38	
Zinc	ug/L	ND	50.0	07/09/13 14:38	

LABORATORY CONTROL SAMPLE: 1215130

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9540	95	85-115	
Antimony	ug/L	1000	992	99	85-115	
Arsenic	ug/L	1000	978	98	85-115	
Beryllium	ug/L	1000	985	98	85-115	
Cadmium	ug/L	1000	1000	100	85-115	
Chromium	ug/L	1000	1010	101	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	972	97	85-115	
Iron	ug/L	10000	9720	97	85-115	
Lead	ug/L	1000	1030	103	85-115	
Nickel	ug/L	1000	1040	104	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	496	99	85-115	
Thallium	ug/L	1000	1040	104	85-115	
Zinc	ug/L	1000	1030	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1215131 1215132

Parameter	Units	60148120001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Aluminum	ug/L	ND	10000	10000	9490	9580	94	95	70-130	1	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

Parameter	Units	60148120001		1215131		1215132		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Antimony	ug/L	ND	1000	1000	998	994	100	99	70-130	0	7			
Arsenic	ug/L	ND	1000	1000	1020	1020	101	101	70-130	0	10			
Beryllium	ug/L	ND	1000	1000	963	965	96	97	70-130	0	7			
Cadmium	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	10			
Chromium	ug/L	ND	1000	1000	996	996	100	100	70-130	0	10			
Cobalt	ug/L	ND	1000	1000	970	964	97	96	70-130	1	6			
Copper	ug/L	ND	1000	1000	977	973	97	97	70-130	0	11			
Iron	ug/L	428	10000	10000	9880	9950	95	95	70-130	1	10			
Lead	ug/L	ND	1000	1000	972	962	97	96	70-130	1	10			
Nickel	ug/L	ND	1000	1000	989	985	98	98	70-130	0	10			
Selenium	ug/L	ND	1000	1000	1010	1010	101	101	70-130	0	10			
Silver	ug/L	ND	500	500	504	504	101	101	70-130	0	10			
Thallium	ug/L	ND	1000	1000	932	936	93	94	70-130	0	6			
Zinc	ug/L	ND	1000	1000	1000	1000	99	99	70-130	0	11			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006  
Pace Project No.: 60148136

QC Batch: MPRP/23352      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60148136001

METHOD BLANK: 1215113      Matrix: Water  
Associated Lab Samples: 60148136001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/09/13 15:14	
Antimony, Dissolved	ug/L	ND	10.0	07/09/13 15:14	
Arsenic, Dissolved	ug/L	ND	10.0	07/09/13 15:14	
Beryllium, Dissolved	ug/L	ND	1.0	07/09/13 15:14	
Cadmium, Dissolved	ug/L	ND	5.0	07/09/13 15:14	
Chromium, Dissolved	ug/L	ND	5.0	07/09/13 15:14	
Cobalt, Dissolved	ug/L	ND	5.0	07/09/13 15:14	
Copper, Dissolved	ug/L	ND	10.0	07/09/13 15:14	
Iron, Dissolved	ug/L	ND	50.0	07/09/13 15:14	
Lead, Dissolved	ug/L	ND	5.0	07/09/13 15:14	
Nickel, Dissolved	ug/L	ND	5.0	07/09/13 15:14	
Selenium, Dissolved	ug/L	ND	15.0	07/09/13 15:14	
Silver, Dissolved	ug/L	ND	7.0	07/09/13 15:14	
Thallium, Dissolved	ug/L	ND	20.0	07/09/13 15:14	
Zinc, Dissolved	ug/L	ND	50.0	07/09/13 15:14	

LABORATORY CONTROL SAMPLE: 1215114

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9190	92	85-115	
Antimony, Dissolved	ug/L	1000	967	97	85-115	
Arsenic, Dissolved	ug/L	1000	974	97	85-115	
Beryllium, Dissolved	ug/L	1000	968	97	85-115	
Cadmium, Dissolved	ug/L	1000	988	99	85-115	
Chromium, Dissolved	ug/L	1000	1020	102	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	950	95	85-115	
Iron, Dissolved	ug/L	10000	9560	96	85-115	
Lead, Dissolved	ug/L	1000	1010	101	85-115	
Nickel, Dissolved	ug/L	1000	1040	104	85-115	
Selenium, Dissolved	ug/L	1000	983	98	85-115	
Silver, Dissolved	ug/L	500	496	99	85-115	
Thallium, Dissolved	ug/L	1000	1030	103	85-115	
Zinc, Dissolved	ug/L	1000	1030	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1215115      1215116

Parameter	Units	60148136001		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	2960	20000	20000	22100	23000	96	100	70-130	4	8		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

Parameter	Units	60148136001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Antimony, Dissolved	ug/L	ND	2000	2000	2130	2080	104	101	70-130	3	7				
Arsenic, Dissolved	ug/L	476	2000	2000	2770	2670	114	110	70-130	3	10				
Beryllium, Dissolved	ug/L	ND	2000	2000	1810	1860	90	93	70-130	3	7				
Cadmium, Dissolved	ug/L	ND	2000	2000	2160	2100	108	105	70-130	3	10				
Chromium, Dissolved	ug/L	178	2000	2000	2000	2070	91	94	70-130	3	10				
Cobalt, Dissolved	ug/L	38.8	2000	2000	2000	1950	98	96	70-130	3	6				
Copper, Dissolved	ug/L	ND	2000	2000	2170	2240	108	112	70-130	3	11				
Iron, Dissolved	ug/L	442000	20000	20000	399000	412000	-217	-151	70-130	3	10	M1			
Lead, Dissolved	ug/L	54.7	2000	2000	1900	1870	92	91	70-130	2	10				
Nickel, Dissolved	ug/L	128	2000	2000	2090	2040	98	96	70-130	3	10				
Selenium, Dissolved	ug/L	ND	2000	2000	2570	2460	125	120	70-130	4	10				
Silver, Dissolved	ug/L	ND	1000	1000	1090	1130	108	112	70-130	4	10				
Thallium, Dissolved	ug/L	ND	2000	2000	1690	1640	85	82	70-130	3	6				
Zinc, Dissolved	ug/L	11500	2000	2000	12500	12300	48	40	70-130	1	11	M1			

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

QC Batch: MSV/54776 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148136001, 60148136002

METHOD BLANK: 1216492 Matrix: Water

Associated Lab Samples: 60148136001, 60148136002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1-Dichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichloropropane	ug/L	ND	1.0	07/08/13 10:47	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/08/13 10:47	
Benzene	ug/L	ND	1.0	07/08/13 10:47	
Bromodichloromethane	ug/L	ND	1.0	07/08/13 10:47	
Bromoform	ug/L	ND	1.0	07/08/13 10:47	
Bromomethane	ug/L	ND	5.0	07/08/13 10:47	
Carbon tetrachloride	ug/L	ND	1.0	07/08/13 10:47	
Chlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
Chloroethane	ug/L	ND	1.0	07/08/13 10:47	
Chloroform	ug/L	ND	1.0	07/08/13 10:47	
Chloromethane	ug/L	ND	1.0	07/08/13 10:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/08/13 10:47	
Dibromochloromethane	ug/L	ND	1.0	07/08/13 10:47	
Ethylbenzene	ug/L	ND	1.0	07/08/13 10:47	
Methylene chloride	ug/L	ND	1.0	07/08/13 10:47	
Tetrachloroethene	ug/L	ND	1.0	07/08/13 10:47	
Toluene	ug/L	ND	1.0	07/08/13 10:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/08/13 10:47	
Trichloroethene	ug/L	ND	1.0	07/08/13 10:47	
Trichlorofluoromethane	ug/L	ND	1.0	07/08/13 10:47	
Vinyl chloride	ug/L	ND	1.0	07/08/13 10:47	
Xylene (Total)	ug/L	ND	3.0	07/08/13 10:47	
1,2-Dichloroethane-d4 (S)	%	105	80-120	07/08/13 10:47	
4-Bromofluorobenzene (S)	%	97	80-120	07/08/13 10:47	
Dibromofluoromethane (S)	%	102	80-120	07/08/13 10:47	
Toluene-d8 (S)	%	100	80-120	07/08/13 10:47	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

LABORATORY CONTROL SAMPLE: 1216493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.8	109	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.4	97	59-138	
1,1,2-Trichloroethane	ug/L	20	20.2	101	69-127	
1,1-Dichloroethane	ug/L	20	19.4	97	69-126	
1,1-Dichloroethene	ug/L	20	20.5	102	65-153	
1,2-Dichlorobenzene	ug/L	20	19.2	96	66-126	
1,2-Dichloroethane	ug/L	20	21.1	106	71-129	
1,2-Dichloropropane	ug/L	20	20.4	102	66-140	
1,3-Dichlorobenzene	ug/L	20	19.4	97	63-127	
1,4-Dichlorobenzene	ug/L	20	19.9	99	68-124	
2-Chloroethylvinyl ether	ug/L	20	14.9	75	33-159	
Benzene	ug/L	20	19.5	98	73-129	
Bromodichloromethane	ug/L	20	19.9	99	63-129	
Bromoform	ug/L	20	20.5	103	52-123	
Bromomethane	ug/L	20	23.1	115	10-160	
Carbon tetrachloride	ug/L	20	21.8	109	70-140	
Chlorobenzene	ug/L	20	19.7	98	68-127	
Chloroethane	ug/L	20	22.0	110	42-160	
Chloroform	ug/L	20	20.1	100	60-120	
Chloromethane	ug/L	20	18.2	91	10-160	
cis-1,2-Dichloroethene	ug/L	20	21.1	106	70-125	
cis-1,3-Dichloropropene	ug/L	20	20.0	100	66-132	
Dibromochloromethane	ug/L	20	21.7	108	63-134	
Ethylbenzene	ug/L	20	19.8	99	66-133	
Methylene chloride	ug/L	20	17.3	86	56-135	
Tetrachloroethene	ug/L	20	20.6	103	64-143	
Toluene	ug/L	20	19.0	95	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.4	102	67-149	
trans-1,3-Dichloropropene	ug/L	20	21.8	109	66-138	
Trichloroethene	ug/L	20	18.3	91	71-130	
Trichlorofluoromethane	ug/L	20	19.3	96	58-158	
Vinyl chloride	ug/L	20	18.3	92	41-160	
Xylene (Total)	ug/L	60	57.7	96	67-130	
1,2-Dichloroethane-d4 (S)	%			109	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			106	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1216494

Parameter	Units	60148136001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3960	99	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3940	99	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3850	96	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3620	91	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3870	97	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3640	91	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

MATRIX SPIKE SAMPLE:		1216494		60148136001		Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits		
1,2-Dichloroethane	ug/L	ND	4000	3980	100	49-155				
1,2-Dichloropropane	ug/L	ND	4000	3960	99	12-160				
1,3-Dichlorobenzene	ug/L	ND	4000	3610	90	59-146				
1,4-Dichlorobenzene	ug/L	ND	4000	3670	92	18-147				
2-Chloroethylvinyl ether	ug/L	ND	4000	4100	102	10-160				
Benzene	ug/L	ND	4000	3710	93	37-151				
Bromodichloromethane	ug/L	ND	4000	3610	90	35-155				
Bromoform	ug/L	ND	4000	4070	102	45-133				
Bromomethane	ug/L	ND	4000	3310	83	10-160				
Carbon tetrachloride	ug/L	ND	4000	4180	104	70-140				
Chlorobenzene	ug/L	ND	4000	3890	97	37-153				
Chloroethane	ug/L	ND	4000	3940	98	14-160				
Chloroform	ug/L	ND	4000	3910	98	51-138				
Chloromethane	ug/L	ND	4000	3110	78	10-160				
cis-1,2-Dichloroethene	ug/L	ND	4000	4100	103	19-160				
cis-1,3-Dichloropropene	ug/L	ND	4000	3850	96	10-160				
Dibromochloromethane	ug/L	ND	4000	4190	105	53-149				
Ethylbenzene	ug/L	ND	4000	3820	95	37-154				
Methylene chloride	ug/L	ND	4000	3330	82	15-156				
Tetrachloroethene	ug/L	ND	4000	3910	98	64-148				
Toluene	ug/L	ND	4000	3700	92	47-150				
trans-1,2-Dichloroethene	ug/L	ND	4000	3780	94	54-156				
trans-1,3-Dichloropropene	ug/L	ND	4000	4270	107	17-160				
Trichloroethene	ug/L	ND	4000	3470	87	71-157				
Trichlorofluoromethane	ug/L	ND	4000	3520	88	17-160				
Vinyl chloride	ug/L	ND	4000	3350	84	10-160				
Xylene (Total)	ug/L	ND	12000	11400	95	12-153				
1,2-Dichloroethane-d4 (S)	%				109	80-120				
4-Bromofluorobenzene (S)	%				99	80-120				
Dibromofluoromethane (S)	%				100	80-120				
Toluene-d8 (S)	%				98	80-120				
Preservation pH			7.0		7.0					

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006  
Pace Project No.: 60148136

QC Batch: OEXT/39163      Analysis Method: EPA 625  
QC Batch Method: EPA 625      Analysis Description: 625 MSS  
Associated Lab Samples: 60148136001

METHOD BLANK: 1215985      Matrix: Water  
Associated Lab Samples: 60148136001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/08/13 14:44	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dichlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dimethylphenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dinitrophenol	ug/L	ND	50.0	07/08/13 14:44	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/08/13 14:44	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/08/13 14:44	
2-Chloronaphthalene	ug/L	ND	5.0	07/08/13 14:44	
2-Chlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2-Nitrophenol	ug/L	ND	5.0	07/08/13 14:44	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/08/13 14:44	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/08/13 14:44	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/08/13 14:44	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/08/13 14:44	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/08/13 14:44	
4-Nitrophenol	ug/L	ND	5.0	07/08/13 14:44	
Acenaphthene	ug/L	ND	5.0	07/08/13 14:44	
Acenaphthylene	ug/L	ND	5.0	07/08/13 14:44	
Anthracene	ug/L	ND	5.0	07/08/13 14:44	
Benzidine	ug/L	ND	50.0	07/08/13 14:44	
Benzo(a)anthracene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(a)pyrene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/08/13 14:44	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/08/13 14:44	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/08/13 14:44	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/08/13 14:44	
Butylbenzylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Chrysene	ug/L	ND	5.0	07/08/13 14:44	
Di-n-butylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Di-n-octylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/08/13 14:44	
Diethylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Dimethylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
Fluorene	ug/L	ND	5.0	07/08/13 14:44	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/08/13 14:44	
Hexachlorobenzene	ug/L	ND	5.0	07/08/13 14:44	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/08/13 14:44	
Hexachloroethane	ug/L	ND	5.0	07/08/13 14:44	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/08/13 14:44	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

METHOD BLANK: 1215985

Matrix: Water

Associated Lab Samples: 60148136001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/08/13 14:44	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/08/13 14:44	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/08/13 14:44	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/08/13 14:44	
Naphthalene	ug/L	ND	5.0	07/08/13 14:44	
Nitrobenzene	ug/L	ND	5.0	07/08/13 14:44	
Pentachlorophenol	ug/L	ND	5.0	07/08/13 14:44	
Phenanthrene	ug/L	ND	5.0	07/08/13 14:44	
Phenol	ug/L	ND	5.0	07/08/13 14:44	
Pyrene	ug/L	ND	5.0	07/08/13 14:44	
2,4,6-Tribromophenol (S)	%	79	39-119	07/08/13 14:44	
2-Fluorobiphenyl (S)	%	79	36-120	07/08/13 14:44	
2-Fluorophenol (S)	%	40	18-120	07/08/13 14:44	
Nitrobenzene-d5 (S)	%	75	32-120	07/08/13 14:44	
Phenol-d6 (S)	%	24	12-120	07/08/13 14:44	
Terphenyl-d14 (S)	%	85	44-120	07/08/13 14:44	

LABORATORY CONTROL SAMPLE: 1215986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	34.8	70	44-120	
2,4,6-Trichlorophenol	ug/L	50	37.6	75	48-120	
2,4-Dichlorophenol	ug/L	50	36.5	73	48-120	
2,4-Dimethylphenol	ug/L	50	34.9	70	37-119	
2,4-Dinitrophenol	ug/L	50	35.7J	71	15-153	
2,4-Dinitrotoluene	ug/L	50	42.2	84	54-120	
2,6-Dinitrotoluene	ug/L	50	41.8	84	52-120	
2-Chloronaphthalene	ug/L	50	38.0	76	60-118	
2-Chlorophenol	ug/L	50	34.9	70	44-120	
2-Nitrophenol	ug/L	50	36.0	72	43-120	
3,3'-Dichlorobenzidine	ug/L	50	39.3	79	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	42.8	86	31-147	
4-Bromophenylphenyl ether	ug/L	50	41.3	83	53-120	
4-Chloro-3-methylphenol	ug/L	50	37.8	76	50-120	
4-Chlorophenylphenyl ether	ug/L	50	40.2	80	54-120	
4-Nitrophenol	ug/L	50	15.1	30	10-120	
Acenaphthene	ug/L	50	39.1	78	51-120	
Acenaphthylene	ug/L	50	38.4	77	51-120	
Anthracene	ug/L	50	41.7	83	54-120	
Benzidine	ug/L	50	28.8J	58	1-124	
Benzo(a)anthracene	ug/L	50	42.5	85	54-120	
Benzo(a)pyrene	ug/L	50	41.9	84	54-120	
Benzo(b)fluoranthene	ug/L	50	42.6	85	57-120	
Benzo(g,h,i)perylene	ug/L	50	42.8	86	54-120	
Benzo(k)fluoranthene	ug/L	50	43.5	87	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

LABORATORY CONTROL SAMPLE: 1215986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	36.5	73	51-120	
bis(2-Chloroethyl) ether	ug/L	50	38.1	76	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	37.4	75	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	43.2	86	51-126	
Butylbenzylphthalate	ug/L	50	42.9	86	45-129	
Chrysene	ug/L	50	42.6	85	54-120	
Di-n-butylphthalate	ug/L	50	43.3	87	57-118	
Di-n-octylphthalate	ug/L	50	43.8	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	43.9	88	56-119	
Diethylphthalate	ug/L	50	41.1	82	55-114	
Dimethylphthalate	ug/L	50	40.2	80	54-112	
Fluoranthene	ug/L	50	42.6	85	56-120	
Fluorene	ug/L	50	39.2	78	59-120	
Hexachloro-1,3-butadiene	ug/L	50	33.7	67	41-116	
Hexachlorobenzene	ug/L	50	41.9	84	53-120	
Hexachlorocyclopentadiene	ug/L	100	50.3	50	31-120	
Hexachloroethane	ug/L	50	34.4	69	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	42.8	86	55-120	
Isophorone	ug/L	50	38.4	77	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	38.8	78	47-120	
N-Nitrosodimethylamine	ug/L	50	22.4	45	28-120	
N-Nitrosodiphenylamine	ug/L	50	39.9	80	53-120	
Naphthalene	ug/L	50	35.7	71	48-120	
Nitrobenzene	ug/L	50	37.3	75	47-120	
Pentachlorophenol	ug/L	50	39.8	80	43-127	
Phenanthrene	ug/L	50	41.4	83	55-120	
Phenol	ug/L	50	13.8	28	15-112	
Pyrene	ug/L	50	42.5	85	55-115	
2,4,6-Tribromophenol (S)	%			83	39-119	
2-Fluorobiphenyl (S)	%			78	36-120	
2-Fluorophenol (S)	%			41	18-120	
Nitrobenzene-d5 (S)	%			74	32-120	
Phenol-d6 (S)	%			27	12-120	
Terphenyl-d14 (S)	%			88	44-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

QC Batch: WET/42198

Analysis Method: EPA 1664A

QC Batch Method: EPA 1664A

Analysis Description: 1664 HEM, Oil and Grease

Associated Lab Samples: 60148136001

METHOD BLANK: 1215713

Matrix: Water

Associated Lab Samples: 60148136001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/05/13 07:26	

LABORATORY CONTROL SAMPLE: 1215714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.8	92	78-114	

MATRIX SPIKE SAMPLE: 1215718

Parameter	Units	60148021001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.7	38.8	91	78-114	

SAMPLE DUPLICATE: 1215719

Parameter	Units	60148102001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

QC Batch: WET/42228

Analysis Method: EPA 1664A

QC Batch Method: EPA 1664A

Analysis Description: 1664 SGT-HEM, TPH

Associated Lab Samples: 60148136001

METHOD BLANK: 1216409

Matrix: Water

Associated Lab Samples: 60148136001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/08/13 06:47	

LABORATORY CONTROL SAMPLE: 1216410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.9	110	64-132	

MATRIX SPIKE SAMPLE: 1216411

Parameter	Units	60147783001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	2.8J	22.2	21.0	82	64-132	

SAMPLE DUPLICATE: 1216413

Parameter	Units	60147660001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	2.7J		34	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

QC Batch:	WET/42210	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60148136001		

METHOD BLANK: 1216014 Matrix: Water

Associated Lab Samples: 60148136001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/05/13 09:35	

SAMPLE DUPLICATE: 1216015

Parameter	Units	60148186001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		25	

SAMPLE DUPLICATE: 1216016

Parameter	Units	60148067002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6.0	ND		25	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

QC Batch: WET/42207 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148136001

SAMPLE DUPLICATE: 1215965

Parameter	Units	60148043001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.4	5.4	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

QC Batch: WETA/25387 Analysis Method: EPA 350.1  
 QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
 Associated Lab Samples: 60148136001

METHOD BLANK: 1216849 Matrix: Water

Associated Lab Samples: 60148136001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/09/13 17:50	

LABORATORY CONTROL SAMPLE: 1216850

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	102	90-110	

MATRIX SPIKE SAMPLE: 1216851

Parameter	Units	60148132002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	103	90-110	

MATRIX SPIKE SAMPLE: 1216852

Parameter	Units	60148137001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.43	2	2.4	100	90-110	

SAMPLE DUPLICATE: 1216853

Parameter	Units	60148140002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.41	0.43	3	18	

**REPORT OF LABORATORY ANALYSIS**

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## QUALITY CONTROL DATA

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

QC Batch:	WETA/25377	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60148136001		

METHOD BLANK: 1216769 Matrix: Water  
Associated Lab Samples: 60148136001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/10/13 09:47	

LABORATORY CONTROL SAMPLE: 1216770

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	54.1	108	90-110	

MATRIX SPIKE SAMPLE: 1216771

Parameter	Units	60147987001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	18.2	50	72.2	108	90-110	

## REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39163

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-006

Pace Project No.: 60148136

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148136001	316-006	EPA 200.7	MPRP/23356	EPA 200.7	ICP/18387
60148136001	316-006	EPA 200.7	MPRP/23352	EPA 200.7	ICP/18384
60148136001	316-006	EPA 245.1	MERP/7484	EPA 245.1	MERC/7440
60148136001	316-006	EPA 245.1	MERP/7483	EPA 245.1	MERC/7441
60148136001	316-006	EPA 625	OEXT/39163	EPA 625	MSSV/12399
60148136001	316-006	EPA 624 Low	MSV/54776		
60148136002	TRIP BLANK	EPA 624 Low	MSV/54776		
60148136001	316-006	EPA 1664A	WET/42198		
60148136001	316-006	EPA 1664A	WET/42228		
60148136001	316-006	SM 2540D	WET/42210		
60148136001	316-006	SM 4500-H+B	WET/42207		
60148136001	316-006	EPA 350.1	WETA/25387		
60148136001	316-006	EPA 410.4	WETA/25377		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148136



Client Name: Barr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  xroads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 2.4

Date and initials of person examining contents: [Signature] 7/31/12

Temperature should be above freezing to 6°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 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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>DT</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>BP30 initial ~4.0 added 2.5ml HNO3; final ~3.0</u> <u>BP35 initial ~4.0 added 2ml H2SO4; final ~2.5</u>
Includes date/time/ID/analyses Matrix: <u>WT</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, <u>P&amp;G</u> , MI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>[Signature]</u> Lot # of added preservative <u>12095</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>Covered</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/31/12





July 09, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-007  
Pace Project No.: 60148152

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 03, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-007

Pace Project No.: 60148152

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-007

Pace Project No.: 60148152

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148152001	316-007	Water	07/02/13 14:47	07/03/13 01:45

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-007

Pace Project No.: 60148152

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148152001	316-007	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-007

Pace Project No.: 60148152

Sample: 316-007	Lab ID: 60148152001	Collected: 07/02/13 14:47	Received: 07/03/13 01:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>33700</b>	mg/L	2.0	1	07/04/13 09:40	07/09/13 09:43		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148152

QC Batch: WET/42201

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148152001

METHOD BLANK: 1215731

Matrix: Water

Associated Lab Samples: 60148152001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/09/13 09:22	

LABORATORY CONTROL SAMPLE: 1215732

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	199	100	85-115	

SAMPLE DUPLICATE: 1215733

Parameter	Units	60148140002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	7.4	7.3	1	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-007

Pace Project No.: 60148152

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-007

Pace Project No.: 60148152

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148152001	316-007	SM 5210B	WET/42201	SM 5210B	WET/42252

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148152



Optional
Proj Due Date:
Proj Name:

Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Y.Roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2 PLC

Thermometer Used: -112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 3.0

Date and initials of person examining contents: 7-3-13 BA

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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		
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.	
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed	Lot # of added preservative
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank lot # (if purchased):		15.	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
		16.	
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/3/13



July 10, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-007  
Pace Project No.: 60148153

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 03, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148153001	316-007	Water	07/02/13 14:47	07/03/13 01:45
60148153002	TRIP BLANK	Water	07/02/13 14:47	07/03/13 01:45

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148153001	316-007	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148153002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

Sample: 316-007		Lab ID: 60148153001	Collected: 07/02/13 14:47	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	13200 ug/L		150	2	07/03/13 16:00	07/10/13 10:34	7429-90-5	
Antimony	ND ug/L		50.0	5	07/03/13 16:00	07/10/13 10:41	7440-36-0	D3
Arsenic	630 ug/L		50.0	5	07/03/13 16:00	07/10/13 10:41	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/03/13 16:00	07/10/13 10:41	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/03/13 16:00	07/10/13 10:41	7440-43-9	D3
Chromium	260 ug/L		10.0	2	07/03/13 16:00	07/10/13 10:34	7440-47-3	
Cobalt	75.8 ug/L		25.0	5	07/03/13 16:00	07/10/13 10:41	7440-48-4	
Copper	44.0 ug/L		20.0	2	07/03/13 16:00	07/10/13 10:34	7440-50-8	
Iron	978000 ug/L		100	2	07/03/13 16:00	07/10/13 10:34	7439-89-6	
Lead	265 ug/L		25.0	5	07/03/13 16:00	07/10/13 10:41	7439-92-1	
Nickel	173 ug/L		25.0	5	07/03/13 16:00	07/10/13 10:41	7440-02-0	
Selenium	ND ug/L		75.0	5	07/03/13 16:00	07/10/13 10:41	7782-49-2	D3
Silver	ND ug/L		14.0	2	07/03/13 16:00	07/10/13 10:34	7440-22-4	D3
Thallium	ND ug/L		100	5	07/03/13 16:00	07/10/13 10:41	7440-28-0	D3
Zinc	16600 ug/L		1000	20	07/03/13 16:00	07/10/13 10:48	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	4710 ug/L		150	2	07/08/13 17:25	07/10/13 11:08	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/08/13 17:25	07/10/13 11:32	7440-36-0	D3
Arsenic, Dissolved	511 ug/L		50.0	5	07/08/13 17:25	07/10/13 11:32	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/08/13 17:25	07/10/13 11:32	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/08/13 17:25	07/10/13 11:32	7440-43-9	D3
Chromium, Dissolved	205 ug/L		10.0	2	07/08/13 17:25	07/10/13 11:08	7440-47-3	
Cobalt, Dissolved	55.9 ug/L		25.0	5	07/08/13 17:25	07/10/13 11:32	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/08/13 17:25	07/10/13 11:08	7440-50-8	D3
Iron, Dissolved	658000 ug/L		100	2	07/08/13 17:25	07/10/13 11:08	7439-89-6	
Lead, Dissolved	73.4 ug/L		25.0	5	07/08/13 17:25	07/10/13 11:32	7439-92-1	
Nickel, Dissolved	141 ug/L		25.0	5	07/08/13 17:25	07/10/13 11:32	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/08/13 17:25	07/10/13 11:32	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/08/13 17:25	07/10/13 11:08	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/08/13 17:25	07/10/13 11:32	7440-28-0	D3
Zinc, Dissolved	15500 ug/L		1000	20	07/08/13 17:25	07/10/13 12:03	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	1.5 ug/L		0.20	1	07/08/13 10:30	07/08/13 15:00	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	07/08/13 10:30	07/09/13 09:29	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:09	83-32-9	
Acenaphthylene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:09	208-96-8	
Anthracene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:09	120-12-7	
Benzidine	ND ug/L		10000	20	07/05/13 00:00	07/08/13 16:09	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:09	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:09	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

Sample: 316-007		Lab ID: 60148153001	Collected: 07/02/13 14:47	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	101-55-3	
Butylbenzylphthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1200	20	07/05/13 00:00	07/08/13 16:09	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1200	20	07/05/13 00:00	07/08/13 16:09	39638-32-9	
2-Chloronaphthalene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	91-58-7	
2-Chlorophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	7005-72-3	
Chrysene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	4000	20	07/05/13 00:00	07/08/13 16:09	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	120-83-2	
Diethylphthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	105-67-9	
Dimethylphthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	131-11-3	
Di-n-butylphthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	20	07/05/13 00:00	07/08/13 16:09	534-52-1	
2,4-Dinitrophenol	ND	ug/L	10000	20	07/05/13 00:00	07/08/13 16:09	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	1200	20	07/05/13 00:00	07/08/13 16:09	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	606-20-2	
Di-n-octylphthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	117-81-7	
Fluoranthene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	206-44-0	
Fluorene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	87-68-3	
Hexachlorobenzene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	77-47-4	
Hexachloroethane	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	193-39-5	
Isophorone	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	78-59-1	
Naphthalene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	91-20-3	
Nitrobenzene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	98-95-3	
2-Nitrophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	88-75-5	
4-Nitrophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	86-30-6	
Pentachlorophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	87-86-5	
Phenanthrene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	85-01-8	
Phenol	<b>15600</b>	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	108-95-2	
Pyrene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:09	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

Sample: 316-007		Lab ID: 60148153001	Collected: 07/02/13 14:47	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/05/13 00:00	07/08/13 16:09	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/05/13 00:00	07/08/13 16:09	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/05/13 00:00	07/08/13 16:09	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/05/13 00:00	07/08/13 16:09	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/05/13 00:00	07/08/13 16:09	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/05/13 00:00	07/08/13 16:09	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/08/13 13:45	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/08/13 13:45	75-27-4	
Bromoform	ND ug/L		200	200		07/08/13 13:45	75-25-2	
Bromomethane	ND ug/L		1000	200		07/08/13 13:45	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/08/13 13:45	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/08/13 13:45	108-90-7	
Chloroethane	ND ug/L		200	200		07/08/13 13:45	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/08/13 13:45	110-75-8	
Chloroform	ND ug/L		200	200		07/08/13 13:45	67-66-3	
Chloromethane	ND ug/L		200	200		07/08/13 13:45	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/08/13 13:45	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/08/13 13:45	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/08/13 13:45	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/08/13 13:45	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/08/13 13:45	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/08/13 13:45	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/08/13 13:45	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/08/13 13:45	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/08/13 13:45	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/08/13 13:45	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/08/13 13:45	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/08/13 13:45	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/08/13 13:45	100-41-4	
Methylene chloride	ND ug/L		200	200		07/08/13 13:45	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/08/13 13:45	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/08/13 13:45	127-18-4	
Toluene	ND ug/L		200	200		07/08/13 13:45	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/08/13 13:45	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/08/13 13:45	79-00-5	
Trichloroethene	ND ug/L		200	200		07/08/13 13:45	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/08/13 13:45	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/08/13 13:45	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/08/13 13:45	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103 %		80-120	200		07/08/13 13:45	1868-53-7	D3
4-Bromofluorobenzene (S)	94 %		80-120	200		07/08/13 13:45	460-00-4	
Toluene-d8 (S)	99 %		80-120	200		07/08/13 13:45	2037-26-5	
1,2-Dichloroethane-d4 (S)	107 %		80-120	200		07/08/13 13:45	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

<b>Sample: 316-007</b>		<b>Lab ID: 60148153001</b>	Collected: 07/02/13 14:47	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/08/13 13:45		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>359</b>	mg/L	5.0	1		07/05/13 07:27		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>22.3</b>	mg/L	5.0	1		07/08/13 06:51		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>221</b>	mg/L	5.0	1		07/05/13 15:31		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.2</b>	Std. Units	0.10	1		07/05/13 10:44		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>645</b>	mg/L	20.0	200		07/09/13 18:17	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>50000</b>	mg/L	5000	500		07/10/13 10:01		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

Sample: TRIP BLANK		Lab ID: 60148153002	Collected: 07/02/13 14:47	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/08/13 11:37	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/08/13 11:37	75-27-4	
Bromoform	ND ug/L		1.0	1		07/08/13 11:37	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/08/13 11:37	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/08/13 11:37	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/08/13 11:37	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/08/13 11:37	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/08/13 11:37	110-75-8	
Chloroform	ND ug/L		1.0	1		07/08/13 11:37	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/08/13 11:37	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/08/13 11:37	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 11:37	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 11:37	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 11:37	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/08/13 11:37	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/08/13 11:37	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/08/13 11:37	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/08/13 11:37	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/08/13 11:37	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/08/13 11:37	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/08/13 11:37	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/08/13 11:37	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/08/13 11:37	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/08/13 11:37	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/08/13 11:37	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/08/13 11:37	127-18-4	
Toluene	ND ug/L		1.0	1		07/08/13 11:37	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/08/13 11:37	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/08/13 11:37	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/08/13 11:37	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/08/13 11:37	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/08/13 11:37	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/08/13 11:37	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	104 %		80-120	1		07/08/13 11:37	1868-53-7	
4-Bromofluorobenzene (S)	96 %		80-120	1		07/08/13 11:37	460-00-4	
Toluene-d8 (S)	101 %		80-120	1		07/08/13 11:37	2037-26-5	
1,2-Dichloroethane-d4 (S)	107 %		80-120	1		07/08/13 11:37	17060-07-0	
Preservation pH	7.0		1.0	1		07/08/13 11:37		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

QC Batch:	MERP/7484	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60148153001		

METHOD BLANK: 1216523 Matrix: Water

Associated Lab Samples: 60148153001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/08/13 14:30	

LABORATORY CONTROL SAMPLE: 1216524

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216525 1216526

Parameter	Units	60147147001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L	ND	5	5	4.3	5.7	84	112	70-130	29	20	R1

MATRIX SPIKE SAMPLE: 1216527

Parameter	Units	60148080001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	4.2	84	70-130	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

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QC Batch:	MERP/7483	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60148153001		

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METHOD BLANK: 1216519 Matrix: Water

Associated Lab Samples: 60148153001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/08/13 15:31	

LABORATORY CONTROL SAMPLE: 1216520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.8	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216521 1216522

Parameter	Units	60148080001 Result	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Max RPD	Qual
			Spike Conc.	MS Spike Conc.	MSD Spike Conc.									
Mercury, Dissolved	ug/L	ND	5	5	5	5	4.7	4.8	95	96	70-130	1	20	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

QC Batch: MPRP/23360 Analysis Method: EPA 200.7  
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
 Associated Lab Samples: 60148153001

METHOD BLANK: 1215551 Matrix: Water

Associated Lab Samples: 60148153001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/10/13 09:22	
Antimony	ug/L	ND	10.0	07/10/13 09:22	
Arsenic	ug/L	ND	10.0	07/10/13 09:22	
Beryllium	ug/L	ND	1.0	07/10/13 09:22	
Cadmium	ug/L	ND	5.0	07/10/13 09:22	
Chromium	ug/L	ND	5.0	07/10/13 09:22	
Cobalt	ug/L	ND	5.0	07/10/13 09:22	
Copper	ug/L	ND	10.0	07/10/13 09:22	
Iron	ug/L	ND	50.0	07/10/13 09:22	
Lead	ug/L	ND	5.0	07/10/13 09:22	
Nickel	ug/L	ND	5.0	07/10/13 09:22	
Selenium	ug/L	ND	15.0	07/10/13 09:22	
Silver	ug/L	ND	7.0	07/10/13 09:22	
Thallium	ug/L	ND	20.0	07/10/13 09:22	
Zinc	ug/L	ND	50.0	07/10/13 09:22	

LABORATORY CONTROL SAMPLE: 1215552

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10200	102	85-115	
Antimony	ug/L	1000	1010	101	85-115	
Arsenic	ug/L	1000	971	97	85-115	
Beryllium	ug/L	1000	1040	104	85-115	
Cadmium	ug/L	1000	1000	100	85-115	
Chromium	ug/L	1000	996	100	85-115	
Cobalt	ug/L	1000	1030	103	85-115	
Copper	ug/L	1000	978	98	85-115	
Iron	ug/L	10000	10300	103	85-115	
Lead	ug/L	1000	1040	104	85-115	
Nickel	ug/L	1000	1040	104	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	501	100	85-115	
Thallium	ug/L	1000	1060	106	85-115	
Zinc	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1215553 1215554

Parameter	Units	60148170001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum	ug/L	170	10000	10000	10900	10000	107	99	70-130	8	8		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

Parameter	Units	60148170001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec							
Antimony	ug/L	ND	1000	1000	1020	1010	101	100	70-130	1	7					
Arsenic	ug/L	78.0	1000	1000	1090	1080	101	100	70-130	1	10					
Beryllium	ug/L	ND	1000	1000	1060	977	106	98	70-130	8	7 R1					
Cadmium	ug/L	ND	1000	1000	1030	1010	103	101	70-130	2	10					
Chromium	ug/L	0.033	1000	1000	997	984	96	95	70-130	1	10					
		mg/L														
Cobalt	ug/L	19.1	1000	1000	961	949	94	93	70-130	1	6					
Copper	ug/L	0.020	1000	1000	1020	997	99	98	70-130	2	11					
		mg/L														
Iron	ug/L	23000	10000	10000	35600	32600	127	96	70-130	9	10					
Lead	ug/L	ND	1000	1000	910	895	91	89	70-130	2	10					
Nickel	ug/L	0.12	1000	1000	1070	1060	95	94	70-130	1	10					
		mg/L														
Selenium	ug/L	ND	1000	1000	1020	1000	102	100	70-130	2	10					
Silver	ug/L	ND	500	500	522	510	104	102	70-130	2	10					
Thallium	ug/L	ND	1000	1000	827	818	83	82	70-130	1	6					
Zinc	ug/L	ND	1000	1000	1000	985	98	96	70-130	1	11					

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007  
Pace Project No.: 60148153

QC Batch: MPRP/23393      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60148153001

METHOD BLANK: 1216706      Matrix: Water  
Associated Lab Samples: 60148153001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/10/13 11:02	
Antimony, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Arsenic, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Beryllium, Dissolved	ug/L	ND	1.0	07/10/13 11:02	
Cadmium, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Chromium, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Cobalt, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Copper, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Iron, Dissolved	ug/L	ND	50.0	07/10/13 11:02	
Lead, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Nickel, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Selenium, Dissolved	ug/L	ND	15.0	07/10/13 11:02	
Silver, Dissolved	ug/L	ND	7.0	07/10/13 11:02	
Thallium, Dissolved	ug/L	ND	20.0	07/10/13 11:02	
Zinc, Dissolved	ug/L	ND	50.0	07/10/13 11:02	

LABORATORY CONTROL SAMPLE: 1216707

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10300	103	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	982	98	85-115	
Beryllium, Dissolved	ug/L	1000	1020	102	85-115	
Cadmium, Dissolved	ug/L	1000	1020	102	85-115	
Chromium, Dissolved	ug/L	1000	980	98	85-115	
Cobalt, Dissolved	ug/L	1000	1040	104	85-115	
Copper, Dissolved	ug/L	1000	998	100	85-115	
Iron, Dissolved	ug/L	10000	9940	99	85-115	
Lead, Dissolved	ug/L	1000	1060	106	85-115	
Nickel, Dissolved	ug/L	1000	1040	104	85-115	
Selenium, Dissolved	ug/L	1000	1010	101	85-115	
Silver, Dissolved	ug/L	500	509	102	85-115	
Thallium, Dissolved	ug/L	1000	1070	107	85-115	
Zinc, Dissolved	ug/L	1000	983	98	85-115	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

QC Batch: MSV/54776 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148153001, 60148153002

METHOD BLANK: 1216492 Matrix: Water

Associated Lab Samples: 60148153001, 60148153002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1-Dichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichloropropane	ug/L	ND	1.0	07/08/13 10:47	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/08/13 10:47	
Benzene	ug/L	ND	1.0	07/08/13 10:47	
Bromodichloromethane	ug/L	ND	1.0	07/08/13 10:47	
Bromoform	ug/L	ND	1.0	07/08/13 10:47	
Bromomethane	ug/L	ND	5.0	07/08/13 10:47	
Carbon tetrachloride	ug/L	ND	1.0	07/08/13 10:47	
Chlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
Chloroethane	ug/L	ND	1.0	07/08/13 10:47	
Chloroform	ug/L	ND	1.0	07/08/13 10:47	
Chloromethane	ug/L	ND	1.0	07/08/13 10:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/08/13 10:47	
Dibromochloromethane	ug/L	ND	1.0	07/08/13 10:47	
Ethylbenzene	ug/L	ND	1.0	07/08/13 10:47	
Methylene chloride	ug/L	ND	1.0	07/08/13 10:47	
Tetrachloroethene	ug/L	ND	1.0	07/08/13 10:47	
Toluene	ug/L	ND	1.0	07/08/13 10:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/08/13 10:47	
Trichloroethene	ug/L	ND	1.0	07/08/13 10:47	
Trichlorofluoromethane	ug/L	ND	1.0	07/08/13 10:47	
Vinyl chloride	ug/L	ND	1.0	07/08/13 10:47	
Xylene (Total)	ug/L	ND	3.0	07/08/13 10:47	
1,2-Dichloroethane-d4 (S)	%	105	80-120	07/08/13 10:47	
4-Bromofluorobenzene (S)	%	97	80-120	07/08/13 10:47	
Dibromofluoromethane (S)	%	102	80-120	07/08/13 10:47	
Toluene-d8 (S)	%	100	80-120	07/08/13 10:47	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

LABORATORY CONTROL SAMPLE: 1216493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.8	109	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.4	97	59-138	
1,1,2-Trichloroethane	ug/L	20	20.2	101	69-127	
1,1-Dichloroethane	ug/L	20	19.4	97	69-126	
1,1-Dichloroethene	ug/L	20	20.5	102	65-153	
1,2-Dichlorobenzene	ug/L	20	19.2	96	66-126	
1,2-Dichloroethane	ug/L	20	21.1	106	71-129	
1,2-Dichloropropane	ug/L	20	20.4	102	66-140	
1,3-Dichlorobenzene	ug/L	20	19.4	97	63-127	
1,4-Dichlorobenzene	ug/L	20	19.9	99	68-124	
2-Chloroethylvinyl ether	ug/L	20	14.9	75	33-159	
Benzene	ug/L	20	19.5	98	73-129	
Bromodichloromethane	ug/L	20	19.9	99	63-129	
Bromoform	ug/L	20	20.5	103	52-123	
Bromomethane	ug/L	20	23.1	115	10-160	
Carbon tetrachloride	ug/L	20	21.8	109	70-140	
Chlorobenzene	ug/L	20	19.7	98	68-127	
Chloroethane	ug/L	20	22.0	110	42-160	
Chloroform	ug/L	20	20.1	100	60-120	
Chloromethane	ug/L	20	18.2	91	10-160	
cis-1,2-Dichloroethene	ug/L	20	21.1	106	70-125	
cis-1,3-Dichloropropene	ug/L	20	20.0	100	66-132	
Dibromochloromethane	ug/L	20	21.7	108	63-134	
Ethylbenzene	ug/L	20	19.8	99	66-133	
Methylene chloride	ug/L	20	17.3	86	56-135	
Tetrachloroethene	ug/L	20	20.6	103	64-143	
Toluene	ug/L	20	19.0	95	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.4	102	67-149	
trans-1,3-Dichloropropene	ug/L	20	21.8	109	66-138	
Trichloroethene	ug/L	20	18.3	91	71-130	
Trichlorofluoromethane	ug/L	20	19.3	96	58-158	
Vinyl chloride	ug/L	20	18.3	92	41-160	
Xylene (Total)	ug/L	60	57.7	96	67-130	
1,2-Dichloroethane-d4 (S)	%			109	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			106	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1216494

Parameter	Units	60148136001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3960	99	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3940	99	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3850	96	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3620	91	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3870	97	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3640	91	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

MATRIX SPIKE SAMPLE:		1216494		60148136001		Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits		
1,2-Dichloroethane	ug/L	ND	4000	3980	100			49-155		
1,2-Dichloropropane	ug/L	ND	4000	3960	99			12-160		
1,3-Dichlorobenzene	ug/L	ND	4000	3610	90			59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	3670	92			18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	4100	102			10-160		
Benzene	ug/L	ND	4000	3710	93			37-151		
Bromodichloromethane	ug/L	ND	4000	3610	90			35-155		
Bromoform	ug/L	ND	4000	4070	102			45-133		
Bromomethane	ug/L	ND	4000	3310	83			10-160		
Carbon tetrachloride	ug/L	ND	4000	4180	104			70-140		
Chlorobenzene	ug/L	ND	4000	3890	97			37-153		
Chloroethane	ug/L	ND	4000	3940	98			14-160		
Chloroform	ug/L	ND	4000	3910	98			51-138		
Chloromethane	ug/L	ND	4000	3110	78			10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	4100	103			19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	3850	96			10-160		
Dibromochloromethane	ug/L	ND	4000	4190	105			53-149		
Ethylbenzene	ug/L	ND	4000	3820	95			37-154		
Methylene chloride	ug/L	ND	4000	3330	82			15-156		
Tetrachloroethene	ug/L	ND	4000	3910	98			64-148		
Toluene	ug/L	ND	4000	3700	92			47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	3780	94			54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	4270	107			17-160		
Trichloroethene	ug/L	ND	4000	3470	87			71-157		
Trichlorofluoromethane	ug/L	ND	4000	3520	88			17-160		
Vinyl chloride	ug/L	ND	4000	3350	84			10-160		
Xylene (Total)	ug/L	ND	12000	11400	95			12-153		
1,2-Dichloroethane-d4 (S)	%				109			80-120		
4-Bromofluorobenzene (S)	%				99			80-120		
Dibromofluoromethane (S)	%				100			80-120		
Toluene-d8 (S)	%				98			80-120		
Preservation pH			7.0			7.0				

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007  
Pace Project No.: 60148153

QC Batch: OEXT/39163      Analysis Method: EPA 625  
QC Batch Method: EPA 625      Analysis Description: 625 MSS  
Associated Lab Samples: 60148153001

METHOD BLANK: 1215985      Matrix: Water  
Associated Lab Samples: 60148153001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/08/13 14:44	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dichlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dimethylphenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dinitrophenol	ug/L	ND	50.0	07/08/13 14:44	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/08/13 14:44	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/08/13 14:44	
2-Chloronaphthalene	ug/L	ND	5.0	07/08/13 14:44	
2-Chlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2-Nitrophenol	ug/L	ND	5.0	07/08/13 14:44	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/08/13 14:44	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/08/13 14:44	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/08/13 14:44	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/08/13 14:44	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/08/13 14:44	
4-Nitrophenol	ug/L	ND	5.0	07/08/13 14:44	
Acenaphthene	ug/L	ND	5.0	07/08/13 14:44	
Acenaphthylene	ug/L	ND	5.0	07/08/13 14:44	
Anthracene	ug/L	ND	5.0	07/08/13 14:44	
Benzidine	ug/L	ND	50.0	07/08/13 14:44	
Benzo(a)anthracene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(a)pyrene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/08/13 14:44	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/08/13 14:44	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/08/13 14:44	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/08/13 14:44	
Butylbenzylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Chrysene	ug/L	ND	5.0	07/08/13 14:44	
Di-n-butylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Di-n-octylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/08/13 14:44	
Diethylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Dimethylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
Fluorene	ug/L	ND	5.0	07/08/13 14:44	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/08/13 14:44	
Hexachlorobenzene	ug/L	ND	5.0	07/08/13 14:44	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/08/13 14:44	
Hexachloroethane	ug/L	ND	5.0	07/08/13 14:44	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/08/13 14:44	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Project No.: 60148153

METHOD BLANK: 1215985

Matrix: Water

Associated Lab Samples: 60148153001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/08/13 14:44	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/08/13 14:44	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/08/13 14:44	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/08/13 14:44	
Naphthalene	ug/L	ND	5.0	07/08/13 14:44	
Nitrobenzene	ug/L	ND	5.0	07/08/13 14:44	
Pentachlorophenol	ug/L	ND	5.0	07/08/13 14:44	
Phenanthrene	ug/L	ND	5.0	07/08/13 14:44	
Phenol	ug/L	ND	5.0	07/08/13 14:44	
Pyrene	ug/L	ND	5.0	07/08/13 14:44	
2,4,6-Tribromophenol (S)	%	79	39-119	07/08/13 14:44	
2-Fluorobiphenyl (S)	%	79	36-120	07/08/13 14:44	
2-Fluorophenol (S)	%	40	18-120	07/08/13 14:44	
Nitrobenzene-d5 (S)	%	75	32-120	07/08/13 14:44	
Phenol-d6 (S)	%	24	12-120	07/08/13 14:44	
Terphenyl-d14 (S)	%	85	44-120	07/08/13 14:44	

LABORATORY CONTROL SAMPLE: 1215986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	34.8	70	44-120	
2,4,6-Trichlorophenol	ug/L	50	37.6	75	48-120	
2,4-Dichlorophenol	ug/L	50	36.5	73	48-120	
2,4-Dimethylphenol	ug/L	50	34.9	70	37-119	
2,4-Dinitrophenol	ug/L	50	35.7J	71	15-153	
2,4-Dinitrotoluene	ug/L	50	42.2	84	54-120	
2,6-Dinitrotoluene	ug/L	50	41.8	84	52-120	
2-Chloronaphthalene	ug/L	50	38.0	76	60-118	
2-Chlorophenol	ug/L	50	34.9	70	44-120	
2-Nitrophenol	ug/L	50	36.0	72	43-120	
3,3'-Dichlorobenzidine	ug/L	50	39.3	79	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	42.8	86	31-147	
4-Bromophenylphenyl ether	ug/L	50	41.3	83	53-120	
4-Chloro-3-methylphenol	ug/L	50	37.8	76	50-120	
4-Chlorophenylphenyl ether	ug/L	50	40.2	80	54-120	
4-Nitrophenol	ug/L	50	15.1	30	10-120	
Acenaphthene	ug/L	50	39.1	78	51-120	
Acenaphthylene	ug/L	50	38.4	77	51-120	
Anthracene	ug/L	50	41.7	83	54-120	
Benzidine	ug/L	50	28.8J	58	1-124	
Benzo(a)anthracene	ug/L	50	42.5	85	54-120	
Benzo(a)pyrene	ug/L	50	41.9	84	54-120	
Benzo(b)fluoranthene	ug/L	50	42.6	85	57-120	
Benzo(g,h,i)perylene	ug/L	50	42.8	86	54-120	
Benzo(k)fluoranthene	ug/L	50	43.5	87	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

LABORATORY CONTROL SAMPLE: 1215986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	36.5	73	51-120	
bis(2-Chloroethyl) ether	ug/L	50	38.1	76	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	37.4	75	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	43.2	86	51-126	
Butylbenzylphthalate	ug/L	50	42.9	86	45-129	
Chrysene	ug/L	50	42.6	85	54-120	
Di-n-butylphthalate	ug/L	50	43.3	87	57-118	
Di-n-octylphthalate	ug/L	50	43.8	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	43.9	88	56-119	
Diethylphthalate	ug/L	50	41.1	82	55-114	
Dimethylphthalate	ug/L	50	40.2	80	54-112	
Fluoranthene	ug/L	50	42.6	85	56-120	
Fluorene	ug/L	50	39.2	78	59-120	
Hexachloro-1,3-butadiene	ug/L	50	33.7	67	41-116	
Hexachlorobenzene	ug/L	50	41.9	84	53-120	
Hexachlorocyclopentadiene	ug/L	100	50.3	50	31-120	
Hexachloroethane	ug/L	50	34.4	69	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	42.8	86	55-120	
Isophorone	ug/L	50	38.4	77	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	38.8	78	47-120	
N-Nitrosodimethylamine	ug/L	50	22.4	45	28-120	
N-Nitrosodiphenylamine	ug/L	50	39.9	80	53-120	
Naphthalene	ug/L	50	35.7	71	48-120	
Nitrobenzene	ug/L	50	37.3	75	47-120	
Pentachlorophenol	ug/L	50	39.8	80	43-127	
Phenanthrene	ug/L	50	41.4	83	55-120	
Phenol	ug/L	50	13.8	28	15-112	
Pyrene	ug/L	50	42.5	85	55-115	
2,4,6-Tribromophenol (S)	%			83	39-119	
2-Fluorobiphenyl (S)	%			78	36-120	
2-Fluorophenol (S)	%			41	18-120	
Nitrobenzene-d5 (S)	%			74	32-120	
Phenol-d6 (S)	%			27	12-120	
Terphenyl-d14 (S)	%			88	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

QC Batch:	WET/42198	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148153001		

METHOD BLANK: 1215713 Matrix: Water

Associated Lab Samples: 60148153001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/05/13 07:26	

LABORATORY CONTROL SAMPLE: 1215714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.8	92	78-114	

MATRIX SPIKE SAMPLE: 1215718

Parameter	Units	60148021001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.7	38.8	91	78-114	

SAMPLE DUPLICATE: 1215719

Parameter	Units	60148102001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

QC Batch:	WET/42228	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60148153001		

METHOD BLANK: 1216409 Matrix: Water

Associated Lab Samples: 60148153001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/08/13 06:47	

LABORATORY CONTROL SAMPLE: 1216410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.9	110	64-132	

MATRIX SPIKE SAMPLE: 1216411

Parameter	Units	60147783001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	2.8J	22.2	21.0	82	64-132	

SAMPLE DUPLICATE: 1216413

Parameter	Units	60147660001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	2.7J		34	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

QC Batch: WET/42218

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60148153001

METHOD BLANK: 1216219

Matrix: Water

Associated Lab Samples: 60148153001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/05/13 15:27	

SAMPLE DUPLICATE: 1216220

Parameter	Units	60148107001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	4040	4280	6	25	

SAMPLE DUPLICATE: 1216221

Parameter	Units	60148140002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	8.0		25	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

QC Batch: WET/42207 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148153001

SAMPLE DUPLICATE: 1215965

Parameter	Units	60148043001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.4	5.4	0	5	H6

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

QC Batch: WETA/25387      Analysis Method: EPA 350.1  
 QC Batch Method: EPA 350.1      Analysis Description: 350.1 Ammonia  
 Associated Lab Samples: 60148153001

METHOD BLANK: 1216849      Matrix: Water

Associated Lab Samples: 60148153001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/09/13 17:50	

LABORATORY CONTROL SAMPLE: 1216850

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	102	90-110	

MATRIX SPIKE SAMPLE: 1216851

Parameter	Units	60148132002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	103	90-110	

MATRIX SPIKE SAMPLE: 1216852

Parameter	Units	60148137001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.43	2	2.4	100	90-110	

SAMPLE DUPLICATE: 1216853

Parameter	Units	60148140002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.41	0.43	3	18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

QC Batch: WETA/25377

Analysis Method: EPA 410.4

QC Batch Method: EPA 410.4

Analysis Description: 410.4 COD

Associated Lab Samples: 60148153001

METHOD BLANK: 1216769

Matrix: Water

Associated Lab Samples: 60148153001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/10/13 09:47	

LABORATORY CONTROL SAMPLE: 1216770

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	54.1	108	90-110	

MATRIX SPIKE SAMPLE: 1216771

Parameter	Units	60147987001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	18.2	50	72.2	108	90-110	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39163

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

R1 RPD value was outside control limits.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-007

Pace Project No.: 60148153

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148153001	316-007	EPA 200.7	MPRP/23360	EPA 200.7	ICP/18390
60148153001	316-007	EPA 200.7	MPRP/23393	EPA 200.7	ICP/18407
60148153001	316-007	EPA 245.1	MERP/7484	EPA 245.1	MERC/7440
60148153001	316-007	EPA 245.1	MERP/7483	EPA 245.1	MERC/7441
60148153001	316-007	EPA 625	OEXT/39163	EPA 625	MSSV/12399
60148153001	316-007	EPA 624 Low	MSV/54776		
60148153002	TRIP BLANK	EPA 624 Low	MSV/54776		
60148153001	316-007	EPA 1664A	WET/42198		
60148153001	316-007	EPA 1664A	WET/42228		
60148153001	316-007	SM 2540D	WET/42218		
60148153001	316-007	SM 4500-H+B	WET/42207		
60148153001	316-007	EPA 350.1	WETA/25387		
60148153001	316-007	EPA 410.4	WETA/25377		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148153



Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Xroads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PLC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 3.0

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: 7-3-13 BA

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>pH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>pH on both HNO3 + H2SO4 container was 6.0. Added 2.5 mL HNO3 and now pH is 4.0. Added 2.0 mL H2SO4 now pH is 3.0.</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: <u>VOA</u> coliform, TOC, <u>O&amp;G</u> WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>BA</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative <u>(HNO3) 12510</u>
Pace Trip Blank lot # (if purchased): <u>covered by label</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/3/13





# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**

**Section B**

**Section C**

**Required Client Information:**

**Required Project Information:**

**Invoice Information:**

Company: BARR ENGINEERING	Report To: ED GALBRAITH/BARR	Attention: TABITHA PROVINCE
Address:	Copy To: SCOTT FEDAK/FEEZOR	Company Name: REPUBLIC SERVICES
	DANA BAKER/MARGARET TREANOR -BARR	Address: BRIDGETON, MO 63044
Email To:	Purchase Order No. PO 3727110	Pace Quote Reference: 130426_7588
Phone: (816) 285-8410 Fax:	Client Project ID: BRIDGETON LF	Pace Project Manager: Brown, Angie
Requested Due Date/TAT: 10 Day (Default)	Container Order Number:	Pace Profile #: 6787 LINE 2

Regulatory Agency
State / Location
Missouri

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Y/N	Requested Analysis Filtered (Y/N)														Residual Chlorine (Y/N)				
				START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	COD EPA 410		pH SM 4500H+B	LF DIS. METALS 200.7/245	TOTAL METALS 200.7/245	AMMONIA EPA 350	O/G EPA 1664	625 SVOCs	VOCs EPA 624	TSS SMP540D	TPH/HEP/ST/664										
				DATE	TIME	DATE	TIME																																
1	50g 316-007 3AG1H 3A 1U 1922U 18P3U	OT	G			7/2/13	1447	15	9/10	1	1	23	1650	1650											X	X	X	X	X	X	X	X	X	X	X	X	X		METALS LIST total & LF Dis.
2	TRIP BLANK 2029U							2	2																													Al, Sb, As, Be, Cd, Cr,	
3																																					Co, Cu, Fe, Pb, Ni, Se, Ag, Tl, Zn		
4																																				and Mercury			
5																																							
6																																							
7																																							
8																																							
9																																							
10																																							
11																																							
12																																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	<i>William Abernathy</i>	7/2/13	1650	<i>554</i>	7/2/13	1650				
SITE ADDRESS: BRIDGETON LF				<i>Paul Clarke</i>	7-3-13	0145	3.0	Y	Y	Y
13570 ST. CHARLES ROCK RD										
BRIDGETON MO 63044										

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:			TEMP in C
SIGNATURE of SAMPLER: <i>William Abernathy</i>			Received on Ice (Y/N)
DATE Signed: 7/2/13			Custody Sealed Cooler (Y/N)
			Samples Intact (Y/N)

July 08, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 264-MSD  
Pace Project No.: 60148159

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 03, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148159

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148159

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<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
60148159001	264-MSD	Water	07/02/13 07:00	07/03/13 01:45

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148159

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148159001	264-MSD	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148159

Sample: 264-MSD	Lab ID: 60148159001	Collected: 07/02/13 07:00	Received: 07/03/13 01:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>52300</b>	mg/L	2.0	1	07/03/13 12:48	07/08/13 09:18		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148159

QC Batch: WET/42192

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148159001

METHOD BLANK: 1215283

Matrix: Water

Associated Lab Samples: 60148159001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/08/13 09:02	

LABORATORY CONTROL SAMPLE: 1215284

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	203	103	85-115	

SAMPLE DUPLICATE: 1215285

Parameter	Units	60148135001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	28900	32200	11	17	

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## QUALIFIERS

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148159

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148159

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148159001	264-MSD	SM 5210B	WET/42192	SM 5210B	WET/42235

## REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO#: 60148159**



Optional
Proj Due Date:
Proj Name:

Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  ZPIC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 2.4

Date and initials of person examining contents: 7-7-13 BA

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Correct containers used:	<input 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	9.	
Containers intact:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.	
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed	Lot # of added preservative
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank lot # (if purchased):		15.	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: \_\_\_\_\_

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: / of /

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:			
Company: BARR ENGINEERING		Report To: ED GALBRAITH		Attention:			
Address:		Copy To: SCOTT C. FEDAK		Company Name: REPUBLIC SERVICES		<b>REGULATORY AGENCY</b>	
Email To:		Purchase Order No.:		Address:		<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER	
Phone:      Fax:		Project Name: BRIDGETON LANDFILL		Pace Quote Reference: 130426_7588		Site Location	
Requested Due Date/TAT: 5 BUSINESS DAY		Project Number:		Pace Project Manager: Angie Brown 913-563-1402		MO	
				Pace Profile #: 6787 line 2		STATE:	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX      CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOIL/SOLID SL OIL OL WIPE WP AIR AR OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test ↓	BOD SM 5210B	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.	
					COMPOSITE START		COMPOSITE END/GRAB				Unpreserved	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>	Methanol					Other
					DATE	TIME	DATE	TIME														
1	264-MSD		DT	G			7/2/13	0700	1	1									60148159	18204 18P14 051		
2																				60230		
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314 502-1299	<i>William Abernathy</i>	7/2/13	1650	<i>Bill Abernathy</i>	7/2/13	1650	2.4	Y	Y	Y
SITE ADDRESS: BRIDGETON LF 13570 ST. CHARLES ROCK RD BRIDGETON MO 63044				PACE	7-3-13	0145				

<b>SAMPLER NAME AND SIGNATURE</b>		Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: WILLIAM ABERNATHY					
SIGNATURE of SAMPLER: <i>William Abernathy</i>					
DATE Signed (MM/DD/YY): 7/2/13					

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

July 11, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 264-MSD  
Pace Project No.: 60148160

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 03, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148160001	264-MSD	Water	07/02/13 07:00	07/03/13 01:45
60148160002	TRIP BLANK	Water	07/02/13 07:00	07/03/13 01:45

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148160001	264-MSD	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148160002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

Sample: 264-MSD		Lab ID: 60148160001	Collected: 07/02/13 07:00	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	7500 ug/L		150	2	07/03/13 16:00	07/10/13 10:37	7429-90-5	
Antimony	56.4 ug/L		50.0	5	07/03/13 16:00	07/10/13 10:44	7440-36-0	
Arsenic	621 ug/L		50.0	5	07/03/13 16:00	07/10/13 10:44	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/03/13 16:00	07/10/13 10:44	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/03/13 16:00	07/10/13 10:44	7440-43-9	D3
Chromium	320 ug/L		25.0	5	07/03/13 16:00	07/10/13 10:44	7440-47-3	
Cobalt	39.0 ug/L		25.0	5	07/03/13 16:00	07/10/13 10:44	7440-48-4	
Copper	ND ug/L		50.0	5	07/03/13 16:00	07/10/13 10:44	7440-50-8	D3
Iron	1210000 ug/L		250	5	07/03/13 16:00	07/10/13 10:44	7439-89-6	
Lead	227 ug/L		25.0	5	07/03/13 16:00	07/10/13 10:44	7439-92-1	
Nickel	105 ug/L		25.0	5	07/03/13 16:00	07/10/13 10:44	7440-02-0	
Selenium	ND ug/L		75.0	5	07/03/13 16:00	07/10/13 10:44	7782-49-2	D3
Silver	ND ug/L		35.0	5	07/03/13 16:00	07/10/13 10:44	7440-22-4	D3
Thallium	ND ug/L		100	5	07/03/13 16:00	07/10/13 10:44	7440-28-0	D3
Zinc	24600 ug/L		1000	20	07/03/13 16:00	07/10/13 10:51	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	6620 ug/L		150	2	07/08/13 17:25	07/10/13 11:11	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/08/13 17:25	07/10/13 11:42	7440-36-0	D3
Arsenic, Dissolved	592 ug/L		50.0	5	07/08/13 17:25	07/10/13 11:42	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/08/13 17:25	07/10/13 11:42	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/08/13 17:25	07/10/13 11:42	7440-43-9	D3
Chromium, Dissolved	312 ug/L		25.0	5	07/08/13 17:25	07/10/13 11:42	7440-47-3	
Cobalt, Dissolved	36.9 ug/L		25.0	5	07/08/13 17:25	07/10/13 11:42	7440-48-4	
Copper, Dissolved	ND ug/L		50.0	5	07/08/13 17:25	07/10/13 11:42	7440-50-8	D3
Iron, Dissolved	1140000 ug/L		250	5	07/08/13 17:25	07/10/13 11:42	7439-89-6	
Lead, Dissolved	194 ug/L		25.0	5	07/08/13 17:25	07/10/13 11:42	7439-92-1	
Nickel, Dissolved	104 ug/L		25.0	5	07/08/13 17:25	07/10/13 11:42	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/08/13 17:25	07/10/13 11:42	7782-49-2	D3
Silver, Dissolved	ND ug/L		35.0	5	07/08/13 17:25	07/10/13 11:42	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/08/13 17:25	07/10/13 11:42	7440-28-0	D3
Zinc, Dissolved	24200 ug/L		1000	20	07/08/13 17:25	07/10/13 12:06	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	0.34 ug/L		0.20	1	07/08/13 10:30	07/08/13 15:02	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	07/08/13 10:30	07/09/13 09:31	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	83-32-9	
Acenaphthylene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	208-96-8	
Anthracene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	120-12-7	
Benzidine	ND ug/L		10000	20	07/05/13 00:00	07/08/13 16:30	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

Sample: 264-MSD	Lab ID: 60148160001	Collected: 07/02/13 07:00	Received: 07/03/13 01:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	191-24-2	
Benzo(k)fluoranthene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	101-55-3	
Butylbenzylphthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		1200	20	07/05/13 00:00	07/08/13 16:30	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		1200	20	07/05/13 00:00	07/08/13 16:30	39638-32-9	
2-Chloronaphthalene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	91-58-7	
2-Chlorophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	7005-72-3	
Chrysene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		4000	20	07/05/13 00:00	07/08/13 16:30	91-94-1	
2,4-Dichlorophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	120-83-2	
Diethylphthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	84-66-2	
2,4-Dimethylphenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	105-67-9	
Dimethylphthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	131-11-3	
Di-n-butylphthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		5000	20	07/05/13 00:00	07/08/13 16:30	534-52-1	
2,4-Dinitrophenol	ND ug/L		10000	20	07/05/13 00:00	07/08/13 16:30	51-28-5	
2,4-Dinitrotoluene	ND ug/L		1200	20	07/05/13 00:00	07/08/13 16:30	121-14-2	
2,6-Dinitrotoluene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	606-20-2	
Di-n-octylphthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	117-81-7	
Fluoranthene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	206-44-0	
Fluorene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	87-68-3	
Hexachlorobenzene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	77-47-4	
Hexachloroethane	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	193-39-5	
Isophorone	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	78-59-1	
Naphthalene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	91-20-3	
Nitrobenzene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	98-95-3	
2-Nitrophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	88-75-5	
4-Nitrophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	100-02-7	
N-Nitrosodimethylamine	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	86-30-6	
Pentachlorophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	87-86-5	
Phenanthrene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	85-01-8	
Phenol	<b>18900</b> ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	108-95-2	
Pyrene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:30	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

Sample: 264-MSD		Lab ID: 60148160001	Collected: 07/02/13 07:00	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/05/13 00:00	07/08/13 16:30	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/05/13 00:00	07/08/13 16:30	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/05/13 00:00	07/08/13 16:30	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/05/13 00:00	07/08/13 16:30	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/05/13 00:00	07/08/13 16:30	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/05/13 00:00	07/08/13 16:30	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/08/13 14:06	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/08/13 14:06	75-27-4	
Bromoform	ND ug/L		200	200		07/08/13 14:06	75-25-2	
Bromomethane	ND ug/L		1000	200		07/08/13 14:06	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/08/13 14:06	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/08/13 14:06	108-90-7	
Chloroethane	ND ug/L		200	200		07/08/13 14:06	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/08/13 14:06	110-75-8	
Chloroform	ND ug/L		200	200		07/08/13 14:06	67-66-3	
Chloromethane	ND ug/L		200	200		07/08/13 14:06	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/08/13 14:06	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/08/13 14:06	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/08/13 14:06	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/08/13 14:06	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/08/13 14:06	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/08/13 14:06	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/08/13 14:06	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/08/13 14:06	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/08/13 14:06	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/08/13 14:06	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/08/13 14:06	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/08/13 14:06	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/08/13 14:06	100-41-4	
Methylene chloride	ND ug/L		200	200		07/08/13 14:06	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/08/13 14:06	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/08/13 14:06	127-18-4	
Toluene	ND ug/L		200	200		07/08/13 14:06	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/08/13 14:06	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/08/13 14:06	79-00-5	
Trichloroethene	ND ug/L		200	200		07/08/13 14:06	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/08/13 14:06	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/08/13 14:06	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/08/13 14:06	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	104 %		80-120	200		07/08/13 14:06	1868-53-7	D3
4-Bromofluorobenzene (S)	102 %		80-120	200		07/08/13 14:06	460-00-4	
Toluene-d8 (S)	99 %		80-120	200		07/08/13 14:06	2037-26-5	
1,2-Dichloroethane-d4 (S)	100 %		80-120	200		07/08/13 14:06	17060-07-0	

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### ANALYTICAL RESULTS

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

<b>Sample: 264-MSD</b>		<b>Lab ID: 60148160001</b>	Collected: 07/02/13 07:00	Received: 07/03/13 01:45	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/08/13 14:06		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>161</b>	mg/L	5.0	1		07/05/13 07:27		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>8.0</b>	mg/L	5.0	1		07/08/13 06:52		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>540</b>	mg/L	5.0	1		07/05/13 15:32		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.4</b>	Std. Units	0.10	1		07/05/13 10:44		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>722</b>	mg/L	20.0	200		07/09/13 18:24	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>91800</b>	mg/L	10000	1000		07/10/13 10:04		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

Sample: TRIP BLANK	Lab ID: 60148160002	Collected: 07/02/13 07:00	Received: 07/03/13 01:45	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/08/13 11:58	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/08/13 11:58	75-27-4	
Bromoform	ND ug/L		1.0	1		07/08/13 11:58	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/08/13 11:58	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/08/13 11:58	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/08/13 11:58	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/08/13 11:58	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/08/13 11:58	110-75-8	
Chloroform	ND ug/L		1.0	1		07/08/13 11:58	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/08/13 11:58	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/08/13 11:58	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 11:58	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 11:58	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 11:58	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/08/13 11:58	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/08/13 11:58	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/08/13 11:58	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/08/13 11:58	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/08/13 11:58	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/08/13 11:58	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/08/13 11:58	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/08/13 11:58	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/08/13 11:58	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/08/13 11:58	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/08/13 11:58	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/08/13 11:58	127-18-4	
Toluene	ND ug/L		1.0	1		07/08/13 11:58	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/08/13 11:58	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/08/13 11:58	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/08/13 11:58	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/08/13 11:58	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/08/13 11:58	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/08/13 11:58	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	99 %		80-120	1		07/08/13 11:58	1868-53-7	
4-Bromofluorobenzene (S)	96 %		80-120	1		07/08/13 11:58	460-00-4	
Toluene-d8 (S)	99 %		80-120	1		07/08/13 11:58	2037-26-5	
1,2-Dichloroethane-d4 (S)	102 %		80-120	1		07/08/13 11:58	17060-07-0	
Preservation pH	7.0			1		07/08/13 11:58		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD  
Pace Project No.: 60148160

QC Batch: MERP/7484 Analysis Method: EPA 245.1  
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury  
Associated Lab Samples: 60148160001

METHOD BLANK: 1216523 Matrix: Water  
Associated Lab Samples: 60148160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/08/13 14:30	

LABORATORY CONTROL SAMPLE: 1216524

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216525 1216526

Parameter	Units	60147147001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L	ND	5	5	4.3	5.7	84	112	70-130	29	20	R1

MATRIX SPIKE SAMPLE: 1216527

Parameter	Units	60148080001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	4.2	84	70-130	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

QC Batch:	MERP/7483	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60148160001		

METHOD BLANK: 1216519 Matrix: Water  
Associated Lab Samples: 60148160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/08/13 15:31	

LABORATORY CONTROL SAMPLE: 1216520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.8	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216521 1216522

Parameter	Units	60148080001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Mercury, Dissolved	ug/L	ND	5	5	4.7	4.8	95	96	70-130	1	20	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

QC Batch: MPRP/23360 Analysis Method: EPA 200.7  
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
 Associated Lab Samples: 60148160001

METHOD BLANK: 1215551 Matrix: Water

Associated Lab Samples: 60148160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/10/13 09:22	
Antimony	ug/L	ND	10.0	07/10/13 09:22	
Arsenic	ug/L	ND	10.0	07/10/13 09:22	
Beryllium	ug/L	ND	1.0	07/10/13 09:22	
Cadmium	ug/L	ND	5.0	07/10/13 09:22	
Chromium	ug/L	ND	5.0	07/10/13 09:22	
Cobalt	ug/L	ND	5.0	07/10/13 09:22	
Copper	ug/L	ND	10.0	07/10/13 09:22	
Iron	ug/L	ND	50.0	07/10/13 09:22	
Lead	ug/L	ND	5.0	07/10/13 09:22	
Nickel	ug/L	ND	5.0	07/10/13 09:22	
Selenium	ug/L	ND	15.0	07/10/13 09:22	
Silver	ug/L	ND	7.0	07/10/13 09:22	
Thallium	ug/L	ND	20.0	07/10/13 09:22	
Zinc	ug/L	ND	50.0	07/10/13 09:22	

LABORATORY CONTROL SAMPLE: 1215552

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10200	102	85-115	
Antimony	ug/L	1000	1010	101	85-115	
Arsenic	ug/L	1000	971	97	85-115	
Beryllium	ug/L	1000	1040	104	85-115	
Cadmium	ug/L	1000	1000	100	85-115	
Chromium	ug/L	1000	996	100	85-115	
Cobalt	ug/L	1000	1030	103	85-115	
Copper	ug/L	1000	978	98	85-115	
Iron	ug/L	10000	10300	103	85-115	
Lead	ug/L	1000	1040	104	85-115	
Nickel	ug/L	1000	1040	104	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	501	100	85-115	
Thallium	ug/L	1000	1060	106	85-115	
Zinc	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1215553 1215554

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Aluminum	ug/L	170	10000	10000	10900	107	99	70-130	8	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

Parameter	Units	5083232001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec							
Antimony	ug/L	ND	1000	1000	1000	1020	1010	101	100	70-130	1	7				
Arsenic	ug/L	78.0	1000	1000	1000	1090	1080	101	100	70-130	1	10				
Beryllium	ug/L	ND	1000	1000	1000	1060	977	106	98	70-130	8	7 R1				
Cadmium	ug/L	ND	1000	1000	1000	1030	1010	103	101	70-130	2	10				
Chromium	ug/L	0.033	1000	1000	1000	997	984	96	95	70-130	1	10				
		mg/L														
Cobalt	ug/L	19.1	1000	1000	1000	961	949	94	93	70-130	1	6				
Copper	ug/L	0.020	1000	1000	1000	1020	997	99	98	70-130	2	11				
		mg/L														
Iron	ug/L	23000	10000	10000	10000	35600	32600	127	96	70-130	9	10				
Lead	ug/L	ND	1000	1000	1000	910	895	91	89	70-130	2	10				
Nickel	ug/L	0.12	1000	1000	1000	1070	1060	95	94	70-130	1	10				
		mg/L														
Selenium	ug/L	ND	1000	1000	1000	1020	1000	102	100	70-130	2	10				
Silver	ug/L	ND	500	500	500	522	510	104	102	70-130	2	10				
Thallium	ug/L	ND	1000	1000	1000	827	818	83	82	70-130	1	6				
Zinc	ug/L	ND	1000	1000	1000	1000	985	98	96	70-130	1	11				

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD  
Pace Project No.: 60148160

QC Batch: MPRP/23393      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60148160001

METHOD BLANK: 1216706      Matrix: Water  
Associated Lab Samples: 60148160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/10/13 11:02	
Antimony, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Arsenic, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Beryllium, Dissolved	ug/L	ND	1.0	07/10/13 11:02	
Cadmium, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Chromium, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Cobalt, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Copper, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Iron, Dissolved	ug/L	ND	50.0	07/10/13 11:02	
Lead, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Nickel, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Selenium, Dissolved	ug/L	ND	15.0	07/10/13 11:02	
Silver, Dissolved	ug/L	ND	7.0	07/10/13 11:02	
Thallium, Dissolved	ug/L	ND	20.0	07/10/13 11:02	
Zinc, Dissolved	ug/L	ND	50.0	07/10/13 11:02	

LABORATORY CONTROL SAMPLE: 1216707

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10300	103	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	982	98	85-115	
Beryllium, Dissolved	ug/L	1000	1020	102	85-115	
Cadmium, Dissolved	ug/L	1000	1020	102	85-115	
Chromium, Dissolved	ug/L	1000	980	98	85-115	
Cobalt, Dissolved	ug/L	1000	1040	104	85-115	
Copper, Dissolved	ug/L	1000	998	100	85-115	
Iron, Dissolved	ug/L	10000	9940	99	85-115	
Lead, Dissolved	ug/L	1000	1060	106	85-115	
Nickel, Dissolved	ug/L	1000	1040	104	85-115	
Selenium, Dissolved	ug/L	1000	1010	101	85-115	
Silver, Dissolved	ug/L	500	509	102	85-115	
Thallium, Dissolved	ug/L	1000	1070	107	85-115	
Zinc, Dissolved	ug/L	1000	983	98	85-115	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

QC Batch: MSV/54776 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148160001, 60148160002

METHOD BLANK: 1216492 Matrix: Water

Associated Lab Samples: 60148160001, 60148160002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1-Dichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichloropropane	ug/L	ND	1.0	07/08/13 10:47	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/08/13 10:47	
Benzene	ug/L	ND	1.0	07/08/13 10:47	
Bromodichloromethane	ug/L	ND	1.0	07/08/13 10:47	
Bromoform	ug/L	ND	1.0	07/08/13 10:47	
Bromomethane	ug/L	ND	5.0	07/08/13 10:47	
Carbon tetrachloride	ug/L	ND	1.0	07/08/13 10:47	
Chlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
Chloroethane	ug/L	ND	1.0	07/08/13 10:47	
Chloroform	ug/L	ND	1.0	07/08/13 10:47	
Chloromethane	ug/L	ND	1.0	07/08/13 10:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/08/13 10:47	
Dibromochloromethane	ug/L	ND	1.0	07/08/13 10:47	
Ethylbenzene	ug/L	ND	1.0	07/08/13 10:47	
Methylene chloride	ug/L	ND	1.0	07/08/13 10:47	
Tetrachloroethene	ug/L	ND	1.0	07/08/13 10:47	
Toluene	ug/L	ND	1.0	07/08/13 10:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/08/13 10:47	
Trichloroethene	ug/L	ND	1.0	07/08/13 10:47	
Trichlorofluoromethane	ug/L	ND	1.0	07/08/13 10:47	
Vinyl chloride	ug/L	ND	1.0	07/08/13 10:47	
Xylene (Total)	ug/L	ND	3.0	07/08/13 10:47	
1,2-Dichloroethane-d4 (S)	%	105	80-120	07/08/13 10:47	
4-Bromofluorobenzene (S)	%	97	80-120	07/08/13 10:47	
Dibromofluoromethane (S)	%	102	80-120	07/08/13 10:47	
Toluene-d8 (S)	%	100	80-120	07/08/13 10:47	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

LABORATORY CONTROL SAMPLE: 1216493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.8	109	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.4	97	59-138	
1,1,2-Trichloroethane	ug/L	20	20.2	101	69-127	
1,1-Dichloroethane	ug/L	20	19.4	97	69-126	
1,1-Dichloroethene	ug/L	20	20.5	102	65-153	
1,2-Dichlorobenzene	ug/L	20	19.2	96	66-126	
1,2-Dichloroethane	ug/L	20	21.1	106	71-129	
1,2-Dichloropropane	ug/L	20	20.4	102	66-140	
1,3-Dichlorobenzene	ug/L	20	19.4	97	63-127	
1,4-Dichlorobenzene	ug/L	20	19.9	99	68-124	
2-Chloroethylvinyl ether	ug/L	20	14.9	75	33-159	
Benzene	ug/L	20	19.5	98	73-129	
Bromodichloromethane	ug/L	20	19.9	99	63-129	
Bromoform	ug/L	20	20.5	103	52-123	
Bromomethane	ug/L	20	23.1	115	10-160	
Carbon tetrachloride	ug/L	20	21.8	109	70-140	
Chlorobenzene	ug/L	20	19.7	98	68-127	
Chloroethane	ug/L	20	22.0	110	42-160	
Chloroform	ug/L	20	20.1	100	60-120	
Chloromethane	ug/L	20	18.2	91	10-160	
cis-1,2-Dichloroethene	ug/L	20	21.1	106	70-125	
cis-1,3-Dichloropropene	ug/L	20	20.0	100	66-132	
Dibromochloromethane	ug/L	20	21.7	108	63-134	
Ethylbenzene	ug/L	20	19.8	99	66-133	
Methylene chloride	ug/L	20	17.3	86	56-135	
Tetrachloroethene	ug/L	20	20.6	103	64-143	
Toluene	ug/L	20	19.0	95	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.4	102	67-149	
trans-1,3-Dichloropropene	ug/L	20	21.8	109	66-138	
Trichloroethene	ug/L	20	18.3	91	71-130	
Trichlorofluoromethane	ug/L	20	19.3	96	58-158	
Vinyl chloride	ug/L	20	18.3	92	41-160	
Xylene (Total)	ug/L	60	57.7	96	67-130	
1,2-Dichloroethane-d4 (S)	%			109	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			106	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1216494

Parameter	Units	60148136001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3960	99	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3940	99	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3850	96	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3620	91	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3870	97	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3640	91	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

MATRIX SPIKE SAMPLE:		1216494		60148136001		Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits		
1,2-Dichloroethane	ug/L	ND	4000	3980	100			49-155		
1,2-Dichloropropane	ug/L	ND	4000	3960	99			12-160		
1,3-Dichlorobenzene	ug/L	ND	4000	3610	90			59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	3670	92			18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	4100	102			10-160		
Benzene	ug/L	ND	4000	3710	93			37-151		
Bromodichloromethane	ug/L	ND	4000	3610	90			35-155		
Bromoform	ug/L	ND	4000	4070	102			45-133		
Bromomethane	ug/L	ND	4000	3310	83			10-160		
Carbon tetrachloride	ug/L	ND	4000	4180	104			70-140		
Chlorobenzene	ug/L	ND	4000	3890	97			37-153		
Chloroethane	ug/L	ND	4000	3940	98			14-160		
Chloroform	ug/L	ND	4000	3910	98			51-138		
Chloromethane	ug/L	ND	4000	3110	78			10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	4100	103			19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	3850	96			10-160		
Dibromochloromethane	ug/L	ND	4000	4190	105			53-149		
Ethylbenzene	ug/L	ND	4000	3820	95			37-154		
Methylene chloride	ug/L	ND	4000	3330	82			15-156		
Tetrachloroethene	ug/L	ND	4000	3910	98			64-148		
Toluene	ug/L	ND	4000	3700	92			47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	3780	94			54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	4270	107			17-160		
Trichloroethene	ug/L	ND	4000	3470	87			71-157		
Trichlorofluoromethane	ug/L	ND	4000	3520	88			17-160		
Vinyl chloride	ug/L	ND	4000	3350	84			10-160		
Xylene (Total)	ug/L	ND	12000	11400	95			12-153		
1,2-Dichloroethane-d4 (S)	%				109			80-120		
4-Bromofluorobenzene (S)	%				99			80-120		
Dibromofluoromethane (S)	%				100			80-120		
Toluene-d8 (S)	%				98			80-120		
Preservation pH			7.0			7.0				

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD  
Pace Project No.: 60148160

QC Batch: OEXT/39163 Analysis Method: EPA 625  
QC Batch Method: EPA 625 Analysis Description: 625 MSS  
Associated Lab Samples: 60148160001

METHOD BLANK: 1215985 Matrix: Water  
Associated Lab Samples: 60148160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/08/13 14:44	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dichlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dimethylphenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dinitrophenol	ug/L	ND	50.0	07/08/13 14:44	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/08/13 14:44	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/08/13 14:44	
2-Chloronaphthalene	ug/L	ND	5.0	07/08/13 14:44	
2-Chlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2-Nitrophenol	ug/L	ND	5.0	07/08/13 14:44	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/08/13 14:44	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/08/13 14:44	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/08/13 14:44	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/08/13 14:44	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/08/13 14:44	
4-Nitrophenol	ug/L	ND	5.0	07/08/13 14:44	
Acenaphthene	ug/L	ND	5.0	07/08/13 14:44	
Acenaphthylene	ug/L	ND	5.0	07/08/13 14:44	
Anthracene	ug/L	ND	5.0	07/08/13 14:44	
Benzidine	ug/L	ND	50.0	07/08/13 14:44	
Benzo(a)anthracene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(a)pyrene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/08/13 14:44	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/08/13 14:44	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/08/13 14:44	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/08/13 14:44	
Butylbenzylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Chrysene	ug/L	ND	5.0	07/08/13 14:44	
Di-n-butylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Di-n-octylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/08/13 14:44	
Diethylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Dimethylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
Fluorene	ug/L	ND	5.0	07/08/13 14:44	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/08/13 14:44	
Hexachlorobenzene	ug/L	ND	5.0	07/08/13 14:44	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/08/13 14:44	
Hexachloroethane	ug/L	ND	5.0	07/08/13 14:44	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/08/13 14:44	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Project No.: 60148160

METHOD BLANK: 1215985

Matrix: Water

Associated Lab Samples: 60148160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/08/13 14:44	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/08/13 14:44	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/08/13 14:44	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/08/13 14:44	
Naphthalene	ug/L	ND	5.0	07/08/13 14:44	
Nitrobenzene	ug/L	ND	5.0	07/08/13 14:44	
Pentachlorophenol	ug/L	ND	5.0	07/08/13 14:44	
Phenanthrene	ug/L	ND	5.0	07/08/13 14:44	
Phenol	ug/L	ND	5.0	07/08/13 14:44	
Pyrene	ug/L	ND	5.0	07/08/13 14:44	
2,4,6-Tribromophenol (S)	%	79	39-119	07/08/13 14:44	
2-Fluorobiphenyl (S)	%	79	36-120	07/08/13 14:44	
2-Fluorophenol (S)	%	40	18-120	07/08/13 14:44	
Nitrobenzene-d5 (S)	%	75	32-120	07/08/13 14:44	
Phenol-d6 (S)	%	24	12-120	07/08/13 14:44	
Terphenyl-d14 (S)	%	85	44-120	07/08/13 14:44	

LABORATORY CONTROL SAMPLE: 1215986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	34.8	70	44-120	
2,4,6-Trichlorophenol	ug/L	50	37.6	75	48-120	
2,4-Dichlorophenol	ug/L	50	36.5	73	48-120	
2,4-Dimethylphenol	ug/L	50	34.9	70	37-119	
2,4-Dinitrophenol	ug/L	50	35.7J	71	15-153	
2,4-Dinitrotoluene	ug/L	50	42.2	84	54-120	
2,6-Dinitrotoluene	ug/L	50	41.8	84	52-120	
2-Chloronaphthalene	ug/L	50	38.0	76	60-118	
2-Chlorophenol	ug/L	50	34.9	70	44-120	
2-Nitrophenol	ug/L	50	36.0	72	43-120	
3,3'-Dichlorobenzidine	ug/L	50	39.3	79	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	42.8	86	31-147	
4-Bromophenylphenyl ether	ug/L	50	41.3	83	53-120	
4-Chloro-3-methylphenol	ug/L	50	37.8	76	50-120	
4-Chlorophenylphenyl ether	ug/L	50	40.2	80	54-120	
4-Nitrophenol	ug/L	50	15.1	30	10-120	
Acenaphthene	ug/L	50	39.1	78	51-120	
Acenaphthylene	ug/L	50	38.4	77	51-120	
Anthracene	ug/L	50	41.7	83	54-120	
Benzidine	ug/L	50	28.8J	58	1-124	
Benzo(a)anthracene	ug/L	50	42.5	85	54-120	
Benzo(a)pyrene	ug/L	50	41.9	84	54-120	
Benzo(b)fluoranthene	ug/L	50	42.6	85	57-120	
Benzo(g,h,i)perylene	ug/L	50	42.8	86	54-120	
Benzo(k)fluoranthene	ug/L	50	43.5	87	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

LABORATORY CONTROL SAMPLE: 1215986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	36.5	73	51-120	
bis(2-Chloroethyl) ether	ug/L	50	38.1	76	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	37.4	75	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	43.2	86	51-126	
Butylbenzylphthalate	ug/L	50	42.9	86	45-129	
Chrysene	ug/L	50	42.6	85	54-120	
Di-n-butylphthalate	ug/L	50	43.3	87	57-118	
Di-n-octylphthalate	ug/L	50	43.8	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	43.9	88	56-119	
Diethylphthalate	ug/L	50	41.1	82	55-114	
Dimethylphthalate	ug/L	50	40.2	80	54-112	
Fluoranthene	ug/L	50	42.6	85	56-120	
Fluorene	ug/L	50	39.2	78	59-120	
Hexachloro-1,3-butadiene	ug/L	50	33.7	67	41-116	
Hexachlorobenzene	ug/L	50	41.9	84	53-120	
Hexachlorocyclopentadiene	ug/L	100	50.3	50	31-120	
Hexachloroethane	ug/L	50	34.4	69	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	42.8	86	55-120	
Isophorone	ug/L	50	38.4	77	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	38.8	78	47-120	
N-Nitrosodimethylamine	ug/L	50	22.4	45	28-120	
N-Nitrosodiphenylamine	ug/L	50	39.9	80	53-120	
Naphthalene	ug/L	50	35.7	71	48-120	
Nitrobenzene	ug/L	50	37.3	75	47-120	
Pentachlorophenol	ug/L	50	39.8	80	43-127	
Phenanthrene	ug/L	50	41.4	83	55-120	
Phenol	ug/L	50	13.8	28	15-112	
Pyrene	ug/L	50	42.5	85	55-115	
2,4,6-Tribromophenol (S)	%			83	39-119	
2-Fluorobiphenyl (S)	%			78	36-120	
2-Fluorophenol (S)	%			41	18-120	
Nitrobenzene-d5 (S)	%			74	32-120	
Phenol-d6 (S)	%			27	12-120	
Terphenyl-d14 (S)	%			88	44-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

QC Batch:	WET/42198	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148160001		

METHOD BLANK: 1215713 Matrix: Water

Associated Lab Samples: 60148160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/05/13 07:26	

LABORATORY CONTROL SAMPLE: 1215714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.8	92	78-114	

MATRIX SPIKE SAMPLE: 1215718

Parameter	Units	60148021001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.7	38.8	91	78-114	

SAMPLE DUPLICATE: 1215719

Parameter	Units	60148102001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

QC Batch: WET/42228

Analysis Method: EPA 1664A

QC Batch Method: EPA 1664A

Analysis Description: 1664 SGT-HEM, TPH

Associated Lab Samples: 60148160001

METHOD BLANK: 1216409

Matrix: Water

Associated Lab Samples: 60148160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/08/13 06:47	

LABORATORY CONTROL SAMPLE: 1216410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.9	110	64-132	

MATRIX SPIKE SAMPLE: 1216411

Parameter	Units	60147783001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	2.8J	22.2	21.0	82	64-132	

SAMPLE DUPLICATE: 1216413

Parameter	Units	60147660001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	2.7J		34	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

QC Batch: WET/42219

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60148160001

METHOD BLANK: 1216222

Matrix: Water

Associated Lab Samples: 60148160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/05/13 15:31	

SAMPLE DUPLICATE: 1216223

Parameter	Units	60148155001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	5.0		25	

SAMPLE DUPLICATE: 1216224

Parameter	Units	60148165001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	84.0	8.0	165	25	D6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

QC Batch: WET/42207 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148160001

SAMPLE DUPLICATE: 1215965

Parameter	Units	60148043001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.4	5.4	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

QC Batch:	WETA/25387	Analysis Method:	EPA 350.1
QC Batch Method:	EPA 350.1	Analysis Description:	350.1 Ammonia
Associated Lab Samples:	60148160001		

METHOD BLANK: 1216849 Matrix: Water

Associated Lab Samples: 60148160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/09/13 17:50	

LABORATORY CONTROL SAMPLE: 1216850

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	102	90-110	

MATRIX SPIKE SAMPLE: 1216851

Parameter	Units	60148132002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	103	90-110	

MATRIX SPIKE SAMPLE: 1216852

Parameter	Units	60148137001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.43	2	2.4	100	90-110	

SAMPLE DUPLICATE: 1216853

Parameter	Units	60148140002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.41	0.43	3	18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

QC Batch:	WETA/25377	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60148160001		

METHOD BLANK: 1216769 Matrix: Water

Associated Lab Samples: 60148160001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/10/13 09:47	

LABORATORY CONTROL SAMPLE: 1216770

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	54.1	108	90-110	

MATRIX SPIKE SAMPLE: 1216771

Parameter	Units	60147987001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	18.2	50	72.2	108	90-110	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 264-MSD  
Pace Project No.: 60148160

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39163

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

R1 RPD value was outside control limits.

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

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 264-MSD

Pace Project No.: 60148160

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148160001	264-MSD	EPA 200.7	MPRP/23360	EPA 200.7	ICP/18390
60148160001	264-MSD	EPA 200.7	MPRP/23393	EPA 200.7	ICP/18407
60148160001	264-MSD	EPA 245.1	MERP/7484	EPA 245.1	MERC/7440
60148160001	264-MSD	EPA 245.1	MERP/7483	EPA 245.1	MERC/7441
60148160001	264-MSD	EPA 625	OEXT/39163	EPA 625	MSSV/12399
60148160001	264-MSD	EPA 624 Low	MSV/54776		
60148160002	TRIP BLANK	EPA 624 Low	MSV/54776		
60148160001	264-MSD	EPA 1664A	WET/42198		
60148160001	264-MSD	EPA 1664A	WET/42228		
60148160001	264-MSD	SM 2540D	WET/42219		
60148160001	264-MSD	SM 4500-H+B	WET/42207		
60148160001	264-MSD	EPA 350.1	WETA/25387		
60148160001	264-MSD	EPA 410.4	WETA/25377		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO# : 60148160**



60148160

Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  XRoads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PCC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.4

(circle one)

Date and initials of person examining contents: 7-3-13 BA

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>PH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>Both HNO3 &amp; H2SO4 containers pH high. Added 2.5 mL HNO3 and pH is now 4.5. Added 2.0 mL H2SO4 pH now 3.5.</u>
All containers needing preservation are found to be in compliance with EPA recommendation	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: <u>VOA</u> , coliform, <u>TOC</u> , <u>O&amp;G</u> WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>BA</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative <u>12510</u>
Pace Trip Blank lot # (if purchased): <u>covered by label</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/3/13





July 10, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 266-MSD  
Pace Project No.: 60148265

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 04, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148265

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148265

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148265001	266-MSD	Water	07/03/13 11:56	07/04/13 01:50

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148265

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148265001	266-MSD	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148265

Sample: 266-MSD	Lab ID: 60148265001	Collected: 07/03/13 11:56	Received: 07/04/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>35600</b>	mg/L	2.0	1	07/05/13 10:14	07/10/13 11:17		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148265

QC Batch: WET/42209

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148265001

METHOD BLANK: 1216009

Matrix: Water

Associated Lab Samples: 60148265001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/10/13 11:00	

LABORATORY CONTROL SAMPLE: 1216010

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	186	94	85-115	

SAMPLE DUPLICATE: 1216011

Parameter	Units	60148258003 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	172	173	1	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148265

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148265

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148265001	266-MSD	SM 5210B	WET/42209	SM 5210B	WET/42283

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO#: 60148265**



60148265

Client Name: Burr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  K/S/oads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 22

Date and initials of person examining contents: [Signature] 7/14

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>Bad</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>W</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/15/13



July 12, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 266-MSD  
Pace Project No.: 60148266

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 04, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148266001	266-MSD	Water	07/03/13 11:56	07/04/13 01:50
60148266002	TRIP BLANK	Water	07/03/13 11:56	07/04/13 01:50

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148266001	266-MSD	EPA 200.7	TDS	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148266002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

Sample: 266-MSD		Lab ID: 60148266001	Collected: 07/03/13 11:56	Received: 07/04/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	14700	ug/L	150	2	07/08/13 17:25	07/10/13 13:16	7429-90-5	M1
Antimony	69.0	ug/L	50.0	5	07/08/13 17:25	07/10/13 13:18	7440-36-0	
Arsenic	714	ug/L	50.0	5	07/08/13 17:25	07/10/13 13:18	7440-38-2	
Beryllium	ND	ug/L	2.0	2	07/08/13 17:25	07/10/13 13:16	7440-41-7	D3
Cadmium	ND	ug/L	25.0	5	07/08/13 17:25	07/10/13 13:18	7440-43-9	D3
Chromium	297	ug/L	25.0	5	07/08/13 17:25	07/10/13 13:18	7440-47-3	
Cobalt	71.3	ug/L	25.0	5	07/08/13 17:25	07/10/13 13:18	7440-48-4	
Copper	ND	ug/L	50.0	5	07/08/13 17:25	07/10/13 13:18	7440-50-8	D3
Iron	111000	ug/L	250	5	07/08/13 17:25	07/10/13 13:18	7439-89-6	M1
Lead	195	ug/L	25.0	5	07/08/13 17:25	07/10/13 13:18	7439-92-1	
Nickel	186	ug/L	25.0	5	07/08/13 17:25	07/10/13 13:18	7440-02-0	
Selenium	112	ug/L	75.0	5	07/08/13 17:25	07/10/13 13:18	7782-49-2	
Silver	ND	ug/L	35.0	5	07/08/13 17:25	07/10/13 13:18	7440-22-4	D3,M1, R1
Thallium	ND	ug/L	100	5	07/08/13 17:25	07/10/13 13:18	7440-28-0	D3
Zinc	16800	ug/L	250	5	07/08/13 17:25	07/10/13 13:18	7440-66-6	M1
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	5110	ug/L	150	2	07/08/13 17:25	07/10/13 11:15	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	5	07/08/13 17:25	07/10/13 11:45	7440-36-0	
Arsenic, Dissolved	530	ug/L	50.0	5	07/08/13 17:25	07/10/13 11:45	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	5	07/08/13 17:25	07/10/13 11:45	7440-41-7	D3
Cadmium, Dissolved	ND	ug/L	25.0	5	07/08/13 17:25	07/10/13 11:45	7440-43-9	D3
Chromium, Dissolved	226	ug/L	10.0	2	07/08/13 17:25	07/10/13 11:15	7440-47-3	
Cobalt, Dissolved	62.2	ug/L	25.0	5	07/08/13 17:25	07/10/13 11:45	7440-48-4	
Copper, Dissolved	ND	ug/L	20.0	2	07/08/13 17:25	07/10/13 11:15	7440-50-8	D3
Iron, Dissolved	747000	ug/L	100	2	07/08/13 17:25	07/10/13 11:15	7439-89-6	
Lead, Dissolved	105	ug/L	25.0	5	07/08/13 17:25	07/10/13 11:45	7439-92-1	
Nickel, Dissolved	150	ug/L	25.0	5	07/08/13 17:25	07/10/13 11:45	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	5	07/08/13 17:25	07/10/13 11:45	7782-49-2	D3
Silver, Dissolved	ND	ug/L	14.0	2	07/08/13 17:25	07/10/13 11:15	7440-22-4	D3
Thallium, Dissolved	ND	ug/L	100	5	07/08/13 17:25	07/10/13 11:45	7440-28-0	D3
Zinc, Dissolved	16100	ug/L	1000	20	07/08/13 17:25	07/10/13 12:09	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	0.86	ug/L	0.20	1	07/08/13 10:30	07/08/13 15:04	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND	ug/L	0.20	1	07/08/13 10:30	07/09/13 09:36	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:51	83-32-9	
Acenaphthylene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:51	208-96-8	
Anthracene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:51	120-12-7	
Benzidine	ND	ug/L	10000	20	07/05/13 00:00	07/08/13 16:51	92-87-5	
Benzo(a)anthracene	ND	ug/L	1000	20	07/05/13 00:00	07/08/13 16:51	56-55-3	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

Sample: 266-MSD		Lab ID: 60148266001	Collected: 07/03/13 11:56	Received: 07/04/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(a)pyrene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	50-32-8	
Benzo(b)fluoranthene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	191-24-2	
Benzo(k)fluoranthene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	101-55-3	
Butylbenzylphthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		1200	20	07/05/13 00:00	07/08/13 16:51	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		1200	20	07/05/13 00:00	07/08/13 16:51	39638-32-9	
2-Chloronaphthalene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	91-58-7	
2-Chlorophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	7005-72-3	
Chrysene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		4000	20	07/05/13 00:00	07/08/13 16:51	91-94-1	
2,4-Dichlorophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	120-83-2	
Diethylphthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	84-66-2	
2,4-Dimethylphenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	105-67-9	
Dimethylphthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	131-11-3	
Di-n-butylphthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		5000	20	07/05/13 00:00	07/08/13 16:51	534-52-1	
2,4-Dinitrophenol	ND ug/L		10000	20	07/05/13 00:00	07/08/13 16:51	51-28-5	
2,4-Dinitrotoluene	ND ug/L		1200	20	07/05/13 00:00	07/08/13 16:51	121-14-2	
2,6-Dinitrotoluene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	606-20-2	
Di-n-octylphthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	117-81-7	
Fluoranthene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	206-44-0	
Fluorene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	87-68-3	
Hexachlorobenzene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	77-47-4	
Hexachloroethane	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	193-39-5	
Isophorone	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	78-59-1	
Naphthalene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	91-20-3	
Nitrobenzene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	98-95-3	
2-Nitrophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	88-75-5	
4-Nitrophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	100-02-7	
N-Nitrosodimethylamine	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	86-30-6	
Pentachlorophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	87-86-5	
Phenanthrene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	85-01-8	
Phenol	<b>14200</b> ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	108-95-2	
Pyrene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	120-82-1	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

Sample: 266-MSD		Lab ID: 60148266001	Collected: 07/03/13 11:56	Received: 07/04/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/05/13 00:00	07/08/13 16:51	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/05/13 00:00	07/08/13 16:51	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/05/13 00:00	07/08/13 16:51	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/05/13 00:00	07/08/13 16:51	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/05/13 00:00	07/08/13 16:51	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/05/13 00:00	07/08/13 16:51	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/05/13 00:00	07/08/13 16:51	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/08/13 14:27	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/08/13 14:27	75-27-4	
Bromoform	ND ug/L		200	200		07/08/13 14:27	75-25-2	
Bromomethane	ND ug/L		1000	200		07/08/13 14:27	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/08/13 14:27	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/08/13 14:27	108-90-7	
Chloroethane	ND ug/L		200	200		07/08/13 14:27	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/08/13 14:27	110-75-8	
Chloroform	ND ug/L		200	200		07/08/13 14:27	67-66-3	
Chloromethane	ND ug/L		200	200		07/08/13 14:27	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/08/13 14:27	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/08/13 14:27	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/08/13 14:27	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/08/13 14:27	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/08/13 14:27	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/08/13 14:27	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/08/13 14:27	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/08/13 14:27	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/08/13 14:27	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/08/13 14:27	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/08/13 14:27	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/08/13 14:27	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/08/13 14:27	100-41-4	
Methylene chloride	ND ug/L		200	200		07/08/13 14:27	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/08/13 14:27	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/08/13 14:27	127-18-4	
Toluene	ND ug/L		200	200		07/08/13 14:27	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/08/13 14:27	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/08/13 14:27	79-00-5	
Trichloroethene	ND ug/L		200	200		07/08/13 14:27	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/08/13 14:27	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/08/13 14:27	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/08/13 14:27	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		80-120	200		07/08/13 14:27	1868-53-7	D3
4-Bromofluorobenzene (S)	96 %		80-120	200		07/08/13 14:27	460-00-4	
Toluene-d8 (S)	97 %		80-120	200		07/08/13 14:27	2037-26-5	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

<b>Sample: 266-MSD</b>		<b>Lab ID: 60148266001</b>	Collected: 07/03/13 11:56	Received: 07/04/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	103 %		80-120	200		07/08/13 14:27	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	200		07/08/13 14:27		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>466</b> mg/L		5.0	1		07/05/13 13:51		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>69.9</b> mg/L		5.0	1		07/08/13 06:52		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>2190</b> mg/L		5.0	1		07/09/13 09:27		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.2</b> Std. Units		0.10	1		07/05/13 10:44		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>696</b> mg/L		20.0	200		07/10/13 15:19	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>66800</b> mg/L		5000	500		07/11/13 10:47		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

Sample: TRIP BLANK		Lab ID: 60148266002	Collected: 07/03/13 11:56	Received: 07/04/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/08/13 12:20	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/08/13 12:20	75-27-4	
Bromoform	ND ug/L		1.0	1		07/08/13 12:20	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/08/13 12:20	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/08/13 12:20	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/08/13 12:20	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/08/13 12:20	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/08/13 12:20	110-75-8	
Chloroform	ND ug/L		1.0	1		07/08/13 12:20	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/08/13 12:20	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/08/13 12:20	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 12:20	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 12:20	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 12:20	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/08/13 12:20	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/08/13 12:20	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/08/13 12:20	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/08/13 12:20	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/08/13 12:20	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/08/13 12:20	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/08/13 12:20	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/08/13 12:20	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/08/13 12:20	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/08/13 12:20	75-09-2	
1,1,1,2-Tetrachloroethane	ND ug/L		1.0	1		07/08/13 12:20	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/08/13 12:20	127-18-4	
Toluene	ND ug/L		1.0	1		07/08/13 12:20	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/08/13 12:20	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/08/13 12:20	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/08/13 12:20	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/08/13 12:20	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/08/13 12:20	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/08/13 12:20	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		80-120	1		07/08/13 12:20	1868-53-7	
4-Bromofluorobenzene (S)	97 %		80-120	1		07/08/13 12:20	460-00-4	
Toluene-d8 (S)	98 %		80-120	1		07/08/13 12:20	2037-26-5	
1,2-Dichloroethane-d4 (S)	100 %		80-120	1		07/08/13 12:20	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/08/13 12:20		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD  
Pace Project No.: 60148266

QC Batch: MERP/7484 Analysis Method: EPA 245.1  
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury  
Associated Lab Samples: 60148266001

METHOD BLANK: 1216523 Matrix: Water  
Associated Lab Samples: 60148266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/08/13 14:30	

LABORATORY CONTROL SAMPLE: 1216524

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216525 1216526

Parameter	Units	60147147001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L	ND	5	5	4.3	5.7	84	112	70-130	29	20	R1

MATRIX SPIKE SAMPLE: 1216527

Parameter	Units	60148080001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	4.2	84	70-130	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

QC Batch: MERP/7483

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury - Dissolved

Associated Lab Samples: 60148266001

METHOD BLANK: 1216519

Matrix: Water

Associated Lab Samples: 60148266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/08/13 15:31	

LABORATORY CONTROL SAMPLE: 1216520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.8	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216521

1216522

Parameter	Units	60148080001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury, Dissolved	ug/L	ND	5	5	4.7	4.8	95	96	70-130	1	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD  
Pace Project No.: 60148266

QC Batch: MPRP/23394      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60148266001

METHOD BLANK: 1216713      Matrix: Water  
Associated Lab Samples: 60148266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/10/13 13:11	
Antimony	ug/L	ND	10.0	07/10/13 13:11	
Arsenic	ug/L	ND	10.0	07/10/13 13:11	
Beryllium	ug/L	ND	1.0	07/10/13 13:11	
Cadmium	ug/L	ND	5.0	07/10/13 13:11	
Chromium	ug/L	ND	5.0	07/10/13 13:11	
Cobalt	ug/L	ND	5.0	07/10/13 13:11	
Copper	ug/L	ND	10.0	07/10/13 13:11	
Iron	ug/L	ND	50.0	07/10/13 13:11	
Lead	ug/L	ND	5.0	07/10/13 13:11	
Nickel	ug/L	ND	5.0	07/10/13 13:11	
Selenium	ug/L	ND	15.0	07/10/13 13:11	
Silver	ug/L	ND	7.0	07/10/13 13:11	
Thallium	ug/L	ND	20.0	07/10/13 13:11	
Zinc	ug/L	ND	50.0	07/10/13 13:11	

LABORATORY CONTROL SAMPLE: 1216714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10600	106	85-115	
Antimony	ug/L	1000	1060	106	85-115	
Arsenic	ug/L	1000	989	99	85-115	
Beryllium	ug/L	1000	1000	100	85-115	
Cadmium	ug/L	1000	1020	102	85-115	
Chromium	ug/L	1000	995	100	85-115	
Cobalt	ug/L	1000	1040	104	85-115	
Copper	ug/L	1000	1050	105	85-115	
Iron	ug/L	10000	9440	94	85-115	
Lead	ug/L	1000	1040	104	85-115	
Nickel	ug/L	1000	1050	105	85-115	
Selenium	ug/L	1000	1050	105	85-115	
Silver	ug/L	500	503	101	85-115	
Thallium	ug/L	1000	1070	107	85-115	
Zinc	ug/L	1000	1000	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216715      1216716

Parameter	Units	60148266001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Aluminum	ug/L	14700	10000	10000	10000	30900	31300	162	166	70-130	1	8 M1	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

Parameter	Units	60148266001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec							
Antimony	ug/L	69.0	1000	1000	1000	864	860	79	79	70-130	0	7				
Arsenic	ug/L	714	1000	1000	1000	1880	1860	117	115	70-130	1	10				
Beryllium	ug/L	ND	1000	1000	1000	952	947	95	95	70-130	1	7				
Cadmium	ug/L	ND	1000	1000	1000	1070	1060	106	105	70-130	1	10				
Chromium	ug/L	297	1000	1000	1000	1240	1240	94	94	70-130	0	10				
Cobalt	ug/L	71.3	1000	1000	1000	1000	990	93	92	70-130	1	6				
Copper	ug/L	ND	1000	1000	1000	1070	1060	106	104	70-130	1	11				
Iron	ug/L	1110000	10000	10000	10000	1130000	1140000	245	370	70-130	1	10	M1			
Lead	ug/L	195	1000	1000	1000	1080	1090	89	89	70-130	1	10				
Nickel	ug/L	186	1000	1000	1000	1110	1110	93	92	70-130	1	10				
Selenium	ug/L	112	1000	1000	1000	1320	1320	121	121	70-130	0	10				
Silver	ug/L	ND	500	500	500	51.6	40.2	7	4	70-130	25	10	M1,R1			
Thallium	ug/L	ND	1000	1000	1000	738	708	74	71	70-130	4	6				
Zinc	ug/L	16800	1000	1000	1000	18100	18400	130	156	70-130	1	11	M1			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD  
Pace Project No.: 60148266

QC Batch: MPRP/23393 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60148266001

METHOD BLANK: 1216706 Matrix: Water  
Associated Lab Samples: 60148266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/10/13 11:02	
Antimony, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Arsenic, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Beryllium, Dissolved	ug/L	ND	1.0	07/10/13 11:02	
Cadmium, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Chromium, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Cobalt, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Copper, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Iron, Dissolved	ug/L	ND	50.0	07/10/13 11:02	
Lead, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Nickel, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Selenium, Dissolved	ug/L	ND	15.0	07/10/13 11:02	
Silver, Dissolved	ug/L	ND	7.0	07/10/13 11:02	
Thallium, Dissolved	ug/L	ND	20.0	07/10/13 11:02	
Zinc, Dissolved	ug/L	ND	50.0	07/10/13 11:02	

LABORATORY CONTROL SAMPLE: 1216707

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10300	103	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	982	98	85-115	
Beryllium, Dissolved	ug/L	1000	1020	102	85-115	
Cadmium, Dissolved	ug/L	1000	1020	102	85-115	
Chromium, Dissolved	ug/L	1000	980	98	85-115	
Cobalt, Dissolved	ug/L	1000	1040	104	85-115	
Copper, Dissolved	ug/L	1000	998	100	85-115	
Iron, Dissolved	ug/L	10000	9940	99	85-115	
Lead, Dissolved	ug/L	1000	1060	106	85-115	
Nickel, Dissolved	ug/L	1000	1040	104	85-115	
Selenium, Dissolved	ug/L	1000	1010	101	85-115	
Silver, Dissolved	ug/L	500	509	102	85-115	
Thallium, Dissolved	ug/L	1000	1070	107	85-115	
Zinc, Dissolved	ug/L	1000	983	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216708 1216709

Parameter	Units	60148335001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum, Dissolved	ug/L	3650	10000	10000	10000	13700	13700	101	100	70-130	0	8

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

Parameter	60148335001		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony, Dissolved	ug/L	37.6	1000	1000	960	968	92	93	70-130	1	7		
Arsenic, Dissolved	ug/L	455	1000	1000	1500	1480	104	103	70-130	1	10		
Beryllium, Dissolved	ug/L	ND	1000	1000	901	909	90	91	70-130	1	7		
Cadmium, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	10		
Chromium, Dissolved	ug/L	198	1000	1000	1090	1090	89	89	70-130	0	10		
Cobalt, Dissolved	ug/L	52.0	1000	1000	976	979	92	93	70-130	0	6		
Copper, Dissolved	ug/L	ND	1000	1000	1000	1020	99	100	70-130	1	11		
Iron, Dissolved	ug/L	524000	10000	10000	555000	538000	306	136	70-130	3	10	M1	
Lead, Dissolved	ug/L	67.8	1000	1000	931	943	86	88	70-130	1	10		
Nickel, Dissolved	ug/L	122	1000	1000	1040	1050	92	93	70-130	0	10		
Selenium, Dissolved	ug/L	ND	1000	1000	1060	1080	106	108	70-130	2	10		
Silver, Dissolved	ug/L	ND	500	500	17.3	18.4	3	4	70-130	6	10	M1	
Thallium, Dissolved	ug/L	ND	1000	1000	714	723	71	72	70-130	1	6		
Zinc, Dissolved	ug/L	13300	1000	1000	15200	14400	182	105	70-130	5	11	M1	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

QC Batch: MSV/54776 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148266001, 60148266002

METHOD BLANK: 1216492 Matrix: Water

Associated Lab Samples: 60148266001, 60148266002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1-Dichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichloropropane	ug/L	ND	1.0	07/08/13 10:47	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/08/13 10:47	
Benzene	ug/L	ND	1.0	07/08/13 10:47	
Bromodichloromethane	ug/L	ND	1.0	07/08/13 10:47	
Bromoform	ug/L	ND	1.0	07/08/13 10:47	
Bromomethane	ug/L	ND	5.0	07/08/13 10:47	
Carbon tetrachloride	ug/L	ND	1.0	07/08/13 10:47	
Chlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
Chloroethane	ug/L	ND	1.0	07/08/13 10:47	
Chloroform	ug/L	ND	1.0	07/08/13 10:47	
Chloromethane	ug/L	ND	1.0	07/08/13 10:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/08/13 10:47	
Dibromochloromethane	ug/L	ND	1.0	07/08/13 10:47	
Ethylbenzene	ug/L	ND	1.0	07/08/13 10:47	
Methylene chloride	ug/L	ND	1.0	07/08/13 10:47	
Tetrachloroethene	ug/L	ND	1.0	07/08/13 10:47	
Toluene	ug/L	ND	1.0	07/08/13 10:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/08/13 10:47	
Trichloroethene	ug/L	ND	1.0	07/08/13 10:47	
Trichlorofluoromethane	ug/L	ND	1.0	07/08/13 10:47	
Vinyl chloride	ug/L	ND	1.0	07/08/13 10:47	
Xylene (Total)	ug/L	ND	3.0	07/08/13 10:47	
1,2-Dichloroethane-d4 (S)	%	105	80-120	07/08/13 10:47	
4-Bromofluorobenzene (S)	%	97	80-120	07/08/13 10:47	
Dibromofluoromethane (S)	%	102	80-120	07/08/13 10:47	
Toluene-d8 (S)	%	100	80-120	07/08/13 10:47	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

LABORATORY CONTROL SAMPLE: 1216493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.8	109	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.4	97	59-138	
1,1,2-Trichloroethane	ug/L	20	20.2	101	69-127	
1,1-Dichloroethane	ug/L	20	19.4	97	69-126	
1,1-Dichloroethene	ug/L	20	20.5	102	65-153	
1,2-Dichlorobenzene	ug/L	20	19.2	96	66-126	
1,2-Dichloroethane	ug/L	20	21.1	106	71-129	
1,2-Dichloropropane	ug/L	20	20.4	102	66-140	
1,3-Dichlorobenzene	ug/L	20	19.4	97	63-127	
1,4-Dichlorobenzene	ug/L	20	19.9	99	68-124	
2-Chloroethylvinyl ether	ug/L	20	14.9	75	33-159	
Benzene	ug/L	20	19.5	98	73-129	
Bromodichloromethane	ug/L	20	19.9	99	63-129	
Bromoform	ug/L	20	20.5	103	52-123	
Bromomethane	ug/L	20	23.1	115	10-160	
Carbon tetrachloride	ug/L	20	21.8	109	70-140	
Chlorobenzene	ug/L	20	19.7	98	68-127	
Chloroethane	ug/L	20	22.0	110	42-160	
Chloroform	ug/L	20	20.1	100	60-120	
Chloromethane	ug/L	20	18.2	91	10-160	
cis-1,2-Dichloroethene	ug/L	20	21.1	106	70-125	
cis-1,3-Dichloropropene	ug/L	20	20.0	100	66-132	
Dibromochloromethane	ug/L	20	21.7	108	63-134	
Ethylbenzene	ug/L	20	19.8	99	66-133	
Methylene chloride	ug/L	20	17.3	86	56-135	
Tetrachloroethene	ug/L	20	20.6	103	64-143	
Toluene	ug/L	20	19.0	95	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.4	102	67-149	
trans-1,3-Dichloropropene	ug/L	20	21.8	109	66-138	
Trichloroethene	ug/L	20	18.3	91	71-130	
Trichlorofluoromethane	ug/L	20	19.3	96	58-158	
Vinyl chloride	ug/L	20	18.3	92	41-160	
Xylene (Total)	ug/L	60	57.7	96	67-130	
1,2-Dichloroethane-d4 (S)	%			109	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			106	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1216494

Parameter	Units	60148136001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3960	99	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3940	99	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3850	96	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3620	91	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3870	97	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3640	91	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

MATRIX SPIKE SAMPLE:		1216494		60148136001		Spike		MS		MS		% Rec		Qualifiers	
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits							
1,2-Dichloroethane	ug/L	ND	4000	3980	100	49-155									
1,2-Dichloropropane	ug/L	ND	4000	3960	99	12-160									
1,3-Dichlorobenzene	ug/L	ND	4000	3610	90	59-146									
1,4-Dichlorobenzene	ug/L	ND	4000	3670	92	18-147									
2-Chloroethylvinyl ether	ug/L	ND	4000	4100	102	10-160									
Benzene	ug/L	ND	4000	3710	93	37-151									
Bromodichloromethane	ug/L	ND	4000	3610	90	35-155									
Bromoform	ug/L	ND	4000	4070	102	45-133									
Bromomethane	ug/L	ND	4000	3310	83	10-160									
Carbon tetrachloride	ug/L	ND	4000	4180	104	70-140									
Chlorobenzene	ug/L	ND	4000	3890	97	37-153									
Chloroethane	ug/L	ND	4000	3940	98	14-160									
Chloroform	ug/L	ND	4000	3910	98	51-138									
Chloromethane	ug/L	ND	4000	3110	78	10-160									
cis-1,2-Dichloroethene	ug/L	ND	4000	4100	103	19-160									
cis-1,3-Dichloropropene	ug/L	ND	4000	3850	96	10-160									
Dibromochloromethane	ug/L	ND	4000	4190	105	53-149									
Ethylbenzene	ug/L	ND	4000	3820	95	37-154									
Methylene chloride	ug/L	ND	4000	3330	82	15-156									
Tetrachloroethene	ug/L	ND	4000	3910	98	64-148									
Toluene	ug/L	ND	4000	3700	92	47-150									
trans-1,2-Dichloroethene	ug/L	ND	4000	3780	94	54-156									
trans-1,3-Dichloropropene	ug/L	ND	4000	4270	107	17-160									
Trichloroethene	ug/L	ND	4000	3470	87	71-157									
Trichlorofluoromethane	ug/L	ND	4000	3520	88	17-160									
Vinyl chloride	ug/L	ND	4000	3350	84	10-160									
Xylene (Total)	ug/L	ND	12000	11400	95	12-153									
1,2-Dichloroethane-d4 (S)	%				109	80-120									
4-Bromofluorobenzene (S)	%				99	80-120									
Dibromofluoromethane (S)	%				100	80-120									
Toluene-d8 (S)	%				98	80-120									
Preservation pH			7.0		7.0										

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

QC Batch:	OEXT/39163	Analysis Method:	EPA 625
QC Batch Method:	EPA 625	Analysis Description:	625 MSS
Associated Lab Samples:	60148266001		

METHOD BLANK: 1215985 Matrix: Water

Associated Lab Samples: 60148266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/08/13 14:44	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dichlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dimethylphenol	ug/L	ND	5.0	07/08/13 14:44	
2,4-Dinitrophenol	ug/L	ND	50.0	07/08/13 14:44	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/08/13 14:44	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/08/13 14:44	
2-Chloronaphthalene	ug/L	ND	5.0	07/08/13 14:44	
2-Chlorophenol	ug/L	ND	5.0	07/08/13 14:44	
2-Nitrophenol	ug/L	ND	5.0	07/08/13 14:44	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/08/13 14:44	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/08/13 14:44	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/08/13 14:44	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/08/13 14:44	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/08/13 14:44	
4-Nitrophenol	ug/L	ND	5.0	07/08/13 14:44	
Acenaphthene	ug/L	ND	5.0	07/08/13 14:44	
Acenaphthylene	ug/L	ND	5.0	07/08/13 14:44	
Anthracene	ug/L	ND	5.0	07/08/13 14:44	
Benzidine	ug/L	ND	50.0	07/08/13 14:44	
Benzo(a)anthracene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(a)pyrene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/08/13 14:44	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/08/13 14:44	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/08/13 14:44	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/08/13 14:44	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/08/13 14:44	
Butylbenzylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Chrysene	ug/L	ND	5.0	07/08/13 14:44	
Di-n-butylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Di-n-octylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/08/13 14:44	
Diethylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Dimethylphthalate	ug/L	ND	5.0	07/08/13 14:44	
Fluoranthene	ug/L	ND	5.0	07/08/13 14:44	
Fluorene	ug/L	ND	5.0	07/08/13 14:44	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/08/13 14:44	
Hexachlorobenzene	ug/L	ND	5.0	07/08/13 14:44	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/08/13 14:44	
Hexachloroethane	ug/L	ND	5.0	07/08/13 14:44	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/08/13 14:44	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Project No.: 60148266

METHOD BLANK: 1215985

Matrix: Water

Associated Lab Samples: 60148266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/08/13 14:44	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/08/13 14:44	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/08/13 14:44	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/08/13 14:44	
Naphthalene	ug/L	ND	5.0	07/08/13 14:44	
Nitrobenzene	ug/L	ND	5.0	07/08/13 14:44	
Pentachlorophenol	ug/L	ND	5.0	07/08/13 14:44	
Phenanthrene	ug/L	ND	5.0	07/08/13 14:44	
Phenol	ug/L	ND	5.0	07/08/13 14:44	
Pyrene	ug/L	ND	5.0	07/08/13 14:44	
2,4,6-Tribromophenol (S)	%	79	39-119	07/08/13 14:44	
2-Fluorobiphenyl (S)	%	79	36-120	07/08/13 14:44	
2-Fluorophenol (S)	%	40	18-120	07/08/13 14:44	
Nitrobenzene-d5 (S)	%	75	32-120	07/08/13 14:44	
Phenol-d6 (S)	%	24	12-120	07/08/13 14:44	
Terphenyl-d14 (S)	%	85	44-120	07/08/13 14:44	

LABORATORY CONTROL SAMPLE: 1215986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	34.8	70	44-120	
2,4,6-Trichlorophenol	ug/L	50	37.6	75	48-120	
2,4-Dichlorophenol	ug/L	50	36.5	73	48-120	
2,4-Dimethylphenol	ug/L	50	34.9	70	37-119	
2,4-Dinitrophenol	ug/L	50	35.7J	71	15-153	
2,4-Dinitrotoluene	ug/L	50	42.2	84	54-120	
2,6-Dinitrotoluene	ug/L	50	41.8	84	52-120	
2-Chloronaphthalene	ug/L	50	38.0	76	60-118	
2-Chlorophenol	ug/L	50	34.9	70	44-120	
2-Nitrophenol	ug/L	50	36.0	72	43-120	
3,3'-Dichlorobenzidine	ug/L	50	39.3	79	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	42.8	86	31-147	
4-Bromophenylphenyl ether	ug/L	50	41.3	83	53-120	
4-Chloro-3-methylphenol	ug/L	50	37.8	76	50-120	
4-Chlorophenylphenyl ether	ug/L	50	40.2	80	54-120	
4-Nitrophenol	ug/L	50	15.1	30	10-120	
Acenaphthene	ug/L	50	39.1	78	51-120	
Acenaphthylene	ug/L	50	38.4	77	51-120	
Anthracene	ug/L	50	41.7	83	54-120	
Benzidine	ug/L	50	28.8J	58	1-124	
Benzo(a)anthracene	ug/L	50	42.5	85	54-120	
Benzo(a)pyrene	ug/L	50	41.9	84	54-120	
Benzo(b)fluoranthene	ug/L	50	42.6	85	57-120	
Benzo(g,h,i)perylene	ug/L	50	42.8	86	54-120	
Benzo(k)fluoranthene	ug/L	50	43.5	87	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

LABORATORY CONTROL SAMPLE: 1215986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	36.5	73	51-120	
bis(2-Chloroethyl) ether	ug/L	50	38.1	76	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	37.4	75	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	43.2	86	51-126	
Butylbenzylphthalate	ug/L	50	42.9	86	45-129	
Chrysene	ug/L	50	42.6	85	54-120	
Di-n-butylphthalate	ug/L	50	43.3	87	57-118	
Di-n-octylphthalate	ug/L	50	43.8	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	43.9	88	56-119	
Diethylphthalate	ug/L	50	41.1	82	55-114	
Dimethylphthalate	ug/L	50	40.2	80	54-112	
Fluoranthene	ug/L	50	42.6	85	56-120	
Fluorene	ug/L	50	39.2	78	59-120	
Hexachloro-1,3-butadiene	ug/L	50	33.7	67	41-116	
Hexachlorobenzene	ug/L	50	41.9	84	53-120	
Hexachlorocyclopentadiene	ug/L	100	50.3	50	31-120	
Hexachloroethane	ug/L	50	34.4	69	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	42.8	86	55-120	
Isophorone	ug/L	50	38.4	77	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	38.8	78	47-120	
N-Nitrosodimethylamine	ug/L	50	22.4	45	28-120	
N-Nitrosodiphenylamine	ug/L	50	39.9	80	53-120	
Naphthalene	ug/L	50	35.7	71	48-120	
Nitrobenzene	ug/L	50	37.3	75	47-120	
Pentachlorophenol	ug/L	50	39.8	80	43-127	
Phenanthrene	ug/L	50	41.4	83	55-120	
Phenol	ug/L	50	13.8	28	15-112	
Pyrene	ug/L	50	42.5	85	55-115	
2,4,6-Tribromophenol (S)	%			83	39-119	
2-Fluorobiphenyl (S)	%			78	36-120	
2-Fluorophenol (S)	%			41	18-120	
Nitrobenzene-d5 (S)	%			74	32-120	
Phenol-d6 (S)	%			27	12-120	
Terphenyl-d14 (S)	%			88	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

QC Batch:	WET/42217	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148266001		

METHOD BLANK: 1216171 Matrix: Water

Associated Lab Samples: 60148266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/05/13 13:49	

LABORATORY CONTROL SAMPLE: 1216172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	35.4	88	78-114	

MATRIX SPIKE SAMPLE: 1216173

Parameter	Units	60148176001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.2	36.4	86	78-114	

SAMPLE DUPLICATE: 1216174

Parameter	Units	60148177001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

QC Batch: WET/42228

Analysis Method: EPA 1664A

QC Batch Method: EPA 1664A

Analysis Description: 1664 SGT-HEM, TPH

Associated Lab Samples: 60148266001

METHOD BLANK: 1216409

Matrix: Water

Associated Lab Samples: 60148266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/08/13 06:47	

LABORATORY CONTROL SAMPLE: 1216410

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.9	110	64-132	

MATRIX SPIKE SAMPLE: 1216411

Parameter	Units	60147783001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	2.8J	22.2	21.0	82	64-132	

SAMPLE DUPLICATE: 1216413

Parameter	Units	60147660001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	2.7J		34	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

QC Batch:	WET/42251	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60148266001		

METHOD BLANK: 1216872 Matrix: Water

Associated Lab Samples: 60148266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/09/13 09:27	

SAMPLE DUPLICATE: 1216873

Parameter	Units	5083229001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	16.0	17.0	6	25	

SAMPLE DUPLICATE: 1216874

Parameter	Units	60148344002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	5.0		25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

QC Batch: WET/42207 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148266001

SAMPLE DUPLICATE: 1215965

Parameter	Units	60148043001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.4	5.4	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD  
Pace Project No.: 60148266

QC Batch: WETA/25396 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60148266001

METHOD BLANK: 1217259 Matrix: Water  
Associated Lab Samples: 60148266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/10/13 14:50	

LABORATORY CONTROL SAMPLE: 1217260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	101	90-110	

MATRIX SPIKE SAMPLE: 1217261

Parameter	Units	60148240006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.8	89	90-110	M1

MATRIX SPIKE SAMPLE: 1217262

Parameter	Units	60148251001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.7	85	90-110	M1

SAMPLE DUPLICATE: 1217263

Parameter	Units	60148253001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	11.4	11.4	0	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 266-MSD  
Pace Project No.: 60148266

QC Batch: WETA/25405 Analysis Method: EPA 410.4  
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD  
Associated Lab Samples: 60148266001

METHOD BLANK: 1217491 Matrix: Water  
Associated Lab Samples: 60148266001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/11/13 10:45	

LABORATORY CONTROL SAMPLE: 1217492

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	53.7	107	90-110	

MATRIX SPIKE SAMPLE: 1217494

Parameter	Units	60148259001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	92.7	50	138	91	90-110	

MATRIX SPIKE SAMPLE: 1217495

Parameter	Units	60148403003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	3320	2500	5750	97	90-110	

SAMPLE DUPLICATE: 1217493

Parameter	Units	60147815002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	55.2	54.6	1	25	

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## QUALIFIERS

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39163

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 266-MSD

Pace Project No.: 60148266

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148266001	266-MSD	EPA 200.7	MPRP/23394	EPA 200.7	ICP/18409
60148266001	266-MSD	EPA 200.7	MPRP/23393	EPA 200.7	ICP/18407
60148266001	266-MSD	EPA 245.1	MERP/7484	EPA 245.1	MERC/7440
60148266001	266-MSD	EPA 245.1	MERP/7483	EPA 245.1	MERC/7441
60148266001	266-MSD	EPA 625	OEXT/39163	EPA 625	MSSV/12399
60148266001	266-MSD	EPA 624 Low	MSV/54776		
60148266002	TRIP BLANK	EPA 624 Low	MSV/54776		
60148266001	266-MSD	EPA 1664A	WET/42217		
60148266001	266-MSD	EPA 1664A	WET/42228		
60148266001	266-MSD	SM 2540D	WET/42251		
60148266001	266-MSD	SM 4500-H+B	WET/42207		
60148266001	266-MSD	EPA 350.1	WETA/25396		
60148266001	266-MSD	EPA 410.4	WETA/25405		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO# : 60148266**



Optional
Proj Due Date:
Proj Name:

Client Name: Barr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  freight

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2-2

(circle one)

Date and initials of person examining contents: [Signature]

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>PH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>W T</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>BXP3N initial pH ~4.5; added 2.5ml HNO3; pH ~3.0</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<u>BXP3S initial pH ~4.5; added 2.5ml H2SO4; pH ~3.0</u>
Exceptions: VOA, coliform, TOC, <u>0&amp;0</u> , WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>[Signature]</u> Lot # of added preservative <u>12095</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>covered</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16. <u>1 of 2 trip blank</u>
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/5/13



July 12, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-008  
Pace Project No.: 60148305

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 06, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-008

Pace Project No.: 60148305

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-008

Pace Project No.: 60148305

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148305001	316-008	Water	07/05/13 08:11	07/06/13 00:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-008

Pace Project No.: 60148305

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148305001	316-008	SM 5210B	JMC1	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-008

Pace Project No.: 60148305

Sample: 316-008	Lab ID: 60148305001	Collected: 07/05/13 08:11	Received: 07/06/13 00:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>23500</b>	mg/L	2.0	1	07/06/13 10:24	07/11/13 08:13		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148305

QC Batch: WET/42223

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148305001

METHOD BLANK: 1216347

Matrix: Water

Associated Lab Samples: 60148305001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/11/13 08:11	

LABORATORY CONTROL SAMPLE: 1216348

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	181	92	85-115	

SAMPLE DUPLICATE: 1216349

Parameter	Units	60148305001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	23500	24200	3	17	

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## QUALIFIERS

Project: BRIDGETON LF 316-008

Pace Project No.: 60148305

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-008

Pace Project No.: 60148305

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148305001	316-008	SM 5210B	WET/42223	SM 5210B	WET/42298

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148305



Client Name: Barr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  XVoad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PIC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.0

Date and initials of person examining contents: 7/16/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>ROD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/18/13



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**

**Required Client Information:**  
 Company: **BARR ENGINEERING**  
 Address:  
 Email To:  
 Phone: **(816) 285-8410** Fax  
 Requested Due Date/TAT: **10 Day (Default)**

**Section B**

**Required Project Information:**  
 Report To: **ED GALBRAITH/BARR**  
 Copy To: **SCOTT FEDAK/FEEZOR**  
 DANA BAKER/MARGARET TREANOR -BARR  
 Purchase Order No. **PO 3727110**  
 Client Project ID: **BRIDGETON LF**  
 Container Order Number:

**Section C**

**Invoice Information:**  
 Attention: **TABITHA PROVINCE**  
 Company Name: **REPUBLIC SERVICES**  
 Address: **BRIDGETON, MO 63044**  
 Pace Quote Reference: **130426 7588**  
 Pace Project Manager: **Brown, Angie**  
 Pace Profile #: **6787 LINE 5**

Page : 1 Of 1

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample IDs must be unique	MATRIX CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	CODE DW WT WW P SL OL WP AR OT TS	COLLECTED START DATE TIME END DATE TIME	SAMPLER NAME AND SIGNATURE	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	Requested Analysis Filtered (Y/N)												Residual Chlorine (Y/N)															
											MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	SAMPLER TEMP AT COLLECTION		# OF CONTAINERS	Preservatives																						
													Unpreserved	H2SO4		HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test		Y/N														
1	316-008	OT	G	7/5/13 0811	William Abernathy	7/5/13	1614	PIASE	7/6/13	0030	X																										60148305	
2																																						
3																																						
4																																						
5																																						
6																																						
7																																						
8																																						
9																																						
10																																						
11																																						
12																																						
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS																								
SITE CONTACT: BILL ABERNATHY 314-502-1299		William Abernathy		7/5/13		1614		PIASE		7/5/13		1614		20 Y Y Y																								
SITE ADDRESS: BRIDGETON LF																																						
13570 ST. CHARLES ROCK RD																																						
BRIDGETON MO 63044																																						

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:		WILLIAM ABERNATHY	
SIGNATURE of SAMPLER:		DATE Signed: 7/5/13	
TEMP in C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

July 15, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-008  
Pace Project No.: 60148306

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 06, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148306001	316-008	Water	07/05/13 08:11	07/06/13 00:30
60148306002	TRIP BLANK	Water	07/05/13 08:00	07/06/13 00:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148306001	316-008	EPA 200.7	TDS	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148306002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

Sample: 316-008	Lab ID: 60148306001	Collected: 07/05/13 08:11	Received: 07/06/13 00:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b> Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum	10300 ug/L		150	2	07/08/13 17:25	07/10/13 13:42	7429-90-5	
Antimony	ND ug/L		50.0	5	07/08/13 17:25	07/10/13 13:45	7440-36-0	D3
Arsenic	540 ug/L		50.0	5	07/08/13 17:25	07/10/13 13:45	7440-38-2	
Beryllium	ND ug/L		2.0	2	07/08/13 17:25	07/10/13 13:42	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/08/13 17:25	07/10/13 13:45	7440-43-9	D3
Chromium	217 ug/L		10.0	2	07/08/13 17:25	07/10/13 13:42	7440-47-3	
Cobalt	54.8 ug/L		25.0	5	07/08/13 17:25	07/10/13 13:45	7440-48-4	
Copper	ND ug/L		20.0	2	07/08/13 17:25	07/10/13 13:42	7440-50-8	D3
Iron	708000 ug/L		100	2	07/08/13 17:25	07/10/13 13:42	7439-89-6	
Lead	150 ug/L		25.0	5	07/08/13 17:25	07/10/13 13:45	7439-92-1	
Nickel	152 ug/L		25.0	5	07/08/13 17:25	07/10/13 13:45	7440-02-0	
Selenium	ND ug/L		75.0	5	07/08/13 17:25	07/10/13 13:45	7782-49-2	D3
Silver	ND ug/L		14.0	2	07/08/13 17:25	07/10/13 13:42	7440-22-4	D3
Thallium	ND ug/L		100	5	07/08/13 17:25	07/10/13 13:45	7440-28-0	D3
Zinc	11100 ug/L		250	5	07/08/13 17:25	07/10/13 13:45	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b> Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum, Dissolved	2780 ug/L		150	2	07/08/13 17:25	07/10/13 11:18	7429-90-5	
Antimony, Dissolved	34.4 ug/L		20.0	2	07/08/13 17:25	07/10/13 11:18	7440-36-0	
Arsenic, Dissolved	374 ug/L		20.0	2	07/08/13 17:25	07/10/13 11:18	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/08/13 17:25	07/10/13 11:49	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		10.0	2	07/08/13 17:25	07/10/13 11:18	7440-43-9	D3
Chromium, Dissolved	167 ug/L		10.0	2	07/08/13 17:25	07/10/13 11:18	7440-47-3	
Cobalt, Dissolved	42.2 ug/L		10.0	2	07/08/13 17:25	07/10/13 11:18	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/08/13 17:25	07/10/13 11:18	7440-50-8	D3
Iron, Dissolved	435000 ug/L		100	2	07/08/13 17:25	07/10/13 11:18	7439-89-6	
Lead, Dissolved	49.7 ug/L		10.0	2	07/08/13 17:25	07/10/13 11:18	7439-92-1	
Nickel, Dissolved	102 ug/L		10.0	2	07/08/13 17:25	07/10/13 11:18	7440-02-0	
Selenium, Dissolved	ND ug/L		30.0	2	07/08/13 17:25	07/10/13 11:18	7782-49-2	
Silver, Dissolved	ND ug/L		14.0	2	07/08/13 17:25	07/10/13 11:18	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/08/13 17:25	07/10/13 11:49	7440-28-0	D3
Zinc, Dissolved	10300 ug/L		1000	20	07/08/13 17:25	07/10/13 12:12	7440-66-6	
<b>245.1 Mercury</b> Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury	ND ug/L		0.20	1	07/08/13 10:30	07/08/13 15:11	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b> Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND ug/L		0.20	1	07/10/13 08:45	07/10/13 12:08	7439-97-6	
<b>625 MSSV</b> Analytical Method: EPA 625 Preparation Method: EPA 625								
Acenaphthene	ND ug/L		1000	20	07/08/13 00:00	07/09/13 17:47	83-32-9	
Acenaphthylene	ND ug/L		1000	20	07/08/13 00:00	07/09/13 17:47	208-96-8	
Anthracene	ND ug/L		1000	20	07/08/13 00:00	07/09/13 17:47	120-12-7	
Benzidine	ND ug/L		10000	20	07/08/13 00:00	07/09/13 17:47	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	07/08/13 00:00	07/09/13 17:47	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	07/08/13 00:00	07/09/13 17:47	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

Sample: 316-008		Lab ID: 60148306001	Collected: 07/05/13 08:11	Received: 07/06/13 00:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	101-55-3	
Butylbenzylphthalate	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1200	20	07/08/13 00:00	07/09/13 17:47	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1200	20	07/08/13 00:00	07/09/13 17:47	39638-32-9	
2-Chloronaphthalene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	91-58-7	
2-Chlorophenol	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	7005-72-3	
Chrysene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	4000	20	07/08/13 00:00	07/09/13 17:47	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	120-83-2	
Diethylphthalate	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	105-67-9	
Dimethylphthalate	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	131-11-3	
Di-n-butylphthalate	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	20	07/08/13 00:00	07/09/13 17:47	534-52-1	
2,4-Dinitrophenol	ND	ug/L	10000	20	07/08/13 00:00	07/09/13 17:47	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	1200	20	07/08/13 00:00	07/09/13 17:47	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	606-20-2	
Di-n-octylphthalate	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	117-81-7	
Fluoranthene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	206-44-0	
Fluorene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	87-68-3	
Hexachlorobenzene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	77-47-4	
Hexachloroethane	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	193-39-5	
Isophorone	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	78-59-1	
Naphthalene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	91-20-3	
Nitrobenzene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	98-95-3	
2-Nitrophenol	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	88-75-5	
4-Nitrophenol	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	86-30-6	
Pentachlorophenol	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	87-86-5	
Phenanthrene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	85-01-8	
Phenol	<b>9800</b>	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	108-95-2	
Pyrene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	20	07/08/13 00:00	07/09/13 17:47	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

Sample: 316-008	Lab ID: 60148306001	Collected: 07/05/13 08:11	Received: 07/06/13 00:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/08/13 00:00	07/09/13 17:47	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/08/13 00:00	07/09/13 17:47	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/08/13 00:00	07/09/13 17:47	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/08/13 00:00	07/09/13 17:47	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/08/13 00:00	07/09/13 17:47	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/08/13 00:00	07/09/13 17:47	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/08/13 14:48	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/08/13 14:48	75-27-4	
Bromoform	ND ug/L		200	200		07/08/13 14:48	75-25-2	
Bromomethane	ND ug/L		1000	200		07/08/13 14:48	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/08/13 14:48	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/08/13 14:48	108-90-7	
Chloroethane	ND ug/L		200	200		07/08/13 14:48	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/08/13 14:48	110-75-8	
Chloroform	ND ug/L		200	200		07/08/13 14:48	67-66-3	
Chloromethane	ND ug/L		200	200		07/08/13 14:48	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/08/13 14:48	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/08/13 14:48	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/08/13 14:48	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/08/13 14:48	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/08/13 14:48	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/08/13 14:48	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/08/13 14:48	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/08/13 14:48	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/08/13 14:48	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/08/13 14:48	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/08/13 14:48	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/08/13 14:48	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/08/13 14:48	100-41-4	
Methylene chloride	ND ug/L		200	200		07/08/13 14:48	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/08/13 14:48	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/08/13 14:48	127-18-4	
Toluene	ND ug/L		200	200		07/08/13 14:48	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/08/13 14:48	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/08/13 14:48	79-00-5	
Trichloroethene	ND ug/L		200	200		07/08/13 14:48	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/08/13 14:48	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/08/13 14:48	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/08/13 14:48	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	101 %		80-120	200		07/08/13 14:48	1868-53-7	D3
4-Bromofluorobenzene (S)	95 %		80-120	200		07/08/13 14:48	460-00-4	
Toluene-d8 (S)	99 %		80-120	200		07/08/13 14:48	2037-26-5	
1,2-Dichloroethane-d4 (S)	104 %		80-120	200		07/08/13 14:48	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

<b>Sample: 316-008</b>		<b>Lab ID: 60148306001</b>	Collected: 07/05/13 08:11	Received: 07/06/13 00:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/08/13 14:48		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>264</b> mg/L		5.0	1		07/08/13 06:56		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>8.5</b> mg/L		5.0	1		07/15/13 07:04		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>1020</b> mg/L		5.0	1		07/09/13 09:28		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.6</b> Std. Units		0.10	1		07/08/13 15:36		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>580</b> mg/L		20.0	200		07/10/13 15:23	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>42500</b> mg/L		5000	500		07/11/13 10:50		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

Sample: TRIP BLANK		Lab ID: 60148306002	Collected: 07/05/13 08:00	Received: 07/06/13 00:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/08/13 12:41	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/08/13 12:41	75-27-4	
Bromoform	ND ug/L		1.0	1		07/08/13 12:41	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/08/13 12:41	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/08/13 12:41	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/08/13 12:41	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/08/13 12:41	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/08/13 12:41	110-75-8	
Chloroform	ND ug/L		1.0	1		07/08/13 12:41	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/08/13 12:41	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/08/13 12:41	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 12:41	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 12:41	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/08/13 12:41	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/08/13 12:41	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/08/13 12:41	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/08/13 12:41	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/08/13 12:41	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/08/13 12:41	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/08/13 12:41	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/08/13 12:41	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/08/13 12:41	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/08/13 12:41	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/08/13 12:41	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/08/13 12:41	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/08/13 12:41	127-18-4	
Toluene	ND ug/L		1.0	1		07/08/13 12:41	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/08/13 12:41	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/08/13 12:41	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/08/13 12:41	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/08/13 12:41	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/08/13 12:41	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/08/13 12:41	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	104 %		80-120	1		07/08/13 12:41	1868-53-7	
4-Bromofluorobenzene (S)	103 %		80-120	1		07/08/13 12:41	460-00-4	
Toluene-d8 (S)	102 %		80-120	1		07/08/13 12:41	2037-26-5	
1,2-Dichloroethane-d4 (S)	89 %		80-120	1		07/08/13 12:41	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/08/13 12:41		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

QC Batch:	MERP/7484	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60148306001		

METHOD BLANK: 1216523 Matrix: Water  
Associated Lab Samples: 60148306001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/08/13 14:30	

LABORATORY CONTROL SAMPLE: 1216524

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216525 1216526

Parameter	Units	60147147001 Result	MS		MSD		% Rec		% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result	% Rec	MSD % Rec					
Mercury	ug/L	ND	5	4.3	5.7	84	112	70-130	29	20	R1	

MATRIX SPIKE SAMPLE: 1216527

Parameter	Units	60148080001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	4.2	84	70-130	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

QC Batch: MERP/7488

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury - Dissolved

Associated Lab Samples: 60148306001

METHOD BLANK: 1217296

Matrix: Water

Associated Lab Samples: 60148306001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/10/13 11:57	

LABORATORY CONTROL SAMPLE: 1217297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.9	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1217298

1217299

Parameter	Units	60148381002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	5	5.5	5.0	111	100	70-130	10	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008  
Pace Project No.: 60148306

QC Batch: MPRP/23394      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60148306001

METHOD BLANK: 1216713      Matrix: Water  
Associated Lab Samples: 60148306001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/10/13 13:11	
Antimony	ug/L	ND	10.0	07/10/13 13:11	
Arsenic	ug/L	ND	10.0	07/10/13 13:11	
Beryllium	ug/L	ND	1.0	07/10/13 13:11	
Cadmium	ug/L	ND	5.0	07/10/13 13:11	
Chromium	ug/L	ND	5.0	07/10/13 13:11	
Cobalt	ug/L	ND	5.0	07/10/13 13:11	
Copper	ug/L	ND	10.0	07/10/13 13:11	
Iron	ug/L	ND	50.0	07/10/13 13:11	
Lead	ug/L	ND	5.0	07/10/13 13:11	
Nickel	ug/L	ND	5.0	07/10/13 13:11	
Selenium	ug/L	ND	15.0	07/10/13 13:11	
Silver	ug/L	ND	7.0	07/10/13 13:11	
Thallium	ug/L	ND	20.0	07/10/13 13:11	
Zinc	ug/L	ND	50.0	07/10/13 13:11	

LABORATORY CONTROL SAMPLE: 1216714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10600	106	85-115	
Antimony	ug/L	1000	1060	106	85-115	
Arsenic	ug/L	1000	989	99	85-115	
Beryllium	ug/L	1000	1000	100	85-115	
Cadmium	ug/L	1000	1020	102	85-115	
Chromium	ug/L	1000	995	100	85-115	
Cobalt	ug/L	1000	1040	104	85-115	
Copper	ug/L	1000	1050	105	85-115	
Iron	ug/L	10000	9440	94	85-115	
Lead	ug/L	1000	1040	104	85-115	
Nickel	ug/L	1000	1050	105	85-115	
Selenium	ug/L	1000	1050	105	85-115	
Silver	ug/L	500	503	101	85-115	
Thallium	ug/L	1000	1070	107	85-115	
Zinc	ug/L	1000	1000	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216715      1216716

Parameter	Units	60148266001		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result						
Aluminum	ug/L	14700	10000	10000	30900	31300	162	166	70-130	1	8	M1	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

Parameter	Units	60148266001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max	RPD	Qual
		Result	Conc.	Spike	Conc.	Result	Conc.	% Rec	% Rec								
Antimony	ug/L	69.0	1000	1000	1000	864	860	79	79	70-130	0	7					
Arsenic	ug/L	714	1000	1000	1000	1880	1860	117	115	70-130	1	10					
Beryllium	ug/L	ND	1000	1000	1000	952	947	95	95	70-130	1	7					
Cadmium	ug/L	ND	1000	1000	1000	1070	1060	106	105	70-130	1	10					
Chromium	ug/L	297	1000	1000	1000	1240	1240	94	94	70-130	0	10					
Cobalt	ug/L	71.3	1000	1000	1000	1000	990	93	92	70-130	1	6					
Copper	ug/L	ND	1000	1000	1000	1070	1060	106	104	70-130	1	11					
Iron	ug/L	1110000	10000	10000	10000	1130000	1140000	245	370	70-130	1	10	M1				
Lead	ug/L	195	1000	1000	1000	1080	1090	89	89	70-130	1	10					
Nickel	ug/L	186	1000	1000	1000	1110	1110	93	92	70-130	1	10					
Selenium	ug/L	112	1000	1000	1000	1320	1320	121	121	70-130	0	10					
Silver	ug/L	ND	500	500	500	51.6	40.2	7	4	70-130	25	10	M1,R1				
Thallium	ug/L	ND	1000	1000	1000	738	708	74	71	70-130	4	6					
Zinc	ug/L	16800	1000	1000	1000	18100	18400	130	156	70-130	1	11	M1				

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

QC Batch: MPRP/23393

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Dissolved

Associated Lab Samples: 60148306001

METHOD BLANK: 1216706

Matrix: Water

Associated Lab Samples: 60148306001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/10/13 11:02	
Antimony, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Arsenic, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Beryllium, Dissolved	ug/L	ND	1.0	07/10/13 11:02	
Cadmium, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Chromium, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Cobalt, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Copper, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Iron, Dissolved	ug/L	ND	50.0	07/10/13 11:02	
Lead, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Nickel, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Selenium, Dissolved	ug/L	ND	15.0	07/10/13 11:02	
Silver, Dissolved	ug/L	ND	7.0	07/10/13 11:02	
Thallium, Dissolved	ug/L	ND	20.0	07/10/13 11:02	
Zinc, Dissolved	ug/L	ND	50.0	07/10/13 11:02	

LABORATORY CONTROL SAMPLE: 1216707

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10300	103	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	982	98	85-115	
Beryllium, Dissolved	ug/L	1000	1020	102	85-115	
Cadmium, Dissolved	ug/L	1000	1020	102	85-115	
Chromium, Dissolved	ug/L	1000	980	98	85-115	
Cobalt, Dissolved	ug/L	1000	1040	104	85-115	
Copper, Dissolved	ug/L	1000	998	100	85-115	
Iron, Dissolved	ug/L	10000	9940	99	85-115	
Lead, Dissolved	ug/L	1000	1060	106	85-115	
Nickel, Dissolved	ug/L	1000	1040	104	85-115	
Selenium, Dissolved	ug/L	1000	1010	101	85-115	
Silver, Dissolved	ug/L	500	509	102	85-115	
Thallium, Dissolved	ug/L	1000	1070	107	85-115	
Zinc, Dissolved	ug/L	1000	983	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216708

1216709

Parameter	Units	60148335001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	3650	10000	10000	13700	13700	101	100	70-130	0	8		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

Parameter	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216708			1216709			MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
	60148335001 Units	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					
Antimony, Dissolved	ug/L	37.6	1000	1000	960	968	92	93	70-130	1	7
Arsenic, Dissolved	ug/L	455	1000	1000	1500	1480	104	103	70-130	1	10
Beryllium, Dissolved	ug/L	ND	1000	1000	901	909	90	91	70-130	1	7
Cadmium, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	10
Chromium, Dissolved	ug/L	198	1000	1000	1090	1090	89	89	70-130	0	10
Cobalt, Dissolved	ug/L	52.0	1000	1000	976	979	92	93	70-130	0	6
Copper, Dissolved	ug/L	ND	1000	1000	1000	1020	99	100	70-130	1	11
Iron, Dissolved	ug/L	524000	10000	10000	555000	538000	306	136	70-130	3	10 M1
Lead, Dissolved	ug/L	67.8	1000	1000	931	943	86	88	70-130	1	10
Nickel, Dissolved	ug/L	122	1000	1000	1040	1050	92	93	70-130	0	10
Selenium, Dissolved	ug/L	ND	1000	1000	1060	1080	106	108	70-130	2	10
Silver, Dissolved	ug/L	ND	500	500	17.3	18.4	3	4	70-130	6	10 M1
Thallium, Dissolved	ug/L	ND	1000	1000	714	723	71	72	70-130	1	6
Zinc, Dissolved	ug/L	13300	1000	1000	15200	14400	182	105	70-130	5	11 M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

QC Batch: MSV/54776 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148306001, 60148306002

METHOD BLANK: 1216492 Matrix: Water

Associated Lab Samples: 60148306001, 60148306002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1-Dichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,1-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichloroethane	ug/L	ND	1.0	07/08/13 10:47	
1,2-Dichloropropane	ug/L	ND	1.0	07/08/13 10:47	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/08/13 10:47	
Benzene	ug/L	ND	1.0	07/08/13 10:47	
Bromodichloromethane	ug/L	ND	1.0	07/08/13 10:47	
Bromoform	ug/L	ND	1.0	07/08/13 10:47	
Bromomethane	ug/L	ND	5.0	07/08/13 10:47	
Carbon tetrachloride	ug/L	ND	1.0	07/08/13 10:47	
Chlorobenzene	ug/L	ND	1.0	07/08/13 10:47	
Chloroethane	ug/L	ND	1.0	07/08/13 10:47	
Chloroform	ug/L	ND	1.0	07/08/13 10:47	
Chloromethane	ug/L	ND	1.0	07/08/13 10:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/08/13 10:47	
Dibromochloromethane	ug/L	ND	1.0	07/08/13 10:47	
Ethylbenzene	ug/L	ND	1.0	07/08/13 10:47	
Methylene chloride	ug/L	ND	1.0	07/08/13 10:47	
Tetrachloroethene	ug/L	ND	1.0	07/08/13 10:47	
Toluene	ug/L	ND	1.0	07/08/13 10:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/08/13 10:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/08/13 10:47	
Trichloroethene	ug/L	ND	1.0	07/08/13 10:47	
Trichlorofluoromethane	ug/L	ND	1.0	07/08/13 10:47	
Vinyl chloride	ug/L	ND	1.0	07/08/13 10:47	
Xylene (Total)	ug/L	ND	3.0	07/08/13 10:47	
1,2-Dichloroethane-d4 (S)	%	105	80-120	07/08/13 10:47	
4-Bromofluorobenzene (S)	%	97	80-120	07/08/13 10:47	
Dibromofluoromethane (S)	%	102	80-120	07/08/13 10:47	
Toluene-d8 (S)	%	100	80-120	07/08/13 10:47	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

LABORATORY CONTROL SAMPLE: 1216493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.8	109	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.4	97	59-138	
1,1,2-Trichloroethane	ug/L	20	20.2	101	69-127	
1,1-Dichloroethane	ug/L	20	19.4	97	69-126	
1,1-Dichloroethene	ug/L	20	20.5	102	65-153	
1,2-Dichlorobenzene	ug/L	20	19.2	96	66-126	
1,2-Dichloroethane	ug/L	20	21.1	106	71-129	
1,2-Dichloropropane	ug/L	20	20.4	102	66-140	
1,3-Dichlorobenzene	ug/L	20	19.4	97	63-127	
1,4-Dichlorobenzene	ug/L	20	19.9	99	68-124	
2-Chloroethylvinyl ether	ug/L	20	14.9	75	33-159	
Benzene	ug/L	20	19.5	98	73-129	
Bromodichloromethane	ug/L	20	19.9	99	63-129	
Bromoform	ug/L	20	20.5	103	52-123	
Bromomethane	ug/L	20	23.1	115	10-160	
Carbon tetrachloride	ug/L	20	21.8	109	70-140	
Chlorobenzene	ug/L	20	19.7	98	68-127	
Chloroethane	ug/L	20	22.0	110	42-160	
Chloroform	ug/L	20	20.1	100	60-120	
Chloromethane	ug/L	20	18.2	91	10-160	
cis-1,2-Dichloroethene	ug/L	20	21.1	106	70-125	
cis-1,3-Dichloropropene	ug/L	20	20.0	100	66-132	
Dibromochloromethane	ug/L	20	21.7	108	63-134	
Ethylbenzene	ug/L	20	19.8	99	66-133	
Methylene chloride	ug/L	20	17.3	86	56-135	
Tetrachloroethene	ug/L	20	20.6	103	64-143	
Toluene	ug/L	20	19.0	95	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.4	102	67-149	
trans-1,3-Dichloropropene	ug/L	20	21.8	109	66-138	
Trichloroethene	ug/L	20	18.3	91	71-130	
Trichlorofluoromethane	ug/L	20	19.3	96	58-158	
Vinyl chloride	ug/L	20	18.3	92	41-160	
Xylene (Total)	ug/L	60	57.7	96	67-130	
1,2-Dichloroethane-d4 (S)	%			109	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			106	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1216494

Parameter	Units	60148136001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3960	99	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3940	99	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3850	96	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3620	91	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3870	97	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3640	91	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

MATRIX SPIKE SAMPLE:		1216494		60148136001		Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits		
1,2-Dichloroethane	ug/L	ND	4000	3980	100	49-155				
1,2-Dichloropropane	ug/L	ND	4000	3960	99	12-160				
1,3-Dichlorobenzene	ug/L	ND	4000	3610	90	59-146				
1,4-Dichlorobenzene	ug/L	ND	4000	3670	92	18-147				
2-Chloroethylvinyl ether	ug/L	ND	4000	4100	102	10-160				
Benzene	ug/L	ND	4000	3710	93	37-151				
Bromodichloromethane	ug/L	ND	4000	3610	90	35-155				
Bromoform	ug/L	ND	4000	4070	102	45-133				
Bromomethane	ug/L	ND	4000	3310	83	10-160				
Carbon tetrachloride	ug/L	ND	4000	4180	104	70-140				
Chlorobenzene	ug/L	ND	4000	3890	97	37-153				
Chloroethane	ug/L	ND	4000	3940	98	14-160				
Chloroform	ug/L	ND	4000	3910	98	51-138				
Chloromethane	ug/L	ND	4000	3110	78	10-160				
cis-1,2-Dichloroethene	ug/L	ND	4000	4100	103	19-160				
cis-1,3-Dichloropropene	ug/L	ND	4000	3850	96	10-160				
Dibromochloromethane	ug/L	ND	4000	4190	105	53-149				
Ethylbenzene	ug/L	ND	4000	3820	95	37-154				
Methylene chloride	ug/L	ND	4000	3330	82	15-156				
Tetrachloroethene	ug/L	ND	4000	3910	98	64-148				
Toluene	ug/L	ND	4000	3700	92	47-150				
trans-1,2-Dichloroethene	ug/L	ND	4000	3780	94	54-156				
trans-1,3-Dichloropropene	ug/L	ND	4000	4270	107	17-160				
Trichloroethene	ug/L	ND	4000	3470	87	71-157				
Trichlorofluoromethane	ug/L	ND	4000	3520	88	17-160				
Vinyl chloride	ug/L	ND	4000	3350	84	10-160				
Xylene (Total)	ug/L	ND	12000	11400	95	12-153				
1,2-Dichloroethane-d4 (S)	%				109	80-120				
4-Bromofluorobenzene (S)	%				99	80-120				
Dibromofluoromethane (S)	%				100	80-120				
Toluene-d8 (S)	%				98	80-120				
Preservation pH			7.0		7.0					

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

QC Batch: OEXT/39174

Analysis Method: EPA 625

QC Batch Method: EPA 625

Analysis Description: 625 MSS

Associated Lab Samples: 60148306001

METHOD BLANK: 1216432

Matrix: Water

Associated Lab Samples: 60148306001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/09/13 16:01	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/09/13 16:01	
2,4-Dichlorophenol	ug/L	ND	5.0	07/09/13 16:01	
2,4-Dimethylphenol	ug/L	ND	5.0	07/09/13 16:01	
2,4-Dinitrophenol	ug/L	ND	50.0	07/09/13 16:01	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/09/13 16:01	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/09/13 16:01	
2-Chloronaphthalene	ug/L	ND	5.0	07/09/13 16:01	
2-Chlorophenol	ug/L	ND	5.0	07/09/13 16:01	
2-Nitrophenol	ug/L	ND	5.0	07/09/13 16:01	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/09/13 16:01	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/09/13 16:01	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/09/13 16:01	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/09/13 16:01	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/09/13 16:01	
4-Nitrophenol	ug/L	ND	5.0	07/09/13 16:01	
Acenaphthene	ug/L	ND	5.0	07/09/13 16:01	
Acenaphthylene	ug/L	ND	5.0	07/09/13 16:01	
Anthracene	ug/L	ND	5.0	07/09/13 16:01	
Benzidine	ug/L	ND	50.0	07/09/13 16:01	
Benzo(a)anthracene	ug/L	ND	5.0	07/09/13 16:01	
Benzo(a)pyrene	ug/L	ND	5.0	07/09/13 16:01	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/09/13 16:01	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/09/13 16:01	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/09/13 16:01	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/09/13 16:01	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/09/13 16:01	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/09/13 16:01	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/09/13 16:01	
Butylbenzylphthalate	ug/L	ND	5.0	07/09/13 16:01	
Chrysene	ug/L	ND	5.0	07/09/13 16:01	
Di-n-butylphthalate	ug/L	ND	5.0	07/09/13 16:01	
Di-n-octylphthalate	ug/L	ND	5.0	07/09/13 16:01	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/09/13 16:01	
Diethylphthalate	ug/L	ND	5.0	07/09/13 16:01	
Dimethylphthalate	ug/L	ND	5.0	07/09/13 16:01	
Fluoranthene	ug/L	ND	5.0	07/09/13 16:01	
Fluorene	ug/L	ND	5.0	07/09/13 16:01	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/09/13 16:01	
Hexachlorobenzene	ug/L	ND	5.0	07/09/13 16:01	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/09/13 16:01	
Hexachloroethane	ug/L	ND	5.0	07/09/13 16:01	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/09/13 16:01	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

METHOD BLANK: 1216432

Matrix: Water

Associated Lab Samples: 60148306001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/09/13 16:01	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/09/13 16:01	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/09/13 16:01	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/09/13 16:01	
Naphthalene	ug/L	ND	5.0	07/09/13 16:01	
Nitrobenzene	ug/L	ND	5.0	07/09/13 16:01	
Pentachlorophenol	ug/L	ND	5.0	07/09/13 16:01	
Phenanthrene	ug/L	ND	5.0	07/09/13 16:01	
Phenol	ug/L	ND	5.0	07/09/13 16:01	
Pyrene	ug/L	ND	5.0	07/09/13 16:01	
2,4,6-Tribromophenol (S)	%	80	39-119	07/09/13 16:01	
2-Fluorobiphenyl (S)	%	80	36-120	07/09/13 16:01	
2-Fluorophenol (S)	%	46	18-120	07/09/13 16:01	
Nitrobenzene-d5 (S)	%	79	32-120	07/09/13 16:01	
Phenol-d6 (S)	%	31	12-120	07/09/13 16:01	
Terphenyl-d14 (S)	%	82	44-120	07/09/13 16:01	

LABORATORY CONTROL SAMPLE: 1216433

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	35.3	71	44-120	
2,4,6-Trichlorophenol	ug/L	50	36.1	72	48-120	
2,4-Dichlorophenol	ug/L	50	35.7	71	48-120	
2,4-Dimethylphenol	ug/L	50	31.2	62	37-119	
2,4-Dinitrophenol	ug/L	50	31.3J	63	15-153	
2,4-Dinitrotoluene	ug/L	50	40.5	81	54-120	
2,6-Dinitrotoluene	ug/L	50	39.6	79	52-120	
2-Chloronaphthalene	ug/L	50	37.3	75	60-118	
2-Chlorophenol	ug/L	50	34.6	69	44-120	
2-Nitrophenol	ug/L	50	36.5	73	43-120	
3,3'-Dichlorobenzidine	ug/L	50	37.7	75	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	38.8	78	31-147	
4-Bromophenylphenyl ether	ug/L	50	39.9	80	53-120	
4-Chloro-3-methylphenol	ug/L	50	36.7	73	50-120	
4-Chlorophenylphenyl ether	ug/L	50	38.3	77	54-120	
4-Nitrophenol	ug/L	50	15.9	32	10-120	
Acenaphthene	ug/L	50	38.0	76	51-120	
Acenaphthylene	ug/L	50	37.7	75	51-120	
Anthracene	ug/L	50	39.6	79	54-120	
Benzidine	ug/L	50	18.2J	36	1-124	
Benzo(a)anthracene	ug/L	50	41.6	83	54-120	
Benzo(a)pyrene	ug/L	50	39.7	79	54-120	
Benzo(b)fluoranthene	ug/L	50	41.9	84	57-120	
Benzo(g,h,i)perylene	ug/L	50	40.7	81	54-120	
Benzo(k)fluoranthene	ug/L	50	39.8	80	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

LABORATORY CONTROL SAMPLE: 1216433

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	36.8	74	51-120	
bis(2-Chloroethyl) ether	ug/L	50	39.7	79	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	39.9	80	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	41.2	82	51-126	
Butylbenzylphthalate	ug/L	50	40.7	81	45-129	
Chrysene	ug/L	50	40.6	81	54-120	
Di-n-butylphthalate	ug/L	50	41.7	83	57-118	
Di-n-octylphthalate	ug/L	50	41.1	82	48-130	
Dibenz(a,h)anthracene	ug/L	50	40.5	81	56-119	
Diethylphthalate	ug/L	50	40.6	81	55-114	
Dimethylphthalate	ug/L	50	39.2	78	54-112	
Fluoranthene	ug/L	50	40.7	81	56-120	
Fluorene	ug/L	50	38.7	77	59-120	
Hexachloro-1,3-butadiene	ug/L	50	35.0	70	41-116	
Hexachlorobenzene	ug/L	50	39.6	79	53-120	
Hexachlorocyclopentadiene	ug/L	100	50.4	50	31-120	
Hexachloroethane	ug/L	50	35.6	71	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	40.6	81	55-120	
Isophorone	ug/L	50	38.0	76	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	40.8	82	47-120	
N-Nitrosodimethylamine	ug/L	50	25.3	51	28-120	
N-Nitrosodiphenylamine	ug/L	50	39.6	79	53-120	
Naphthalene	ug/L	50	36.9	74	48-120	
Nitrobenzene	ug/L	50	38.3	77	47-120	
Pentachlorophenol	ug/L	50	36.9	74	43-127	
Phenanthrene	ug/L	50	39.7	79	55-120	
Phenol	ug/L	50	14.7	29	15-112	
Pyrene	ug/L	50	40.0	80	55-115	
2,4,6-Tribromophenol (S)	%			81	39-119	
2-Fluorobiphenyl (S)	%			78	36-120	
2-Fluorophenol (S)	%			43	18-120	
Nitrobenzene-d5 (S)	%			76	32-120	
Phenol-d6 (S)	%			29	12-120	
Terphenyl-d14 (S)	%			85	44-120	

MATRIX SPIKE SAMPLE: 1216434

Parameter	Units	60148128001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	34.1	68	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	39.5	79	37-121	
2,4-Dichlorophenol	ug/L	ND	50	36.1	72	39-120	
2,4-Dimethylphenol	ug/L	ND	50	33.6	67	32-119	
2,4-Dinitrophenol	ug/L	ND	50	21.2J	42	20-157	
2,4-Dinitrotoluene	ug/L	ND	50	39.4	79	39-130	
2,6-Dinitrotoluene	ug/L	ND	50	38.8	78	50-128	
2-Chloronaphthalene	ug/L	ND	50	37.1	74	60-118	
2-Chlorophenol	ug/L	ND	50	30.2	60	35-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

MATRIX SPIKE SAMPLE:		1216434						
Parameter	Units	60148128001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
2-Nitrophenol	ug/L	ND	50	35.9	72	29-123		
3,3'-Dichlorobenzidine	ug/L	ND	50	8J	16	10-160		
4,6-Dinitro-2-methylphenol	ug/L	ND	50	25.1	50	27-146		
4-Bromophenylphenyl ether	ug/L	ND	50	39.7	79	53-124		
4-Chloro-3-methylphenol	ug/L	ND	50	37.2	74	33-123		
4-Chlorophenylphenyl ether	ug/L	ND	50	39.1	78	34-125		
4-Nitrophenol	ug/L	ND	50	17.3	35	10-120		
Acenaphthene	ug/L	ND	50	38.3	77	47-120		
Acenaphthylene	ug/L	ND	50	37.2	74	33-120		
Anthracene	ug/L	ND	50	39.2	78	36-121		
Benzidine	ug/L	ND	50	23.7J	47	1-120		
Benzo(a)anthracene	ug/L	ND	50	40.6	81	37-127		
Benzo(a)pyrene	ug/L	ND	50	38.6	77	34-125		
Benzo(b)fluoranthene	ug/L	ND	50	38.8	78	37-131		
Benzo(g,h,i)perylene	ug/L	ND	50	39.3	79	35-128		
Benzo(k)fluoranthene	ug/L	ND	50	41.6	83	34-130		
bis(2-Chloroethoxy)methane	ug/L	ND	50	33.4	67	33-120		
bis(2-Chloroethyl) ether	ug/L	ND	50	33.5	67	32-120		
bis(2-Chloroisopropyl) ether	ug/L	ND	50	33.2	66	36-120		
bis(2-Ethylhexyl)phthalate	ug/L	ND	50	42.5	82	38-137		
Butylbenzylphthalate	ug/L	ND	50	41.3	83	43-136		
Chrysene	ug/L	ND	50	40.9	82	36-127		
Di-n-butylphthalate	ug/L	ND	50	41.0	82	38-118		
Di-n-octylphthalate	ug/L	ND	50	42.9	86	40-140		
Dibenz(a,h)anthracene	ug/L	ND	50	39.1	78	35-131		
Diethylphthalate	ug/L	ND	50	39.5	79	33-114		
Dimethylphthalate	ug/L	ND	50	37.6	75	34-112		
Fluoranthene	ug/L	ND	50	39.5	79	38-125		
Fluorene	ug/L	ND	50	38.1	76	59-121		
Hexachloro-1,3-butadiene	ug/L	ND	50	33.1	66	27-116		
Hexachlorobenzene	ug/L	ND	50	40.9	82	34-124		
Hexachlorocyclopentadiene	ug/L	ND	100	44.3	44	11-120		
Hexachloroethane	ug/L	ND	50	30.4	61	40-113		
Indeno(1,2,3-cd)pyrene	ug/L	ND	50	38.4	77	38-127		
Isophorone	ug/L	ND	50	35.1	70	31-120		
N-Nitroso-di-n-propylamine	ug/L	ND	50	33.4	67	30-120		
N-Nitrosodimethylamine	ug/L	ND	50	22.0	44	29-120		
N-Nitrosodiphenylamine	ug/L	ND	50	38.9	78	10-139		
Naphthalene	ug/L	ND	50	34.3	69	32-120		
Nitrobenzene	ug/L	ND	50	40.0	80	35-128		
Pentachlorophenol	ug/L	ND	50	42.5	85	38-133		
Phenanthrene	ug/L	ND	50	39.9	80	54-120		
Phenol	ug/L	ND	50	12.7	25	13-112		
Pyrene	ug/L	ND	50	39.6	79	52-115		
2,4,6-Tribromophenol (S)	%				81	39-119		
2-Fluorobiphenyl (S)	%				75	36-120		
2-Fluorophenol (S)	%				33	18-120		
Nitrobenzene-d5 (S)	%				68	32-120		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

MATRIX SPIKE SAMPLE:		1216434					
Parameter	Units	60148128001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenol-d6 (S)	%				24	12-120	
Terphenyl-d14 (S)	%				82	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

QC Batch:	WET/42229	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148306001		

METHOD BLANK: 1216414 Matrix: Water

Associated Lab Samples: 60148306001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/08/13 06:56	

LABORATORY CONTROL SAMPLE: 1216415

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	38.9	97	78-114	

MATRIX SPIKE SAMPLE: 1216418

Parameter	Units	60148229001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	44	44.1	98	78-114	

SAMPLE DUPLICATE: 1216417

Parameter	Units	60148120003 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

QC Batch:	WET/42340	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60148306001		

METHOD BLANK: 1219911 Matrix: Water

Associated Lab Samples: 60148306001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/15/13 07:03	

LABORATORY CONTROL SAMPLE: 1219912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.6	108	64-132	

MATRIX SPIKE SAMPLE: 1219916

Parameter	Units	60148121001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.7	26.5	110	64-132	

SAMPLE DUPLICATE: 1219917

Parameter	Units	60148128001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	3.5J		34	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

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QC Batch:	WET/42251	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60148306001		

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METHOD BLANK: 1216872 Matrix: Water

Associated Lab Samples: 60148306001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/09/13 09:27	

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SAMPLE DUPLICATE: 1216873

Parameter	Units	5083229001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	16.0	17.0	6	25	

---

SAMPLE DUPLICATE: 1216874

Parameter	Units	60148344002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	5.0		25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

QC Batch: WET/42241 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148306001

SAMPLE DUPLICATE: 1216623

Parameter	Units	60148306001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.6	5.5	1	5	H6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008  
Pace Project No.: 60148306

QC Batch: WETA/25396 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60148306001

METHOD BLANK: 1217259 Matrix: Water  
Associated Lab Samples: 60148306001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/10/13 14:50	

LABORATORY CONTROL SAMPLE: 1217260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	101	90-110	

MATRIX SPIKE SAMPLE: 1217261

Parameter	Units	60148240006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.8	89	90-110	M1

MATRIX SPIKE SAMPLE: 1217262

Parameter	Units	60148251001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.7	85	90-110	M1

SAMPLE DUPLICATE: 1217263

Parameter	Units	60148253001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	11.4	11.4	0	18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

QC Batch:	WETA/25405	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60148306001		

METHOD BLANK: 1217491 Matrix: Water

Associated Lab Samples: 60148306001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/11/13 10:45	

LABORATORY CONTROL SAMPLE: 1217492

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	53.7	107	90-110	

MATRIX SPIKE SAMPLE: 1217494

Parameter	Units	60148259001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	92.7	50	138	91	90-110	

MATRIX SPIKE SAMPLE: 1217495

Parameter	Units	60148403003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	3320	2500	5750	97	90-110	

SAMPLE DUPLICATE: 1217493

Parameter	Units	60147815002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	55.2	54.6	1	25	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-008

Pace Project No.: 60148306

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148306001	316-008	EPA 200.7	MPRP/23394	EPA 200.7	ICP/18409
60148306001	316-008	EPA 200.7	MPRP/23393	EPA 200.7	ICP/18407
60148306001	316-008	EPA 245.1	MERP/7484	EPA 245.1	MERC/7440
60148306001	316-008	EPA 245.1	MERP/7488	EPA 245.1	MERC/7445
60148306001	316-008	EPA 625	OEXT/39174	EPA 625	MSSV/12409
60148306001	316-008	EPA 624 Low	MSV/54776		
60148306002	TRIP BLANK	EPA 624 Low	MSV/54776		
60148306001	316-008	EPA 1664A	WET/42229		
60148306001	316-008	EPA 1664A	WET/42340		
60148306001	316-008	SM 2540D	WET/42251		
60148306001	316-008	SM 4500-H+B	WET/42241		
60148306001	316-008	EPA 350.1	WETA/25396		
60148306001	316-008	EPA 410.4	WETA/25405		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148306



Client Name: Barr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PIC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.0

(circle one)

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: PV 7/16/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>PH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>Added 25 ml of H<sub>2</sub>O<sub>2</sub> to BP3M pH 6.0/4.0 Added 2.0 ml of H<sub>2</sub>O<sub>4</sub> to BP3S pH 6.0/1.5</u>
Exceptions: VOA, coliform, TOC, P&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>PV</u> Lot # of added preservative <u>12510</u>
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/18/13

### CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b> Required Client Information:			<b>Section B</b> Required Project Information:			<b>Section C</b> Invoice Information:			Page : 1 Of 1
Company: <b>BARR ENGINEERING</b>			Report To: <b>ED GALBRAITH/BARR</b>			Attention: <b>TABITHA PROVINCE</b>			
Address:			Copy To: <b>SCOTT FEDAK/FEEZOR</b>			Company Name: <b>REPUBLIC SERVICES</b>			
			<b>DANA BAKER/MARGARET TREANOR -BARR</b>			Address: <b>BRIDGETON, MO 63044</b>			<b>Regulatory Agency</b>
Email To:			Purchase Order No. <b>PO 3727110</b>			Pace Quote Reference: <b>130426_7588</b>			
Phone: <b>(816) 285-8410</b> Fax:			Client Project ID: <b>BRIDGETON LF</b>			Pace Project Manager: <b>Brown, Angie</b>			<b>State / Location</b>
Requested Due Date/TAT: <b>10 Day (Default)</b>			Container Order Number:			Pace Profile #: <b>6787 LINE 2</b>			<b>Missouri</b>

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 /, -) Sample IDs must be unique	MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED								SAMPLE TEMP AT COLLECTION	Preservatives										Y/N	Requested Analysis Filtered (Y/N)												Residual Chlorine (Y/N)	001  002			
			START				END					# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test		COD EPA 410	PH SM 4500H+B	LF DIS. METALS 200.7/245	TOTAL METALS 200.7/245	AMMONIA EPA 350	O/G EPA 1664	625 SVOCs	VOCs EPA 624	TSS SM2540D	7PAH/PCDD/F/ST/LS/HS	METALS LIST total & LF Dis:						
			DATE	TIME	DATE	TIME	Unpreserved	H2SO4	HNO3	HCl																								NaOH			Na2S2O3	Methanol	Other
1	3AH117 316-008 1BP2U 1BP355 1BP2N <sup>15</sup>	OT G	7/5/13	0811	---	---	---	---	15	2	1	1	2	3	1B22U	3AH117	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		001
2	TRIP BLANK							2	2																			X										002	
3																																							
4																																							
5																																							
6																																							
7																																							
8																																							
9																																							
10																																							
11																																							
12																																							

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	<i>Bill Abernathy</i>	7/5/13	1614	<i>Bill Abernathy</i>	7/5/13	1614				
SITE ADDRESS: BRIDGETON LF					7/6/13	0030	20	+	-	-
13570 ST. CHARLES ROCK RD										
BRIDGETON MO 63044										

<b>SAMPLER NAME AND SIGNATURE</b>			
PRINT Name of SAMPLER: <b>WILLIAM ABERNATHY</b>			
SIGNATURE of SAMPLER: <i>Bill Abernathy</i>			DATE Signed: <b>7/5/13</b>
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

July 15, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-009  
Pace Project No.: 60148334

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 08, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-009

Pace Project No.: 60148334

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-009  
Pace Project No.: 60148334

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148334001	316-009	Water	07/06/13 19:57	07/08/13 11:50

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-009

Pace Project No.: 60148334

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148334001	316-009	SM 5210B	AJM	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-009

Pace Project No.: 60148334

Sample: 316-009	Lab ID: 60148334001	Collected: 07/06/13 19:57	Received: 07/08/13 11:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>24900</b>	mg/L	2.0	1	07/08/13 15:58	07/13/13 11:50		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148334

QC Batch: WET/42244

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148334001

METHOD BLANK: 1216699

Matrix: Water

Associated Lab Samples: 60148334001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/13/13 11:45	

LABORATORY CONTROL SAMPLE: 1216700

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	195	98	85-115	

SAMPLE DUPLICATE: 1216701

Parameter	Units	60148334001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	24900	26400	6	17	

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## QUALIFIERS

Project: BRIDGETON LF 316-009

Pace Project No.: 60148334

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-009

Pace Project No.: 60148334

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148334001	316-009	SM 5210B	WET/42244	SM 5210B	WET/42334

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148334



Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  XR

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: water Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.0

Date and initials of person examining contents: JMS 7/8/13 1345

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>water</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>JMS</u> Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>covered</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/8/13



July 15, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-009  
Pace Project No.: 60148335

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 08, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148335001	316-009	Water	07/06/13 19:57	07/08/13 11:50
60148335002	TRIP BLANK	Water	07/06/13 08:00	07/08/13 11:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148335001	316-009	EPA 200.7	TDS	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148335002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

Sample: 316-009		Lab ID: 60148335001	Collected: 07/06/13 19:57	Received: 07/08/13 11:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	7480 ug/L		150	2	07/08/13 17:25	07/10/13 13:49	7429-90-5	
Antimony	72.0 ug/L		50.0	5	07/08/13 17:25	07/10/13 13:52	7440-36-0	
Arsenic	604 ug/L		50.0	5	07/08/13 17:25	07/10/13 13:52	7440-38-2	
Beryllium	ND ug/L		2.0	2	07/08/13 17:25	07/10/13 13:49	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/08/13 17:25	07/10/13 13:52	7440-43-9	D3
Chromium	263 ug/L		25.0	5	07/08/13 17:25	07/10/13 13:52	7440-47-3	
Cobalt	61.4 ug/L		25.0	5	07/08/13 17:25	07/10/13 13:52	7440-48-4	
Copper	ND ug/L		50.0	5	07/08/13 17:25	07/10/13 13:52	7440-50-8	D3
Iron	802000 ug/L		100	2	07/08/13 17:25	07/10/13 13:49	7439-89-6	
Lead	167 ug/L		25.0	5	07/08/13 17:25	07/10/13 13:52	7439-92-1	
Nickel	157 ug/L		25.0	5	07/08/13 17:25	07/10/13 13:52	7440-02-0	
Selenium	ND ug/L		75.0	5	07/08/13 17:25	07/10/13 13:52	7782-49-2	D3
Silver	ND ug/L		35.0	5	07/08/13 17:25	07/10/13 13:52	7440-22-4	D3
Thallium	ND ug/L		100	5	07/08/13 17:25	07/10/13 13:52	7440-28-0	D3
Zinc	14600 ug/L		250	5	07/08/13 17:25	07/10/13 13:52	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	3650 ug/L		150	2	07/08/13 17:25	07/10/13 11:22	7429-90-5	
Antimony, Dissolved	37.6 ug/L		20.0	2	07/08/13 17:25	07/10/13 11:22	7440-36-0	
Arsenic, Dissolved	455 ug/L		20.0	2	07/08/13 17:25	07/10/13 11:22	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/08/13 17:25	07/10/13 11:52	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		10.0	2	07/08/13 17:25	07/10/13 11:22	7440-43-9	D3
Chromium, Dissolved	198 ug/L		10.0	2	07/08/13 17:25	07/10/13 11:22	7440-47-3	
Cobalt, Dissolved	52.0 ug/L		10.0	2	07/08/13 17:25	07/10/13 11:22	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/08/13 17:25	07/10/13 11:22	7440-50-8	D3
Iron, Dissolved	524000 ug/L		100	2	07/08/13 17:25	07/10/13 11:22	7439-89-6	M1
Lead, Dissolved	67.8 ug/L		10.0	2	07/08/13 17:25	07/10/13 11:22	7439-92-1	
Nickel, Dissolved	122 ug/L		10.0	2	07/08/13 17:25	07/10/13 11:22	7440-02-0	
Selenium, Dissolved	ND ug/L		30.0	2	07/08/13 17:25	07/10/13 11:22	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/08/13 17:25	07/10/13 11:22	7440-22-4	D3,M1
Thallium, Dissolved	ND ug/L		100	5	07/08/13 17:25	07/10/13 11:52	7440-28-0	D3
Zinc, Dissolved	13300 ug/L		1000	20	07/08/13 17:25	07/10/13 12:22	7440-66-6	M1
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	0.24 ug/L		0.20	1	07/10/13 08:45	07/10/13 12:42	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	07/10/13 08:45	07/10/13 12:11	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	83-32-9	
Acenaphthylene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	208-96-8	
Anthracene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	120-12-7	
Benzidine	ND ug/L		5000	10	07/10/13 00:00	07/11/13 10:09	92-87-5	
Benzo(a)anthracene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	56-55-3	
Benzo(a)pyrene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

Sample: 316-009	Lab ID: 60148335001	Collected: 07/06/13 19:57	Received: 07/08/13 11:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	191-24-2	
Benzo(k)fluoranthene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	101-55-3	
Butylbenzylphthalate	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		600	10	07/10/13 00:00	07/11/13 10:09	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		600	10	07/10/13 00:00	07/11/13 10:09	39638-32-9	
2-Chloronaphthalene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	91-58-7	
2-Chlorophenol	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	7005-72-3	
Chrysene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		2000	10	07/10/13 00:00	07/11/13 10:09	91-94-1	
2,4-Dichlorophenol	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	120-83-2	
Diethylphthalate	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	84-66-2	
2,4-Dimethylphenol	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	105-67-9	
Dimethylphthalate	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	131-11-3	
Di-n-butylphthalate	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		2500	10	07/10/13 00:00	07/11/13 10:09	534-52-1	
2,4-Dinitrophenol	ND ug/L		5000	10	07/10/13 00:00	07/11/13 10:09	51-28-5	
2,4-Dinitrotoluene	ND ug/L		600	10	07/10/13 00:00	07/11/13 10:09	121-14-2	
2,6-Dinitrotoluene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	606-20-2	
Di-n-octylphthalate	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	117-81-7	
Fluoranthene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	206-44-0	
Fluorene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	87-68-3	
Hexachlorobenzene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	77-47-4	
Hexachloroethane	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	193-39-5	
Isophorone	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	78-59-1	
Naphthalene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	91-20-3	
Nitrobenzene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	98-95-3	
2-Nitrophenol	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	88-75-5	
4-Nitrophenol	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	100-02-7	
N-Nitrosodimethylamine	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	86-30-6	
Pentachlorophenol	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	87-86-5	
Phenanthrene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	85-01-8	
Phenol	<b>3690</b> ug/L		500	10	07/10/13 00:00	07/11/13 10:09	108-95-2	
Pyrene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		500	10	07/10/13 00:00	07/11/13 10:09	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

Sample: 316-009		Lab ID: 60148335001	Collected: 07/06/13 19:57	Received: 07/08/13 11:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	10	07/10/13 00:00	07/11/13 10:09	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	10	07/10/13 00:00	07/11/13 10:09	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	10	07/10/13 00:00	07/11/13 10:09	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	10	07/10/13 00:00	07/11/13 10:09	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	10	07/10/13 00:00	07/11/13 10:09	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	10	07/10/13 00:00	07/11/13 10:09	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/09/13 12:32	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/09/13 12:32	75-27-4	
Bromoform	ND ug/L		200	200		07/09/13 12:32	75-25-2	
Bromomethane	ND ug/L		1000	200		07/09/13 12:32	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/09/13 12:32	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/09/13 12:32	108-90-7	
Chloroethane	ND ug/L		200	200		07/09/13 12:32	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/09/13 12:32	110-75-8	
Chloroform	ND ug/L		200	200		07/09/13 12:32	67-66-3	
Chloromethane	ND ug/L		200	200		07/09/13 12:32	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/09/13 12:32	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/09/13 12:32	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/09/13 12:32	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/09/13 12:32	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/09/13 12:32	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/09/13 12:32	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/09/13 12:32	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/09/13 12:32	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/09/13 12:32	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/09/13 12:32	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/09/13 12:32	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/09/13 12:32	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/09/13 12:32	100-41-4	
Methylene chloride	ND ug/L		200	200		07/09/13 12:32	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/09/13 12:32	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/09/13 12:32	127-18-4	
Toluene	ND ug/L		200	200		07/09/13 12:32	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/09/13 12:32	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/09/13 12:32	79-00-5	
Trichloroethene	ND ug/L		200	200		07/09/13 12:32	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/09/13 12:32	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/09/13 12:32	75-01-4	
Xylene (Total)	<b>893</b> ug/L		600	200		07/09/13 12:32	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		80-120	200		07/09/13 12:32	1868-53-7	D3
4-Bromofluorobenzene (S)	97 %		80-120	200		07/09/13 12:32	460-00-4	
Toluene-d8 (S)	99 %		80-120	200		07/09/13 12:32	2037-26-5	
1,2-Dichloroethane-d4 (S)	100 %		80-120	200		07/09/13 12:32	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

<b>Sample: 316-009</b>		<b>Lab ID: 60148335001</b>	Collected: 07/06/13 19:57	Received: 07/08/13 11:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/09/13 12:32		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>356</b>	mg/L	5.0	1		07/10/13 09:33		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>50.1</b>	mg/L	5.0	1		07/15/13 07:04		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>1530</b>	mg/L	5.0	1		07/09/13 09:28		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.6</b>	Std. Units	0.10	1		07/09/13 14:54		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>694</b>	mg/L	20.0	200		07/10/13 15:24	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>52100</b>	mg/L	5000	500		07/11/13 10:51		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

Sample: TRIP BLANK	Lab ID: 60148335002	Collected: 07/06/13 08:00	Received: 07/08/13 11:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/09/13 13:15	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/09/13 13:15	75-27-4	
Bromoform	ND ug/L		1.0	1		07/09/13 13:15	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/09/13 13:15	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/09/13 13:15	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/09/13 13:15	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/09/13 13:15	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/09/13 13:15	110-75-8	
Chloroform	ND ug/L		1.0	1		07/09/13 13:15	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/09/13 13:15	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/09/13 13:15	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/09/13 13:15	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/09/13 13:15	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/09/13 13:15	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/09/13 13:15	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/09/13 13:15	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/09/13 13:15	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/09/13 13:15	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/09/13 13:15	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/09/13 13:15	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/09/13 13:15	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/09/13 13:15	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/09/13 13:15	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/09/13 13:15	75-09-2	
1,1,1,2-Tetrachloroethane	ND ug/L		1.0	1		07/09/13 13:15	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/09/13 13:15	127-18-4	
Toluene	ND ug/L		1.0	1		07/09/13 13:15	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/09/13 13:15	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/09/13 13:15	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/09/13 13:15	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/09/13 13:15	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/09/13 13:15	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/09/13 13:15	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		80-120	1		07/09/13 13:15	1868-53-7	
4-Bromofluorobenzene (S)	97 %		80-120	1		07/09/13 13:15	460-00-4	
Toluene-d8 (S)	99 %		80-120	1		07/09/13 13:15	2037-26-5	
1,2-Dichloroethane-d4 (S)	102 %		80-120	1		07/09/13 13:15	17060-07-0	
Preservation pH	7.0		1.0	1		07/09/13 13:15		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

QC Batch:	MERP/7489	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60148335001		

METHOD BLANK: 1217301 Matrix: Water

Associated Lab Samples: 60148335001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/10/13 12:37	

LABORATORY CONTROL SAMPLE: 1217302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1217303 1217304

Parameter	Units	60148381002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Mercury	ug/L	ND	5	5	5	5.0	5.2	100	104	70-130	4	20

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

QC Batch:	MERP/7488	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60148335001		

METHOD BLANK: 1217296 Matrix: Water

Associated Lab Samples: 60148335001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/10/13 11:57	

LABORATORY CONTROL SAMPLE: 1217297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.9	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1217298 1217299

Parameter	Units	60148381002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	5	5.5	5.0	111	100	70-130	10	20	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

QC Batch: MPRP/23394

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Total

Associated Lab Samples: 60148335001

METHOD BLANK: 1216713

Matrix: Water

Associated Lab Samples: 60148335001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/10/13 13:11	
Antimony	ug/L	ND	10.0	07/10/13 13:11	
Arsenic	ug/L	ND	10.0	07/10/13 13:11	
Beryllium	ug/L	ND	1.0	07/10/13 13:11	
Cadmium	ug/L	ND	5.0	07/10/13 13:11	
Chromium	ug/L	ND	5.0	07/10/13 13:11	
Cobalt	ug/L	ND	5.0	07/10/13 13:11	
Copper	ug/L	ND	10.0	07/10/13 13:11	
Iron	ug/L	ND	50.0	07/10/13 13:11	
Lead	ug/L	ND	5.0	07/10/13 13:11	
Nickel	ug/L	ND	5.0	07/10/13 13:11	
Selenium	ug/L	ND	15.0	07/10/13 13:11	
Silver	ug/L	ND	7.0	07/10/13 13:11	
Thallium	ug/L	ND	20.0	07/10/13 13:11	
Zinc	ug/L	ND	50.0	07/10/13 13:11	

LABORATORY CONTROL SAMPLE: 1216714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10600	106	85-115	
Antimony	ug/L	1000	1060	106	85-115	
Arsenic	ug/L	1000	989	99	85-115	
Beryllium	ug/L	1000	1000	100	85-115	
Cadmium	ug/L	1000	1020	102	85-115	
Chromium	ug/L	1000	995	100	85-115	
Cobalt	ug/L	1000	1040	104	85-115	
Copper	ug/L	1000	1050	105	85-115	
Iron	ug/L	10000	9440	94	85-115	
Lead	ug/L	1000	1040	104	85-115	
Nickel	ug/L	1000	1050	105	85-115	
Selenium	ug/L	1000	1050	105	85-115	
Silver	ug/L	500	503	101	85-115	
Thallium	ug/L	1000	1070	107	85-115	
Zinc	ug/L	1000	1000	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216715

1216716

Parameter	Units	60148266001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum	ug/L	14700	10000	10000	10000	30900	31300	162	166	70-130	1	8 M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

Parameter	Units	1216715		1216716		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		60148266001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result							
Antimony	ug/L	69.0	1000	1000	864	860	79	79	70-130	0	7	
Arsenic	ug/L	714	1000	1000	1880	1860	117	115	70-130	1	10	
Beryllium	ug/L	ND	1000	1000	952	947	95	95	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1070	1060	106	105	70-130	1	10	
Chromium	ug/L	297	1000	1000	1240	1240	94	94	70-130	0	10	
Cobalt	ug/L	71.3	1000	1000	1000	990	93	92	70-130	1	6	
Copper	ug/L	ND	1000	1000	1070	1060	106	104	70-130	1	11	
Iron	ug/L	1110000	10000	10000	1130000	1140000	245	370	70-130	1	10	M1
Lead	ug/L	195	1000	1000	1080	1090	89	89	70-130	1	10	
Nickel	ug/L	186	1000	1000	1110	1110	93	92	70-130	1	10	
Selenium	ug/L	112	1000	1000	1320	1320	121	121	70-130	0	10	
Silver	ug/L	ND	500	500	51.6	40.2	7	4	70-130	25	10	M1,R1
Thallium	ug/L	ND	1000	1000	738	708	74	71	70-130	4	6	
Zinc	ug/L	16800	1000	1000	18100	18400	130	156	70-130	1	11	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009  
Pace Project No.: 60148335

QC Batch: MPRP/23393      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60148335001

METHOD BLANK: 1216706      Matrix: Water  
Associated Lab Samples: 60148335001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/10/13 11:02	
Antimony, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Arsenic, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Beryllium, Dissolved	ug/L	ND	1.0	07/10/13 11:02	
Cadmium, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Chromium, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Cobalt, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Copper, Dissolved	ug/L	ND	10.0	07/10/13 11:02	
Iron, Dissolved	ug/L	ND	50.0	07/10/13 11:02	
Lead, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Nickel, Dissolved	ug/L	ND	5.0	07/10/13 11:02	
Selenium, Dissolved	ug/L	ND	15.0	07/10/13 11:02	
Silver, Dissolved	ug/L	ND	7.0	07/10/13 11:02	
Thallium, Dissolved	ug/L	ND	20.0	07/10/13 11:02	
Zinc, Dissolved	ug/L	ND	50.0	07/10/13 11:02	

LABORATORY CONTROL SAMPLE: 1216707

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10300	103	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	982	98	85-115	
Beryllium, Dissolved	ug/L	1000	1020	102	85-115	
Cadmium, Dissolved	ug/L	1000	1020	102	85-115	
Chromium, Dissolved	ug/L	1000	980	98	85-115	
Cobalt, Dissolved	ug/L	1000	1040	104	85-115	
Copper, Dissolved	ug/L	1000	998	100	85-115	
Iron, Dissolved	ug/L	10000	9940	99	85-115	
Lead, Dissolved	ug/L	1000	1060	106	85-115	
Nickel, Dissolved	ug/L	1000	1040	104	85-115	
Selenium, Dissolved	ug/L	1000	1010	101	85-115	
Silver, Dissolved	ug/L	500	509	102	85-115	
Thallium, Dissolved	ug/L	1000	1070	107	85-115	
Zinc, Dissolved	ug/L	1000	983	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216708      1216709

Parameter	Units	60148335001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Aluminum, Dissolved	ug/L	3650	10000	10000	13700	13700	101	100	70-130	0	8		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

Parameter	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1216708			1216709			MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
	Units	60148335001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Antimony, Dissolved	ug/L	37.6	1000	1000	960	968	92	93	70-130	1	7
Arsenic, Dissolved	ug/L	455	1000	1000	1500	1480	104	103	70-130	1	10
Beryllium, Dissolved	ug/L	ND	1000	1000	901	909	90	91	70-130	1	7
Cadmium, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	10
Chromium, Dissolved	ug/L	198	1000	1000	1090	1090	89	89	70-130	0	10
Cobalt, Dissolved	ug/L	52.0	1000	1000	976	979	92	93	70-130	0	6
Copper, Dissolved	ug/L	ND	1000	1000	1000	1020	99	100	70-130	1	11
Iron, Dissolved	ug/L	524000	10000	10000	555000	538000	306	136	70-130	3	10 M1
Lead, Dissolved	ug/L	67.8	1000	1000	931	943	86	88	70-130	1	10
Nickel, Dissolved	ug/L	122	1000	1000	1040	1050	92	93	70-130	0	10
Selenium, Dissolved	ug/L	ND	1000	1000	1060	1080	106	108	70-130	2	10
Silver, Dissolved	ug/L	ND	500	500	17.3	18.4	3	4	70-130	6	10 M1
Thallium, Dissolved	ug/L	ND	1000	1000	714	723	71	72	70-130	1	6
Zinc, Dissolved	ug/L	13300	1000	1000	15200	14400	182	105	70-130	5	11 M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

QC Batch: MSV/54816 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148335001, 60148335002

METHOD BLANK: 1216951 Matrix: Water

Associated Lab Samples: 60148335001, 60148335002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/09/13 11:07	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/09/13 11:07	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/09/13 11:07	
1,1-Dichloroethane	ug/L	ND	1.0	07/09/13 11:07	
1,1-Dichloroethene	ug/L	ND	1.0	07/09/13 11:07	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/09/13 11:07	
1,2-Dichloroethane	ug/L	ND	1.0	07/09/13 11:07	
1,2-Dichloropropane	ug/L	ND	1.0	07/09/13 11:07	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/09/13 11:07	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/09/13 11:07	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/09/13 11:07	
Benzene	ug/L	ND	1.0	07/09/13 11:07	
Bromodichloromethane	ug/L	ND	1.0	07/09/13 11:07	
Bromoform	ug/L	ND	1.0	07/09/13 11:07	
Bromomethane	ug/L	ND	5.0	07/09/13 11:07	
Carbon tetrachloride	ug/L	ND	1.0	07/09/13 11:07	
Chlorobenzene	ug/L	ND	1.0	07/09/13 11:07	
Chloroethane	ug/L	ND	1.0	07/09/13 11:07	
Chloroform	ug/L	ND	1.0	07/09/13 11:07	
Chloromethane	ug/L	ND	1.0	07/09/13 11:07	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/09/13 11:07	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/09/13 11:07	
Dibromochloromethane	ug/L	ND	1.0	07/09/13 11:07	
Ethylbenzene	ug/L	ND	1.0	07/09/13 11:07	
Methylene chloride	ug/L	ND	1.0	07/09/13 11:07	
Tetrachloroethene	ug/L	ND	1.0	07/09/13 11:07	
Toluene	ug/L	ND	1.0	07/09/13 11:07	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/09/13 11:07	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/09/13 11:07	
Trichloroethene	ug/L	ND	1.0	07/09/13 11:07	
Trichlorofluoromethane	ug/L	ND	1.0	07/09/13 11:07	
Vinyl chloride	ug/L	ND	1.0	07/09/13 11:07	
Xylene (Total)	ug/L	ND	3.0	07/09/13 11:07	
1,2-Dichloroethane-d4 (S)	%	97	80-120	07/09/13 11:07	
4-Bromofluorobenzene (S)	%	92	80-120	07/09/13 11:07	
Dibromofluoromethane (S)	%	100	80-120	07/09/13 11:07	
Toluene-d8 (S)	%	100	80-120	07/09/13 11:07	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

LABORATORY CONTROL SAMPLE: 1216952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.9	99	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	18.0	90	59-138	
1,1,2-Trichloroethane	ug/L	20	19.3	97	69-127	
1,1-Dichloroethane	ug/L	20	17.5	88	69-126	
1,1-Dichloroethene	ug/L	20	18.5	93	65-153	
1,2-Dichlorobenzene	ug/L	20	17.9	89	66-126	
1,2-Dichloroethane	ug/L	20	18.4	92	71-129	
1,2-Dichloropropane	ug/L	20	19.1	95	66-140	
1,3-Dichlorobenzene	ug/L	20	17.9	90	63-127	
1,4-Dichlorobenzene	ug/L	20	18.4	92	68-124	
2-Chloroethylvinyl ether	ug/L	20	17.0	85	33-159	
Benzene	ug/L	20	18.1	90	73-129	
Bromodichloromethane	ug/L	20	18.3	91	63-129	
Bromoform	ug/L	20	18.8	94	52-123	
Bromomethane	ug/L	20	18.7	94	10-160	
Carbon tetrachloride	ug/L	20	20.7	104	70-140	
Chlorobenzene	ug/L	20	18.6	93	68-127	
Chloroethane	ug/L	20	18.3	92	42-160	
Chloroform	ug/L	20	17.8	89	60-120	
Chloromethane	ug/L	20	15.3	77	10-160	
cis-1,2-Dichloroethene	ug/L	20	19.7	98	70-125	
cis-1,3-Dichloropropene	ug/L	20	18.1	91	66-132	
Dibromochloromethane	ug/L	20	20.4	102	63-134	
Ethylbenzene	ug/L	20	18.7	94	66-133	
Methylene chloride	ug/L	20	15.2	76	56-135	
Tetrachloroethene	ug/L	20	19.2	96	64-143	
Toluene	ug/L	20	17.8	89	70-130	
trans-1,2-Dichloroethene	ug/L	20	18.0	90	67-149	
trans-1,3-Dichloropropene	ug/L	20	20.6	103	66-138	
Trichloroethene	ug/L	20	17.1	86	71-130	
Trichlorofluoromethane	ug/L	20	17.0	85	58-158	
Vinyl chloride	ug/L	20	14.9	75	41-160	
Xylene (Total)	ug/L	60	54.8	91	67-130	
1,2-Dichloroethane-d4 (S)	%			110	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Dibromofluoromethane (S)	%			104	80-120	
Toluene-d8 (S)	%			97	80-120	

MATRIX SPIKE SAMPLE: 1216953

Parameter	Units	60148335001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	4310	108	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4250	106	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4300	108	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3800	95	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3980	100	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	4060	102	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

MATRIX SPIKE SAMPLE:		1216953		60148335001		Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits		
1,2-Dichloroethane	ug/L	ND	4000	4190	105	49-155				
1,2-Dichloropropane	ug/L	ND	4000	4180	105	12-160				
1,3-Dichlorobenzene	ug/L	ND	4000	4040	101	59-146				
1,4-Dichlorobenzene	ug/L	ND	4000	4050	100	18-147				
2-Chloroethylvinyl ether	ug/L	ND	4000	4380	110	10-160				
Benzene	ug/L	ND	4000	4050	100	37-151				
Bromodichloromethane	ug/L	ND	4000	4090	102	35-155				
Bromoform	ug/L	ND	4000	4260	107	45-133				
Bromomethane	ug/L	ND	4000	3640	91	10-160				
Carbon tetrachloride	ug/L	ND	4000	4350	109	70-140				
Chlorobenzene	ug/L	ND	4000	4120	103	37-153				
Chloroethane	ug/L	ND	4000	3830	96	14-160				
Chloroform	ug/L	ND	4000	4070	102	51-138				
Chloromethane	ug/L	ND	4000	3180	80	10-160				
cis-1,2-Dichloroethene	ug/L	ND	4000	4250	106	19-160				
cis-1,3-Dichloropropene	ug/L	ND	4000	4220	106	10-160				
Dibromochloromethane	ug/L	ND	4000	4390	110	53-149				
Ethylbenzene	ug/L	ND	4000	4290	103	37-154				
Methylene chloride	ug/L	ND	4000	3500	88	15-156				
Tetrachloroethene	ug/L	ND	4000	4130	103	64-148				
Toluene	ug/L	ND	4000	4040	100	47-150				
trans-1,2-Dichloroethene	ug/L	ND	4000	3900	98	54-156				
trans-1,3-Dichloropropene	ug/L	ND	4000	4710	118	17-160				
Trichloroethene	ug/L	ND	4000	3750	94	71-157				
Trichlorofluoromethane	ug/L	ND	4000	3520	88	17-160				
Vinyl chloride	ug/L	ND	4000	3320	83	10-160				
Xylene (Total)	ug/L	893	12000	12800	99	12-153				
1,2-Dichloroethane-d4 (S)	%				104	80-120				
4-Bromofluorobenzene (S)	%				103	80-120				
Dibromofluoromethane (S)	%				100	80-120				
Toluene-d8 (S)	%				99	80-120				
Preservation pH			7.0		7.0					

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009  
Pace Project No.: 60148335

QC Batch: OEXT/39215      Analysis Method: EPA 625  
QC Batch Method: EPA 625      Analysis Description: 625 MSS  
Associated Lab Samples: 60148335001

METHOD BLANK: 1217221      Matrix: Water  
Associated Lab Samples: 60148335001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/11/13 09:06	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/11/13 09:06	
2,4-Dichlorophenol	ug/L	ND	5.0	07/11/13 09:06	
2,4-Dimethylphenol	ug/L	ND	5.0	07/11/13 09:06	
2,4-Dinitrophenol	ug/L	ND	50.0	07/11/13 09:06	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/11/13 09:06	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/11/13 09:06	
2-Chloronaphthalene	ug/L	ND	5.0	07/11/13 09:06	
2-Chlorophenol	ug/L	ND	5.0	07/11/13 09:06	
2-Nitrophenol	ug/L	ND	5.0	07/11/13 09:06	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/11/13 09:06	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/11/13 09:06	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/11/13 09:06	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/11/13 09:06	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/11/13 09:06	
4-Nitrophenol	ug/L	ND	5.0	07/11/13 09:06	
Acenaphthene	ug/L	ND	5.0	07/11/13 09:06	
Acenaphthylene	ug/L	ND	5.0	07/11/13 09:06	
Anthracene	ug/L	ND	5.0	07/11/13 09:06	
Benzidine	ug/L	ND	50.0	07/11/13 09:06	
Benzo(a)anthracene	ug/L	ND	5.0	07/11/13 09:06	
Benzo(a)pyrene	ug/L	ND	5.0	07/11/13 09:06	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/11/13 09:06	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/11/13 09:06	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/11/13 09:06	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/11/13 09:06	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/11/13 09:06	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/11/13 09:06	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/11/13 09:06	
Butylbenzylphthalate	ug/L	ND	5.0	07/11/13 09:06	
Chrysene	ug/L	ND	5.0	07/11/13 09:06	
Di-n-butylphthalate	ug/L	ND	5.0	07/11/13 09:06	
Di-n-octylphthalate	ug/L	ND	5.0	07/11/13 09:06	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/11/13 09:06	
Diethylphthalate	ug/L	ND	5.0	07/11/13 09:06	
Dimethylphthalate	ug/L	ND	5.0	07/11/13 09:06	
Fluoranthene	ug/L	ND	5.0	07/11/13 09:06	
Fluorene	ug/L	ND	5.0	07/11/13 09:06	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/11/13 09:06	
Hexachlorobenzene	ug/L	ND	5.0	07/11/13 09:06	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/11/13 09:06	
Hexachloroethane	ug/L	ND	5.0	07/11/13 09:06	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/11/13 09:06	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009  
Pace Project No.: 60148335

METHOD BLANK: 1217221 Matrix: Water

Associated Lab Samples: 60148335001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/11/13 09:06	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/11/13 09:06	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/11/13 09:06	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/11/13 09:06	
Naphthalene	ug/L	ND	5.0	07/11/13 09:06	
Nitrobenzene	ug/L	ND	5.0	07/11/13 09:06	
Pentachlorophenol	ug/L	ND	5.0	07/11/13 09:06	
Phenanthrene	ug/L	ND	5.0	07/11/13 09:06	
Phenol	ug/L	ND	5.0	07/11/13 09:06	
Pyrene	ug/L	ND	5.0	07/11/13 09:06	
2,4,6-Tribromophenol (S)	%	74	39-119	07/11/13 09:06	
2-Fluorobiphenyl (S)	%	75	36-120	07/11/13 09:06	
2-Fluorophenol (S)	%	40	18-120	07/11/13 09:06	
Nitrobenzene-d5 (S)	%	75	32-120	07/11/13 09:06	
Phenol-d6 (S)	%	27	12-120	07/11/13 09:06	
Terphenyl-d14 (S)	%	80	44-120	07/11/13 09:06	

LABORATORY CONTROL SAMPLE: 1217222

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.5	79	44-120	
2,4,6-Trichlorophenol	ug/L	50	39.7	79	48-120	
2,4-Dichlorophenol	ug/L	50	38.9	78	48-120	
2,4-Dimethylphenol	ug/L	50	36.8	74	37-119	
2,4-Dinitrophenol	ug/L	50	37.4J	75	15-153	
2,4-Dinitrotoluene	ug/L	50	42.1	84	54-120	
2,6-Dinitrotoluene	ug/L	50	42.2	84	52-120	
2-Chloronaphthalene	ug/L	50	40.3	81	60-118	
2-Chlorophenol	ug/L	50	39.3	79	44-120	
2-Nitrophenol	ug/L	50	40.4	81	43-120	
3,3'-Dichlorobenzidine	ug/L	50	42.2	84	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	44.4	89	31-147	
4-Bromophenylphenyl ether	ug/L	50	43.9	88	53-120	
4-Chloro-3-methylphenol	ug/L	50	39.1	78	50-120	
4-Chlorophenylphenyl ether	ug/L	50	40.3	81	54-120	
4-Nitrophenol	ug/L	50	16.4	33	10-120	
Acenaphthene	ug/L	50	40.7	81	51-120	
Acenaphthylene	ug/L	50	40.5	81	51-120	
Anthracene	ug/L	50	43.0	86	54-120	
Benzidine	ug/L	50	14.7J	29	1-124	
Benzo(a)anthracene	ug/L	50	44.3	89	54-120	
Benzo(a)pyrene	ug/L	50	42.5	85	54-120	
Benzo(b)fluoranthene	ug/L	50	40.5	81	57-120	
Benzo(g,h,i)perylene	ug/L	50	41.8	84	54-120	
Benzo(k)fluoranthene	ug/L	50	44.6	89	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

LABORATORY CONTROL SAMPLE: 1217222

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	38.8	78	51-120	
bis(2-Chloroethyl) ether	ug/L	50	43.1	86	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	44.8	90	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	44.1	88	51-126	
Butylbenzylphthalate	ug/L	50	44.1	88	45-129	
Chrysene	ug/L	50	43.8	88	54-120	
Di-n-butylphthalate	ug/L	50	44.1	88	57-118	
Di-n-octylphthalate	ug/L	50	42.0	84	48-130	
Dibenz(a,h)anthracene	ug/L	50	42.2	84	56-119	
Diethylphthalate	ug/L	50	41.1	82	55-114	
Dimethylphthalate	ug/L	50	41.5	83	54-112	
Fluoranthene	ug/L	50	43.6	87	56-120	
Fluorene	ug/L	50	39.9	80	59-120	
Hexachloro-1,3-butadiene	ug/L	50	37.0	74	41-116	
Hexachlorobenzene	ug/L	50	42.4	85	53-120	
Hexachlorocyclopentadiene	ug/L	100	60.3	60	31-120	
Hexachloroethane	ug/L	50	40.5	81	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	41.6	83	55-120	
Isophorone	ug/L	50	41.0	82	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	43.7	87	47-120	
N-Nitrosodimethylamine	ug/L	50	26.2	52	28-120	
N-Nitrosodiphenylamine	ug/L	50	41.5	83	53-120	
Naphthalene	ug/L	50	39.8	80	48-120	
Nitrobenzene	ug/L	50	40.8	82	47-120	
Pentachlorophenol	ug/L	50	41.2	82	43-127	
Phenanthrene	ug/L	50	43.0	86	55-120	
Phenol	ug/L	50	17.1	34	15-112	
Pyrene	ug/L	50	43.8	88	55-115	
2,4,6-Tribromophenol (S)	%			89	39-119	
2-Fluorobiphenyl (S)	%			85	36-120	
2-Fluorophenol (S)	%			50	18-120	
Nitrobenzene-d5 (S)	%			85	32-120	M4
Phenol-d6 (S)	%			34	12-120	
Terphenyl-d14 (S)	%			94	44-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

QC Batch:	WET/42271	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148335001		

METHOD BLANK: 1217361 Matrix: Water  
Associated Lab Samples: 60148335001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/10/13 09:32	

LABORATORY CONTROL SAMPLE: 1217362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	39.2	98	78-114	

MATRIX SPIKE SAMPLE: 1217365

Parameter	Units	60148338002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.4	39.4	88	78-114	

SAMPLE DUPLICATE: 1217364

Parameter	Units	60148338001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	29.7	26.2	12	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

QC Batch:	WET/42340	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60148335001		

METHOD BLANK: 1219911 Matrix: Water

Associated Lab Samples: 60148335001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/15/13 07:03	

LABORATORY CONTROL SAMPLE: 1219912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.6	108	64-132	

MATRIX SPIKE SAMPLE: 1219916

Parameter	Units	60148121001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.7	26.5	110	64-132	

SAMPLE DUPLICATE: 1219917

Parameter	Units	60148128001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	3.5J		34	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

QC Batch: WET/42251

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60148335001

METHOD BLANK: 1216872

Matrix: Water

Associated Lab Samples: 60148335001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/09/13 09:27	

SAMPLE DUPLICATE: 1216873

Parameter	Units	5083229001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	16.0	17.0	6	25	

SAMPLE DUPLICATE: 1216874

Parameter	Units	60148344002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	5.0		25	

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

QC Batch: WET/42255 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148335001

SAMPLE DUPLICATE: 1217077

Parameter	Units	60148335001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.6	5.6	1	5	H6

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

QC Batch:	WETA/25396	Analysis Method:	EPA 350.1
QC Batch Method:	EPA 350.1	Analysis Description:	350.1 Ammonia
Associated Lab Samples:	60148335001		

METHOD BLANK: 1217259 Matrix: Water

Associated Lab Samples: 60148335001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/10/13 14:50	

LABORATORY CONTROL SAMPLE: 1217260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	101	90-110	

MATRIX SPIKE SAMPLE: 1217261

Parameter	Units	60148240006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.8	89	90-110	M1

MATRIX SPIKE SAMPLE: 1217262

Parameter	Units	60148251001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.7	85	90-110	M1

SAMPLE DUPLICATE: 1217263

Parameter	Units	60148253001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	11.4	11.4	0	18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

QC Batch: WETA/25405      Analysis Method: EPA 410.4  
 QC Batch Method: EPA 410.4      Analysis Description: 410.4 COD  
 Associated Lab Samples: 60148335001

METHOD BLANK: 1217491      Matrix: Water

Associated Lab Samples: 60148335001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/11/13 10:45	

LABORATORY CONTROL SAMPLE: 1217492

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	53.7	107	90-110	

MATRIX SPIKE SAMPLE: 1217494

Parameter	Units	60148259001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	92.7	50	138	91	90-110	

MATRIX SPIKE SAMPLE: 1217495

Parameter	Units	60148403003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	3320	2500	5750	97	90-110	

SAMPLE DUPLICATE: 1217493

Parameter	Units	60147815002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	55.2	54.6	1	25	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M4 A matrix spike/matrix spike duplicate was not performed for this batch due to sample dilution.

R1 RPD value was outside control limits.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-009

Pace Project No.: 60148335

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148335001	316-009	EPA 200.7	MPRP/23394	EPA 200.7	ICP/18409
60148335001	316-009	EPA 200.7	MPRP/23393	EPA 200.7	ICP/18407
60148335001	316-009	EPA 245.1	MERP/7489	EPA 245.1	MERC/7446
60148335001	316-009	EPA 245.1	MERP/7488	EPA 245.1	MERC/7445
60148335001	316-009	EPA 625	OEXT/39215	EPA 625	MSSV/12422
60148335001	316-009	EPA 624 Low	MSV/54816		
60148335002	TRIP BLANK	EPA 624 Low	MSV/54816		
60148335001	316-009	EPA 1664A	WET/42271		
60148335001	316-009	EPA 1664A	WET/42340		
60148335001	316-009	SM 2540D	WET/42251		
60148335001	316-009	SM 4500-H+B	WET/42255		
60148335001	316-009	EPA 350.1	WETA/25396		
60148335001	316-009	EPA 410.4	WETA/25405		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148335



Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  XR

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Yes Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.0

Date and initials of person examining contents: JWS 7/8/13 1345

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>water</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>JWS</u> Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>covered</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State: _____

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: [Signature]



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

## Section A

## Section B

## Section C

### Required Client Information:

### Required Project Information:

### Invoice Information:

Page : 1 Of 1

Company: BARR ENGINEERING	Report To: ED GALBRAITH/BARR	Attention: TABITHA PROVINCE
Address:	Copy To: SCOTT FEDAK/FEEZOR	Company Name: REPUBLIC SERVICES
	DANA BAKER/MARGARET TREANOR -BARR	Address: BRIDGETON, MO 63044
Email To:	Purchase Order No. PO 3727110	Pace Quote Reference: 130426_7588
Phone: (816) 285-8410 Fax:	Client Project ID: BRIDGETON LF	Pace Project Manager: Brown, Angie
Requested Due Date/TAT: 10 Day (Default)	Container Order Number:	Pace Profile #: 6787 LINE 2

Regulatory Agency	
State / Location	Missouri

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 /, -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	Preservatives											Y/N	Requested Analysis Filtered (Y/N)														Residual Chlorine (Y/N)				
				START		END			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	COD EPA 410	pH SM 4500H+B		LF DIS. METALS 200.7/245	TOTAL METALS 200.7/245	AMMONIA EPA 350	O/G EPA 1664	625 SVOCs	VOCs EPA 624	TSS SM2540D	TPH/HENP/ST 1464											
				DATE	TIME	DATE	TIME																						# OF CONTAINERS										
1	316-009	OT	G	7/6/13	1957			15	10	1	1	2												X	X	X	X	X	X	X	X	X	X	X	✓				
2	TRIP BLANK							2	2																														
3																																							
4																																							
5																																							
6																																							
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9																																							
10																																							
11																																							
12																																							

00148335

(B2M) (B3M) (B35) (B35)  
3 (REM) 3 (REM) 5 (REM)

METALS LIST total & LF Dis: 001

Al, Sb, As, Be, Cd, Cr. 002

Co, Cu, Fe, Pb, Ni, Se, Ag, Tl, Zn

and Mercury

2 (REM) 1 (REM)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS		
SITE CONTACT: BILL ABERNATHY 314-502-1299	<i>William Abernathy</i>	7/8/13	0810	<i>Trevor J. ...</i>	7/8	8:10			
SITE ADDRESS: BRIDGETON LF				<i>John J. ...</i>	7/8/13	1150	2.0	Y	Y
13570 ST. CHARLES ROCK RD									
BRIDGETON MO 63044									

SAMPLER NAME AND SIGNATURE				TEMP. in C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:							
SIGNATURE of SAMPLER: <i>William Abernathy</i>							
DATE Signed: 7/7/13							

July 16, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-010  
Pace Project No.: 60148417

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 10, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-010

Pace Project No.: 60148417

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-010

Pace Project No.: 60148417

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148417001	316-010	Water	07/08/13 14:36	07/10/13 01:50

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-010

Pace Project No.: 60148417

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148417001	316-010	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-010

Pace Project No.: 60148417

Sample: 316-010	Lab ID: 60148417001	Collected: 07/08/13 14:36	Received: 07/10/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>27900</b>	mg/L	2.0	1	07/10/13 09:34	07/15/13 10:28		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148417

QC Batch: WET/42267

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148417001

METHOD BLANK: 1217316

Matrix: Water

Associated Lab Samples: 60148417001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/15/13 10:11	

LABORATORY CONTROL SAMPLE: 1217317

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	195	99	85-115	

SAMPLE DUPLICATE: 1217318

Parameter	Units	60148341002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	ND	ND		17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-010

Pace Project No.: 60148417

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-010

Pace Project No.: 60148417

---

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148417001	316-010	SM 5210B	WET/42267	SM 5210B	WET/42351

## REPORT OF LABORATORY ANALYSIS

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



Sample Condition Upon Receipt

WO#: 60148417



Client Name: Barr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PIC

Thermometer Used: T-112 / T-194 Type of Ice:  Wet  Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 1.8  
Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: DL 7/10/13

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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>Bad</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/10/13



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: BARR ENGINEERING		Report To: ED GALBRAITH/BARR		Attention: TABITHA PROVINCE	
Address:		Copy To: SCOTT FEDAK/FEEZOR		Company Name: REPUBLIC SERVICES	
		DANA BAKER/MARGARET TREANOR -BARR		Address: BRIDGETON, MO 63044	
Email To:		Purchase Order No. PO 3727110		Pace Quote Reference: 130426 7588	
Phone: (816) 285-8410 Fax		Client Project ID: BRIDGETON LF		Pace Project Manager: Brown, Angie	
Requested Due Date/TAT: 10 Day (Default)		Container Order Number:		Pace Profile #: 6787 LINE 5	

Regulatory Agency	
State / Location	
Missouri	

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)		COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives									Analyses Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)					
		MATRIX CODE	SAMPLE TYPE	START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N								
				DATE	TIME	DATE	TIME																			
1	316-010	OT	G	7/9/13	1436				1	1															60148417	
2																										
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS		
SITE CONTACT: BILL ABERNATHY 314-502-1299	<i>[Signature]</i>	7/9/13	1645	<i>[Signature]</i> 554	7/9/13	1645			
SITE ADDRESS: BRIDGETON LF				<i>[Signature]</i> PAUL	7/10/13	0150	1.8	Y	Y
13570 ST. CHARLES ROCK RD									
BRIDGETON MO 63044									

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER: WILLIAM ABERNATHY			
SIGNATURE of SAMPLER: <i>[Signature]</i>		DATE Signed: 7/8/13	
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)



July 16, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-010  
Pace Project No.: 60148422

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 10, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148422001	316-010	Water	07/08/13 14:36	07/10/13 01:50
60148422002	TRIP BLANK	Water	07/08/13 14:36	07/10/13 01:50

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148422001	316-010	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148422002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

Sample: 316-010		Lab ID: 60148422001	Collected: 07/08/13 14:36	Received: 07/10/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	10200	ug/L	150	2	07/11/13 16:30	07/15/13 16:29	7429-90-5	
Antimony	ND	ug/L	50.0	5	07/11/13 16:30	07/15/13 16:32	7440-36-0	D3
Arsenic	610	ug/L	50.0	5	07/11/13 16:30	07/15/13 16:32	7440-38-2	
Beryllium	ND	ug/L	5.0	5	07/11/13 16:30	07/15/13 16:32	7440-41-7	D3
Cadmium	ND	ug/L	25.0	5	07/11/13 16:30	07/15/13 16:32	7440-43-9	D3
Chromium	264	ug/L	10.0	2	07/11/13 16:30	07/15/13 16:29	7440-47-3	
Cobalt	72.9	ug/L	25.0	5	07/11/13 16:30	07/15/13 16:32	7440-48-4	
Copper	35.1	ug/L	20.0	2	07/11/13 16:30	07/15/13 16:29	7440-50-8	
Iron	855000	ug/L	100	2	07/11/13 16:30	07/15/13 16:29	7439-89-6	
Lead	236	ug/L	25.0	5	07/11/13 16:30	07/15/13 16:32	7439-92-1	
Nickel	164	ug/L	25.0	5	07/11/13 16:30	07/15/13 16:32	7440-02-0	
Selenium	ND	ug/L	75.0	5	07/11/13 16:30	07/15/13 16:32	7782-49-2	D3
Silver	ND	ug/L	14.0	2	07/11/13 16:30	07/15/13 16:29	7440-22-4	D3
Thallium	ND	ug/L	100	5	07/11/13 16:30	07/15/13 16:32	7440-28-0	D3
Zinc	15000	ug/L	1000	20	07/11/13 16:30	07/15/13 16:36	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	3570	ug/L	150	2	07/12/13 16:20	07/15/13 17:38	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	5	07/12/13 16:20	07/15/13 18:02	7440-36-0	D3
Arsenic, Dissolved	468	ug/L	50.0	5	07/12/13 16:20	07/15/13 18:02	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	5	07/12/13 16:20	07/15/13 18:02	7440-41-7	D3
Cadmium, Dissolved	ND	ug/L	25.0	5	07/12/13 16:20	07/15/13 18:02	7440-43-9	D3
Chromium, Dissolved	209	ug/L	10.0	2	07/12/13 16:20	07/15/13 17:38	7440-47-3	
Cobalt, Dissolved	55.4	ug/L	25.0	5	07/12/13 16:20	07/15/13 18:02	7440-48-4	
Copper, Dissolved	ND	ug/L	20.0	2	07/12/13 16:20	07/15/13 17:38	7440-50-8	D3
Iron, Dissolved	459000	ug/L	100	2	07/12/13 16:20	07/15/13 17:38	7439-89-6	
Lead, Dissolved	91.0	ug/L	25.0	5	07/12/13 16:20	07/15/13 18:02	7439-92-1	
Nickel, Dissolved	139	ug/L	25.0	5	07/12/13 16:20	07/15/13 18:02	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	5	07/12/13 16:20	07/15/13 18:02	7782-49-2	D3
Silver, Dissolved	ND	ug/L	14.0	2	07/12/13 16:20	07/15/13 17:38	7440-22-4	D3
Thallium, Dissolved	ND	ug/L	100	5	07/12/13 16:20	07/15/13 18:02	7440-28-0	D3
Zinc, Dissolved	13700	ug/L	1000	20	07/12/13 16:20	07/15/13 18:32	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	0.56	ug/L	0.20	1	07/10/13 08:45	07/10/13 13:09	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND	ug/L	0.20	1	07/11/13 08:30	07/11/13 11:36	7439-97-6	M1
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 16:18	83-32-9	
Acenaphthylene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 16:18	208-96-8	
Anthracene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 16:18	120-12-7	
Benzidine	ND	ug/L	5000	10	07/11/13 00:00	07/12/13 16:18	92-87-5	
Benzo(a)anthracene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 16:18	56-55-3	
Benzo(a)pyrene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 16:18	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

Sample: 316-010	Lab ID: 60148422001	Collected: 07/08/13 14:36	Received: 07/10/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	191-24-2	
Benzo(k)fluoranthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	101-55-3	
Butylbenzylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		600	10	07/11/13 00:00	07/12/13 16:18	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		600	10	07/11/13 00:00	07/12/13 16:18	39638-32-9	
2-Chloronaphthalene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	91-58-7	
2-Chlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	7005-72-3	
Chrysene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		2000	10	07/11/13 00:00	07/12/13 16:18	91-94-1	
2,4-Dichlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	120-83-2	
Diethylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	84-66-2	
2,4-Dimethylphenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	105-67-9	
Dimethylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	131-11-3	
Di-n-butylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		2500	10	07/11/13 00:00	07/12/13 16:18	534-52-1	
2,4-Dinitrophenol	ND ug/L		5000	10	07/11/13 00:00	07/12/13 16:18	51-28-5	
2,4-Dinitrotoluene	ND ug/L		600	10	07/11/13 00:00	07/12/13 16:18	121-14-2	
2,6-Dinitrotoluene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	606-20-2	
Di-n-octylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	117-81-7	
Fluoranthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	206-44-0	
Fluorene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	87-68-3	
Hexachlorobenzene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	77-47-4	
Hexachloroethane	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	193-39-5	
Isophorone	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	78-59-1	
Naphthalene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	91-20-3	
Nitrobenzene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	98-95-3	
2-Nitrophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	88-75-5	
4-Nitrophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	100-02-7	
N-Nitrosodimethylamine	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	86-30-6	
Pentachlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	87-86-5	
Phenanthrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	85-01-8	
Phenol	<b>5440</b> ug/L		500	10	07/11/13 00:00	07/12/13 16:18	108-95-2	
Pyrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:18	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

Sample: 316-010		Lab ID: 60148422001	Collected: 07/08/13 14:36	Received: 07/10/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	10	07/11/13 00:00	07/12/13 16:18	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	10	07/11/13 00:00	07/12/13 16:18	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	10	07/11/13 00:00	07/12/13 16:18	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	10	07/11/13 00:00	07/12/13 16:18	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	10	07/11/13 00:00	07/12/13 16:18	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	10	07/11/13 00:00	07/12/13 16:18	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/12/13 13:07	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/12/13 13:07	75-27-4	
Bromoform	ND ug/L		200	200		07/12/13 13:07	75-25-2	
Bromomethane	ND ug/L		1000	200		07/12/13 13:07	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/12/13 13:07	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/12/13 13:07	108-90-7	
Chloroethane	ND ug/L		200	200		07/12/13 13:07	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/12/13 13:07	110-75-8	
Chloroform	ND ug/L		200	200		07/12/13 13:07	67-66-3	
Chloromethane	ND ug/L		200	200		07/12/13 13:07	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/12/13 13:07	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/12/13 13:07	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/12/13 13:07	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/12/13 13:07	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/12/13 13:07	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/12/13 13:07	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/12/13 13:07	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/12/13 13:07	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/12/13 13:07	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/12/13 13:07	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/12/13 13:07	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/12/13 13:07	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/12/13 13:07	100-41-4	
Methylene chloride	ND ug/L		200	200		07/12/13 13:07	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/12/13 13:07	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/12/13 13:07	127-18-4	
Toluene	ND ug/L		200	200		07/12/13 13:07	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/12/13 13:07	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/12/13 13:07	79-00-5	
Trichloroethene	ND ug/L		200	200		07/12/13 13:07	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/12/13 13:07	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/12/13 13:07	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/12/13 13:07	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102 %		80-120	200		07/12/13 13:07	1868-53-7	D3
4-Bromofluorobenzene (S)	100 %		80-120	200		07/12/13 13:07	460-00-4	
Toluene-d8 (S)	97 %		80-120	200		07/12/13 13:07	2037-26-5	
1,2-Dichloroethane-d4 (S)	99 %		80-120	200		07/12/13 13:07	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

<b>Sample: 316-010</b>		<b>Lab ID: 60148422001</b>	Collected: 07/08/13 14:36	Received: 07/10/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/12/13 13:07		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>395</b>	mg/L	5.0	1		07/10/13 09:35		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>13.1</b>	mg/L	5.0	1		07/15/13 07:06		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>1520</b>	mg/L	5.0	1		07/10/13 14:00		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.5</b>	Std. Units	0.10	1		07/10/13 13:45		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>713</b>	mg/L	20.0	200		07/12/13 13:41	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>51300</b>	mg/L	5000	500		07/11/13 10:55		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

Sample: TRIP BLANK		Lab ID: 60148422002	Collected: 07/08/13 14:36	Received: 07/10/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/12/13 13:50	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/12/13 13:50	75-27-4	
Bromoform	ND ug/L		1.0	1		07/12/13 13:50	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/12/13 13:50	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/12/13 13:50	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/12/13 13:50	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/12/13 13:50	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/12/13 13:50	110-75-8	
Chloroform	ND ug/L		1.0	1		07/12/13 13:50	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/12/13 13:50	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/12/13 13:50	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/12/13 13:50	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/12/13 13:50	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/12/13 13:50	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/12/13 13:50	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/12/13 13:50	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/12/13 13:50	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/12/13 13:50	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/12/13 13:50	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/12/13 13:50	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/12/13 13:50	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/12/13 13:50	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/12/13 13:50	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/12/13 13:50	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/12/13 13:50	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/12/13 13:50	127-18-4	
Toluene	ND ug/L		1.0	1		07/12/13 13:50	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/12/13 13:50	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/12/13 13:50	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/12/13 13:50	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/12/13 13:50	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/12/13 13:50	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/12/13 13:50	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	101 %		80-120	1		07/12/13 13:50	1868-53-7	
4-Bromofluorobenzene (S)	93 %		80-120	1		07/12/13 13:50	460-00-4	
Toluene-d8 (S)	101 %		80-120	1		07/12/13 13:50	2037-26-5	
1,2-Dichloroethane-d4 (S)	101 %		80-120	1		07/12/13 13:50	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/12/13 13:50		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

QC Batch:	MERP/7489	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60148422001		

METHOD BLANK: 1217301 Matrix: Water  
Associated Lab Samples: 60148422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/10/13 12:37	

LABORATORY CONTROL SAMPLE: 1217302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1217303 1217304

Parameter	Units	60148381002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L	ND	5	5	5	5.0	5.2	100	104	70-130	4	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

QC Batch: MERP/7492	Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1	Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60148422001	

METHOD BLANK: 1217991 Matrix: Water  
Associated Lab Samples: 60148422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/11/13 11:27	

LABORATORY CONTROL SAMPLE: 1217992

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.7	115	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1217993 1217994

Parameter	Units	60148422001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	1.3	1.4	23	25	70-130	6	20	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010  
Pace Project No.: 60148422

QC Batch: MPRP/23431      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60148422001

METHOD BLANK: 1218315      Matrix: Water  
Associated Lab Samples: 60148422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/15/13 15:57	
Antimony	ug/L	ND	10.0	07/15/13 15:57	
Arsenic	ug/L	ND	10.0	07/15/13 15:57	
Beryllium	ug/L	ND	1.0	07/15/13 15:57	
Cadmium	ug/L	ND	5.0	07/15/13 15:57	
Chromium	ug/L	ND	5.0	07/15/13 15:57	
Cobalt	ug/L	ND	5.0	07/15/13 15:57	
Copper	ug/L	ND	10.0	07/15/13 15:57	
Iron	ug/L	ND	50.0	07/15/13 15:57	
Lead	ug/L	ND	5.0	07/15/13 15:57	
Nickel	ug/L	ND	5.0	07/15/13 15:57	
Selenium	ug/L	ND	15.0	07/15/13 15:57	
Silver	ug/L	ND	7.0	07/15/13 15:57	
Thallium	ug/L	ND	20.0	07/15/13 15:57	
Zinc	ug/L	59.0	50.0	07/15/13 15:57	

LABORATORY CONTROL SAMPLE: 1218316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9700	97	85-115	
Antimony	ug/L	1000	1040	104	85-115	
Arsenic	ug/L	1000	970	97	85-115	
Beryllium	ug/L	1000	964	96	85-115	
Cadmium	ug/L	1000	998	100	85-115	
Chromium	ug/L	1000	941	94	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	1000	100	85-115	
Iron	ug/L	10000	9410	94	85-115	
Lead	ug/L	1000	1030	103	85-115	
Nickel	ug/L	1000	1020	102	85-115	
Selenium	ug/L	1000	1020	102	85-115	
Silver	ug/L	500	488	98	85-115	
Thallium	ug/L	1000	1060	106	85-115	
Zinc	ug/L	1000	950	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1218317      1218318

Parameter	Units	60148544001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Aluminum	ug/L	152	10000	10000	10100	10100	100	99	70-130	0	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

Parameter	Units	60148544001		1218317		1218318		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Antimony	ug/L	ND	1000	1000	1090	1100	109	110	70-130	1	7			
Arsenic	ug/L	ND	1000	1000	1040	1060	104	105	70-130	1	10			
Beryllium	ug/L	ND	1000	1000	959	959	96	96	70-130	0	7			
Cadmium	ug/L	ND	1000	1000	1040	1050	104	105	70-130	1	10			
Chromium	ug/L	ND	1000	1000	961	948	96	95	70-130	1	10			
Cobalt	ug/L	ND	1000	1000	1020	1020	102	102	70-130	0	6			
Copper	ug/L	ND	1000	1000	1040	1050	103	104	70-130	1	11			
Iron	ug/L	176	10000	10000	9590	9480	94	93	70-130	1	10			
Lead	ug/L	ND	1000	1000	1010	1010	101	101	70-130	0	10			
Nickel	ug/L	ND	1000	1000	1030	1030	102	103	70-130	0	10			
Selenium	ug/L	ND	1000	1000	1080	1100	108	110	70-130	2	10			
Silver	ug/L	ND	500	500	507	504	101	101	70-130	1	10			
Thallium	ug/L	ND	1000	1000	1000	1010	100	101	70-130	1	6			
Zinc	ug/L	ND	1000	1000	963	977	93	95	70-130	1	11			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

QC Batch: MPRP/23453

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Dissolved

Associated Lab Samples: 60148422001

METHOD BLANK: 1219377

Matrix: Water

Associated Lab Samples: 60148422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/15/13 17:28	
Antimony, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Arsenic, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Beryllium, Dissolved	ug/L	ND	1.0	07/15/13 17:28	
Cadmium, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Chromium, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Cobalt, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Copper, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Iron, Dissolved	ug/L	ND	50.0	07/15/13 17:28	
Lead, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Nickel, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Selenium, Dissolved	ug/L	ND	15.0	07/15/13 17:28	
Silver, Dissolved	ug/L	ND	7.0	07/15/13 17:28	
Thallium, Dissolved	ug/L	ND	20.0	07/15/13 17:28	
Zinc, Dissolved	ug/L	ND	50.0	07/15/13 17:28	

LABORATORY CONTROL SAMPLE: 1219378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9830	98	85-115	
Antimony, Dissolved	ug/L	1000	1010	101	85-115	
Arsenic, Dissolved	ug/L	1000	951	95	85-115	
Beryllium, Dissolved	ug/L	1000	968	97	85-115	
Cadmium, Dissolved	ug/L	1000	978	98	85-115	
Chromium, Dissolved	ug/L	1000	956	96	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	960	96	85-115	
Iron, Dissolved	ug/L	10000	9360	94	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	997	100	85-115	
Silver, Dissolved	ug/L	500	477	95	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	960	96	85-115	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

QC Batch: MSV/54896 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148422001, 60148422002

METHOD BLANK: 1218840 Matrix: Water

Associated Lab Samples: 60148422001, 60148422002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1-Dichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1-Dichloroethene	ug/L	ND	1.0	07/12/13 12:46	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
1,2-Dichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,2-Dichloropropane	ug/L	ND	1.0	07/12/13 12:46	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/12/13 12:46	
Benzene	ug/L	ND	1.0	07/12/13 12:46	
Bromodichloromethane	ug/L	ND	1.0	07/12/13 12:46	
Bromoform	ug/L	ND	1.0	07/12/13 12:46	
Bromomethane	ug/L	ND	5.0	07/12/13 12:46	
Carbon tetrachloride	ug/L	ND	1.0	07/12/13 12:46	
Chlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
Chloroethane	ug/L	ND	1.0	07/12/13 12:46	
Chloroform	ug/L	ND	1.0	07/12/13 12:46	
Chloromethane	ug/L	ND	1.0	07/12/13 12:46	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/12/13 12:46	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/12/13 12:46	
Dibromochloromethane	ug/L	ND	1.0	07/12/13 12:46	
Ethylbenzene	ug/L	ND	1.0	07/12/13 12:46	
Methylene chloride	ug/L	ND	1.0	07/12/13 12:46	
Tetrachloroethene	ug/L	ND	1.0	07/12/13 12:46	
Toluene	ug/L	ND	1.0	07/12/13 12:46	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/12/13 12:46	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/12/13 12:46	
Trichloroethene	ug/L	ND	1.0	07/12/13 12:46	
Trichlorofluoromethane	ug/L	ND	1.0	07/12/13 12:46	
Vinyl chloride	ug/L	ND	1.0	07/12/13 12:46	
Xylene (Total)	ug/L	ND	3.0	07/12/13 12:46	
1,2-Dichloroethane-d4 (S)	%	101	80-120	07/12/13 12:46	
4-Bromofluorobenzene (S)	%	97	80-120	07/12/13 12:46	
Dibromofluoromethane (S)	%	103	80-120	07/12/13 12:46	
Toluene-d8 (S)	%	99	80-120	07/12/13 12:46	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

LABORATORY CONTROL SAMPLE: 1218841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.7	108	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.9	100	59-138	
1,1,2-Trichloroethane	ug/L	20	19.9	99	69-127	
1,1-Dichloroethane	ug/L	20	19.6	98	69-126	
1,1-Dichloroethene	ug/L	20	21.3	107	65-153	
1,2-Dichlorobenzene	ug/L	20	20.3	101	66-126	
1,2-Dichloroethane	ug/L	20	20.6	103	71-129	
1,2-Dichloropropane	ug/L	20	20.1	100	66-140	
1,3-Dichlorobenzene	ug/L	20	20.2	101	63-127	
1,4-Dichlorobenzene	ug/L	20	20.2	101	68-124	
2-Chloroethylvinyl ether	ug/L	20	17.8	89	33-159	
Benzene	ug/L	20	19.2	96	73-129	
Bromodichloromethane	ug/L	20	19.6	98	63-129	
Bromoform	ug/L	20	19.4	97	52-123	
Bromomethane	ug/L	20	21.1	105	10-160	
Carbon tetrachloride	ug/L	20	21.8	109	70-140	
Chlorobenzene	ug/L	20	19.9	99	68-127	
Chloroethane	ug/L	20	21.7	109	42-160	
Chloroform	ug/L	20	20.3	102	60-120	
Chloromethane	ug/L	20	15.8	79	10-160	
cis-1,2-Dichloroethene	ug/L	20	22.1	110	70-125	
cis-1,3-Dichloropropene	ug/L	20	19.5	98	66-132	
Dibromochloromethane	ug/L	20	21.2	106	63-134	
Ethylbenzene	ug/L	20	19.9	99	66-133	
Methylene chloride	ug/L	20	16.9	85	56-135	
Tetrachloroethene	ug/L	20	20.9	104	64-143	
Toluene	ug/L	20	19.6	98	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.7	103	67-149	
trans-1,3-Dichloropropene	ug/L	20	21.3	106	66-138	
Trichloroethene	ug/L	20	19.1	96	71-130	
Trichlorofluoromethane	ug/L	20	19.4	97	58-158	
Vinyl chloride	ug/L	20	17.6	88	41-160	
Xylene (Total)	ug/L	60	58.0	97	67-130	
1,2-Dichloroethane-d4 (S)	%			110	80-120	
4-Bromofluorobenzene (S)	%			103	80-120	
Dibromofluoromethane (S)	%			108	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1218842

Parameter	Units	60148422001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	4540	113	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4000	100	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4120	103	52-150	
1,1-Dichloroethane	ug/L	ND	4000	4030	101	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4520	113	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3980	100	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

MATRIX SPIKE SAMPLE:		1218842		60148422001		Spike		MS		MS		% Rec		Qualifiers	
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits							
1,2-Dichloroethane	ug/L	ND	4000	4160	104	49-155									
1,2-Dichloropropane	ug/L	ND	4000	4320	108	12-160									
1,3-Dichlorobenzene	ug/L	ND	4000	4010	100	59-146									
1,4-Dichlorobenzene	ug/L	ND	4000	4050	101	18-147									
2-Chloroethylvinyl ether	ug/L	ND	4000	4820	121	10-160									
Benzene	ug/L	ND	4000	4000	100	37-151									
Bromodichloromethane	ug/L	ND	4000	4110	103	35-155									
Bromoform	ug/L	ND	4000	4070	102	45-133									
Bromomethane	ug/L	ND	4000	4410	110	10-160									
Carbon tetrachloride	ug/L	ND	4000	4690	117	70-140									
Chlorobenzene	ug/L	ND	4000	4140	104	37-153									
Chloroethane	ug/L	ND	4000	4500	113	14-160									
Chloroform	ug/L	ND	4000	4180	105	51-138									
Chloromethane	ug/L	ND	4000	3380	85	10-160									
cis-1,2-Dichloroethene	ug/L	ND	4000	4480	112	19-160									
cis-1,3-Dichloropropene	ug/L	ND	4000	4080	102	10-160									
Dibromochloromethane	ug/L	ND	4000	4320	108	53-149									
Ethylbenzene	ug/L	ND	4000	4180	104	37-154									
Methylene chloride	ug/L	ND	4000	3620	90	15-156									
Tetrachloroethene	ug/L	ND	4000	4300	108	64-148									
Toluene	ug/L	ND	4000	3980	99	47-150									
trans-1,2-Dichloroethene	ug/L	ND	4000	4230	106	54-156									
trans-1,3-Dichloropropene	ug/L	ND	4000	4530	113	17-160									
Trichloroethene	ug/L	ND	4000	3810	95	71-157									
Trichlorofluoromethane	ug/L	ND	4000	4140	104	17-160									
Vinyl chloride	ug/L	ND	4000	3820	96	10-160									
Xylene (Total)	ug/L	ND	12000	12000	100	12-153									
1,2-Dichloroethane-d4 (S)	%				102	80-120									
4-Bromofluorobenzene (S)	%				98	80-120									
Dibromofluoromethane (S)	%				102	80-120									
Toluene-d8 (S)	%				97	80-120									
Preservation pH			7.0		7.0										

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

QC Batch: OEXT/39236

Analysis Method: EPA 625

QC Batch Method: EPA 625

Analysis Description: 625 MSS

Associated Lab Samples: 60148422001

METHOD BLANK: 1217933

Matrix: Water

Associated Lab Samples: 60148422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/12/13 14:53	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dichlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dimethylphenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dinitrophenol	ug/L	ND	50.0	07/12/13 14:53	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/12/13 14:53	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/12/13 14:53	
2-Chloronaphthalene	ug/L	ND	5.0	07/12/13 14:53	
2-Chlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2-Nitrophenol	ug/L	ND	5.0	07/12/13 14:53	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/12/13 14:53	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/12/13 14:53	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/12/13 14:53	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/12/13 14:53	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/12/13 14:53	
4-Nitrophenol	ug/L	ND	5.0	07/12/13 14:53	
Acenaphthene	ug/L	ND	5.0	07/12/13 14:53	
Acenaphthylene	ug/L	ND	5.0	07/12/13 14:53	
Anthracene	ug/L	ND	5.0	07/12/13 14:53	
Benzidine	ug/L	ND	50.0	07/12/13 14:53	
Benzo(a)anthracene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(a)pyrene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/12/13 14:53	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/12/13 14:53	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/12/13 14:53	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/12/13 14:53	
Butylbenzylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Chrysene	ug/L	ND	5.0	07/12/13 14:53	
Di-n-butylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Di-n-octylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/12/13 14:53	
Diethylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Dimethylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
Fluorene	ug/L	ND	5.0	07/12/13 14:53	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/12/13 14:53	
Hexachlorobenzene	ug/L	ND	5.0	07/12/13 14:53	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/12/13 14:53	
Hexachloroethane	ug/L	ND	5.0	07/12/13 14:53	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/12/13 14:53	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Project No.: 60148422

METHOD BLANK: 1217933

Matrix: Water

Associated Lab Samples: 60148422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/12/13 14:53	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/12/13 14:53	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/12/13 14:53	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/12/13 14:53	
Naphthalene	ug/L	ND	5.0	07/12/13 14:53	
Nitrobenzene	ug/L	ND	5.0	07/12/13 14:53	
Pentachlorophenol	ug/L	ND	5.0	07/12/13 14:53	
Phenanthrene	ug/L	ND	5.0	07/12/13 14:53	
Phenol	ug/L	ND	5.0	07/12/13 14:53	
Pyrene	ug/L	ND	5.0	07/12/13 14:53	
2,4,6-Tribromophenol (S)	%	84	39-119	07/12/13 14:53	
2-Fluorobiphenyl (S)	%	84	36-120	07/12/13 14:53	
2-Fluorophenol (S)	%	40	18-120	07/12/13 14:53	
Nitrobenzene-d5 (S)	%	78	32-120	07/12/13 14:53	
Phenol-d6 (S)	%	26	12-120	07/12/13 14:53	
Terphenyl-d14 (S)	%	90	44-120	07/12/13 14:53	

LABORATORY CONTROL SAMPLE: 1217934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.2	78	44-120	
2,4,6-Trichlorophenol	ug/L	50	41.2	82	48-120	
2,4-Dichlorophenol	ug/L	50	39.1	78	48-120	
2,4-Dimethylphenol	ug/L	50	35.5	71	37-119	
2,4-Dinitrophenol	ug/L	50	39J	78	15-153	
2,4-Dinitrotoluene	ug/L	50	43.2	86	54-120	
2,6-Dinitrotoluene	ug/L	50	42.8	86	52-120	
2-Chloronaphthalene	ug/L	50	41.6	83	60-118	
2-Chlorophenol	ug/L	50	34.9	70	44-120	
2-Nitrophenol	ug/L	50	41.9	84	43-120	
3,3'-Dichlorobenzidine	ug/L	50	53.4	107	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	44.3	89	31-147	
4-Bromophenylphenyl ether	ug/L	50	44.6	89	53-120	
4-Chloro-3-methylphenol	ug/L	50	38.0	76	50-120	
4-Chlorophenylphenyl ether	ug/L	50	42.3	85	54-120	
4-Nitrophenol	ug/L	50	14.9	30	10-120	
Acenaphthene	ug/L	50	42.0	84	51-120	
Acenaphthylene	ug/L	50	41.6	83	51-120	
Anthracene	ug/L	50	44.0	88	54-120	
Benzidine	ug/L	50	27.2J	54	1-124	
Benzo(a)anthracene	ug/L	50	43.7	87	54-120	
Benzo(a)pyrene	ug/L	50	43.0	86	54-120	
Benzo(b)fluoranthene	ug/L	50	44.0	88	57-120	
Benzo(g,h,i)perylene	ug/L	50	43.4	87	54-120	
Benzo(k)fluoranthene	ug/L	50	42.9	86	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

LABORATORY CONTROL SAMPLE: 1217934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	40.6	81	51-120	
bis(2-Chloroethyl) ether	ug/L	50	40.7	81	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	41.2	82	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	44.2	88	51-126	
Butylbenzylphthalate	ug/L	50	44.1	88	45-129	
Chrysene	ug/L	50	44.1	88	54-120	
Di-n-butylphthalate	ug/L	50	44.6	89	57-118	
Di-n-octylphthalate	ug/L	50	43.9	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	43.7	87	56-119	
Diethylphthalate	ug/L	50	42.5	85	55-114	
Dimethylphthalate	ug/L	50	42.9	86	54-112	
Fluoranthene	ug/L	50	44.8	90	56-120	
Fluorene	ug/L	50	42.7	85	59-120	
Hexachloro-1,3-butadiene	ug/L	50	39.3	79	41-116	
Hexachlorobenzene	ug/L	50	43.4	87	53-120	
Hexachlorocyclopentadiene	ug/L	100	60.2	60	31-120	
Hexachloroethane	ug/L	50	38.6	77	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	42.9	86	55-120	
Isophorone	ug/L	50	41.0	82	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	40.2	80	47-120	
N-Nitrosodimethylamine	ug/L	50	23.5	47	28-120	
N-Nitrosodiphenylamine	ug/L	50	42.1	84	53-120	
Naphthalene	ug/L	50	40.1	80	48-120	
Nitrobenzene	ug/L	50	40.7	81	47-120	
Pentachlorophenol	ug/L	50	41.8	84	43-127	
Phenanthrene	ug/L	50	44.2	88	55-120	
Phenol	ug/L	50	13.1	26	15-112	
Pyrene	ug/L	50	44.4	89	55-115	
2,4,6-Tribromophenol (S)	%			82	39-119	
2-Fluorobiphenyl (S)	%			84	36-120	
2-Fluorophenol (S)	%			38	18-120	
Nitrobenzene-d5 (S)	%			79	32-120	M4
Phenol-d6 (S)	%			25	12-120	
Terphenyl-d14 (S)	%			88	44-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

QC Batch:	WET/42271	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148422001		

METHOD BLANK: 1217361 Matrix: Water  
Associated Lab Samples: 60148422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/10/13 09:32	

LABORATORY CONTROL SAMPLE: 1217362

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	39.2	98	78-114	

MATRIX SPIKE SAMPLE: 1217365

Parameter	Units	60148338002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.4	39.4	88	78-114	

SAMPLE DUPLICATE: 1217364

Parameter	Units	60148338001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	29.7	26.2	12	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

QC Batch:	WET/42340	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60148422001		

METHOD BLANK: 1219911 Matrix: Water

Associated Lab Samples: 60148422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/15/13 07:03	

LABORATORY CONTROL SAMPLE: 1219912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.6	108	64-132	

MATRIX SPIKE SAMPLE: 1219916

Parameter	Units	60148121001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.7	26.5	110	64-132	

SAMPLE DUPLICATE: 1219917

Parameter	Units	60148128001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	3.5J		34	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

QC Batch: WET/42288

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60148422001

METHOD BLANK: 1217629

Matrix: Water

Associated Lab Samples: 60148422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/10/13 13:59	

SAMPLE DUPLICATE: 1217630

Parameter	Units	60148421001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6.0	7.0	15	25	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

QC Batch: WET/42284 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148422001

SAMPLE DUPLICATE: 1217466

Parameter	Units	60148432001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.0	0	5	H6

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

QC Batch: WETA/25436

Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1

Analysis Description: 350.1 Ammonia

Associated Lab Samples: 60148422001

METHOD BLANK: 1219015

Matrix: Water

Associated Lab Samples: 60148422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/12/13 13:16	

LABORATORY CONTROL SAMPLE: 1219016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	103	90-110	

MATRIX SPIKE SAMPLE: 1219017

Parameter	Units	60148256001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.7	84	90-110	M1

MATRIX SPIKE SAMPLE: 1219018

Parameter	Units	60148264002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	99	90-110	

SAMPLE DUPLICATE: 1219019

Parameter	Units	60148257002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	1.5	1.5	1	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

QC Batch:	WETA/25405	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60148422001		

METHOD BLANK: 1217491 Matrix: Water  
Associated Lab Samples: 60148422001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/11/13 10:45	

LABORATORY CONTROL SAMPLE: 1217492

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	53.7	107	90-110	

MATRIX SPIKE SAMPLE: 1217494

Parameter	Units	60148259001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	92.7	50	138	91	90-110	

MATRIX SPIKE SAMPLE: 1217495

Parameter	Units	60148403003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	3320	2500	5750	97	90-110	

SAMPLE DUPLICATE: 1217493

Parameter	Units	60147815002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	55.2	54.6	1	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M4 A matrix spike/matrix spike duplicate was not performed for this batch due to sample dilution.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-010

Pace Project No.: 60148422

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148422001	316-010	EPA 200.7	MPRP/23431	EPA 200.7	ICP/18430
60148422001	316-010	EPA 200.7	MPRP/23453	EPA 200.7	ICP/18438
60148422001	316-010	EPA 245.1	MERP/7489	EPA 245.1	MERC/7446
60148422001	316-010	EPA 245.1	MERP/7492	EPA 245.1	MERC/7449
60148422001	316-010	EPA 625	OEXT/39236	EPA 625	MSSV/12437
60148422001	316-010	EPA 624 Low	MSV/54896		
60148422002	TRIP BLANK	EPA 624 Low	MSV/54896		
60148422001	316-010	EPA 1664A	WET/42271		
60148422001	316-010	EPA 1664A	WET/42340		
60148422001	316-010	SM 2540D	WET/42288		
60148422001	316-010	SM 4500-H+B	WET/42284		
60148422001	316-010	EPA 350.1	WETA/25436		
60148422001	316-010	EPA 410.4	WETA/25405		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148422



Optional
Proj Due Date:
Proj Name:

Client Name: Barr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  road

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PLC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 1.0

Date and initials of person examining contents: PV 7/10/13

Temperature should be above freezing to 6°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 type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>PH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Pace containers used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Includes date/time/ID/analyses Matrix:	<u>WT</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>Added 2.0 ml of H2O4 to BP33 pH 6.0/1.5</u> <u>Added 2.5 ml of HNO3 to BP21 pH 6.0/4.0</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed <u>PV</u> Lot # of added preservative <u>12570</u>
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Pace Trip Blank lot # (if purchased):	_____	15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State: _____

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/10/13



July 16, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-011  
Pace Project No.: 60148424

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 10, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

## CERTIFICATIONS

Project: BRIDGETON LF 316-011

Pace Project No.: 60148424

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-011

Pace Project No.: 60148424

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148424001	316-011	Water	07/09/13 08:11	07/10/13 01:50

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-011

Pace Project No.: 60148424

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148424001	316-011	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-011

Pace Project No.: 60148424

Sample: 316-011	Lab ID: 60148424001	Collected: 07/09/13 08:11	Received: 07/10/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>27700</b>	mg/L	2.0	1	07/10/13 09:59	07/15/13 10:45		

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148424

QC Batch: WET/42267

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148424001

METHOD BLANK: 1217316

Matrix: Water

Associated Lab Samples: 60148424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/15/13 10:11	

LABORATORY CONTROL SAMPLE: 1217317

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	195	99	85-115	

SAMPLE DUPLICATE: 1217318

Parameter	Units	60148341002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	ND	ND		17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-011

Pace Project No.: 60148424

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-011

Pace Project No.: 60148424

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148424001	316-011	SM 5210B	WET/42267	SM 5210B	WET/42351

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148424



Client Name: Barr Eng.

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other [X] Roads

Tracking #: Pace Shipping Label Used? Yes [ ] No [X]

Custody Seal on Cooler/Box Present: Yes [X] No [ ] Seals intact: Yes [X] No [ ]

Packing Material: Bubble Wrap [ ] Bubble Bags [ ] Foam [ ] None [ ] Other [X] ZPLC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue None [ ] Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 2.6

Date and initials of person examining contents: 7-10-13 BA

Temperature should be above freezing to 6°C

Table with 17 rows of inspection items and checkboxes. Items include Chain of Custody, Short Hold Time analyses, Rush Turn Around Time, etc.

Client Notification/ Resolution: Copy COC to Client? Y [ ] N [X] Field Data Required? Y [ ] N [X]

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: [Signature] Date: 7/10/13



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**  
Required Client Information:

**Section B**  
Required Project Information:

**Section C**  
Invoice Information:

Page: / of /

Company: <b>BARR ENGINEERING</b>		Report To: <b>ED GALBRAITH</b>		Attention:	
Address:		Copy To: <b>SCOTT C. FEDAK</b>		Company Name: <b>REPUBLIC SERVICES</b>	
Email To:		Purchase Order No.:		Address:	
Phone:	Fax:	Project Name: <b>BRIDGETON LANDFILL</b>		Pace Quote Reference: <b>130426_7588</b>	
Requested Due Date/TAT: <b>5 BUSINESS DAY</b>		Project Number:		Pace Project Manager: <b>Angie Brown 913-563-1402</b>	
				Pace Profile #: <b>6787 line 2</b>	
				<b>REGULATORY AGENCY</b>	
				<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER	
				<input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER	
				Site Location: <b>MO</b>	
				STATE: <u>        </u>	

ITEM #	Section D Required Client Information  SAMPLE ID (A-Z, 0-9 / . -) Sample IDs MUST BE UNIQUE	Valid Matrix Codes MATRIX CODE	COLLECTED	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Y/N	Requested Analysis Filtered (Y/N)				Residual Chlorine (Y/N)		
								DATE	TIME	DATE	TIME		Analysis Test	BOD
		MATRIX CODE	COMPOSITE START			Unpreserved								
		CODE	COMPOSITE END/GRAB			H <sub>2</sub> SO <sub>4</sub>								
						HNO <sub>3</sub>								
						HCl								
						NaOH								
						Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>								
						Methanol								
						Other								
1	316-011	DW		7/9/13	0811	1	1			X			18P14	14
2														
3														
4														
5														
6														
7														
8														
9														
10														
11														
12														

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299		<i>William Abernathy</i>		7/9/13	1645	<i>Bill 554</i>		7/9/13	1647	2.6	Y	Y	Y
SITE ADDRESS: BRIDGETON LF						<i>Shunt Of Pace</i>		7-10-13	0150				
13570 ST. CHARLES ROCK RD													
BRIDGETON MO 63044													

SAMPLER NAME AND SIGNATURE			Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	<i>WILLIAM ABERNATHY</i>					
SIGNATURE of SAMPLER:	<i>William Abernathy</i>	DATE Signed (MM/DD/YY):	7/9/13			

\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.



July 16, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF OB-272  
Pace Project No.: 60148425

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 10, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF OB-272

Pace Project No.: 60148425

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

---

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF OB-272

Pace Project No.: 60148425

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148425001	OB-272	Water	07/09/13 08:39	07/10/13 01:50

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF OB-272

Pace Project No.: 60148425

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>Method</b>	<b>Analysts</b>	<b>Analytes Reported</b>
60148425001	OB-272	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-272

Pace Project No.: 60148425

Sample: OB-272	Lab ID: 60148425001	Collected: 07/09/13 08:39	Received: 07/10/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>34100</b>	mg/L	2.0	1	07/10/13 10:07	07/15/13 10:47		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Pace Project No.: 60148425

QC Batch: WET/42267

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148425001

METHOD BLANK: 1217316

Matrix: Water

Associated Lab Samples: 60148425001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/15/13 10:11	

LABORATORY CONTROL SAMPLE: 1217317

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	195	99	85-115	

SAMPLE DUPLICATE: 1217318

Parameter	Units	60148341002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	ND	ND		17	

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

## QUALIFIERS

Project: BRIDGETON LF OB-272

Pace Project No.: 60148425

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF OB-272

Pace Project No.: 60148425

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148425001	OB-272	SM 5210B	WET/42267	SM 5210B	WET/42351

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..





**Sample Condition Upon Receipt**

WO#: 60148425



60148425

Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  XRoads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2 PLC

Thermometer Used: 112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 3.0

Date and initials of person examining contents: 7-10-13 GA

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/10/13



July 17, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-011  
Pace Project No.: 60148426

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 10, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

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Oklahoma Certification #: 9205/9935

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Utah Certification #: KS000212013-3

Illinois Certification #: 003097

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148426001	316-011	Water	07/09/13 08:11	07/10/13 01:50
60148426002	TRIP BLANK	Water	07/09/13 08:11	07/10/13 01:50

## REPORT OF LABORATORY ANALYSIS

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

### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148426001	316-011	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148426002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

Sample: 316-011		Lab ID: 60148426001	Collected: 07/09/13 08:11	Received: 07/10/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	11200 ug/L		150	2	07/11/13 16:30	07/15/13 16:39	7429-90-5	
Antimony	ND ug/L		50.0	5	07/11/13 16:30	07/15/13 16:42	7440-36-0	D3
Arsenic	652 ug/L		50.0	5	07/11/13 16:30	07/15/13 16:42	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/11/13 16:30	07/15/13 16:42	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/11/13 16:30	07/15/13 16:42	7440-43-9	D3
Chromium	277 ug/L		10.0	2	07/11/13 16:30	07/15/13 16:39	7440-47-3	
Cobalt	71.6 ug/L		25.0	5	07/11/13 16:30	07/15/13 16:42	7440-48-4	
Copper	28.8 ug/L		20.0	2	07/11/13 16:30	07/15/13 16:39	7440-50-8	
Iron	815000 ug/L		100	2	07/11/13 16:30	07/15/13 16:39	7439-89-6	
Lead	198 ug/L		25.0	5	07/11/13 16:30	07/15/13 16:42	7439-92-1	
Nickel	164 ug/L		25.0	5	07/11/13 16:30	07/15/13 16:42	7440-02-0	
Selenium	ND ug/L		75.0	5	07/11/13 16:30	07/15/13 16:42	7782-49-2	D3
Silver	ND ug/L		14.0	2	07/11/13 16:30	07/15/13 16:39	7440-22-4	D3
Thallium	ND ug/L		100	5	07/11/13 16:30	07/15/13 16:42	7440-28-0	D3
Zinc	15700 ug/L		1000	20	07/11/13 16:30	07/15/13 16:46	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	4000 ug/L		150	2	07/12/13 16:20	07/15/13 17:48	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/12/13 16:20	07/15/13 18:18	7440-36-0	D3
Arsenic, Dissolved	527 ug/L		50.0	5	07/12/13 16:20	07/15/13 18:18	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/12/13 16:20	07/15/13 18:18	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/12/13 16:20	07/15/13 18:18	7440-43-9	D3
Chromium, Dissolved	242 ug/L		10.0	2	07/12/13 16:20	07/15/13 17:48	7440-47-3	
Cobalt, Dissolved	54.8 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:18	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/12/13 16:20	07/15/13 17:48	7440-50-8	D3
Iron, Dissolved	551000 ug/L		100	2	07/12/13 16:20	07/15/13 17:48	7439-89-6	
Lead, Dissolved	94.2 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:18	7439-92-1	
Nickel, Dissolved	140 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:18	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/12/13 16:20	07/15/13 18:18	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/12/13 16:20	07/15/13 17:48	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/12/13 16:20	07/15/13 18:18	7440-28-0	D3
Zinc, Dissolved	14500 ug/L		1000	20	07/12/13 16:20	07/15/13 18:42	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	0.30 ug/L		0.20	1	07/10/13 08:45	07/10/13 13:11	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	07/11/13 08:30	07/11/13 11:42	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	83-32-9	
Acenaphthylene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	208-96-8	
Anthracene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	120-12-7	
Benzidine	ND ug/L		5000	10	07/11/13 00:00	07/12/13 16:39	92-87-5	
Benzo(a)anthracene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	56-55-3	
Benzo(a)pyrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	50-32-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

Sample: 316-011	Lab ID: 60148426001	Collected: 07/09/13 08:11	Received: 07/10/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	191-24-2	
Benzo(k)fluoranthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	101-55-3	
Butylbenzylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		600	10	07/11/13 00:00	07/12/13 16:39	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		600	10	07/11/13 00:00	07/12/13 16:39	39638-32-9	
2-Chloronaphthalene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	91-58-7	
2-Chlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	7005-72-3	
Chrysene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		2000	10	07/11/13 00:00	07/12/13 16:39	91-94-1	
2,4-Dichlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	120-83-2	
Diethylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	84-66-2	
2,4-Dimethylphenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	105-67-9	
Dimethylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	131-11-3	
Di-n-butylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		2500	10	07/11/13 00:00	07/12/13 16:39	534-52-1	
2,4-Dinitrophenol	ND ug/L		5000	10	07/11/13 00:00	07/12/13 16:39	51-28-5	
2,4-Dinitrotoluene	ND ug/L		600	10	07/11/13 00:00	07/12/13 16:39	121-14-2	
2,6-Dinitrotoluene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	606-20-2	
Di-n-octylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	117-81-7	
Fluoranthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	206-44-0	
Fluorene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	87-68-3	
Hexachlorobenzene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	77-47-4	
Hexachloroethane	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	193-39-5	
Isophorone	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	78-59-1	
Naphthalene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	91-20-3	
Nitrobenzene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	98-95-3	
2-Nitrophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	88-75-5	
4-Nitrophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	100-02-7	
N-Nitrosodimethylamine	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	86-30-6	
Pentachlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	87-86-5	
Phenanthrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	85-01-8	
Phenol	<b>4770</b> ug/L		500	10	07/11/13 00:00	07/12/13 16:39	108-95-2	
Pyrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 16:39	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

Sample: 316-011		Lab ID: 60148426001	Collected: 07/09/13 08:11	Received: 07/10/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	10	07/11/13 00:00	07/12/13 16:39	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	10	07/11/13 00:00	07/12/13 16:39	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	10	07/11/13 00:00	07/12/13 16:39	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	10	07/11/13 00:00	07/12/13 16:39	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	10	07/11/13 00:00	07/12/13 16:39	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	10	07/11/13 00:00	07/12/13 16:39	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/12/13 14:11	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/12/13 14:11	75-27-4	
Bromoform	ND ug/L		200	200		07/12/13 14:11	75-25-2	
Bromomethane	ND ug/L		1000	200		07/12/13 14:11	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/12/13 14:11	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/12/13 14:11	108-90-7	
Chloroethane	ND ug/L		200	200		07/12/13 14:11	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/12/13 14:11	110-75-8	
Chloroform	ND ug/L		200	200		07/12/13 14:11	67-66-3	
Chloromethane	ND ug/L		200	200		07/12/13 14:11	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/12/13 14:11	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/12/13 14:11	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/12/13 14:11	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/12/13 14:11	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/12/13 14:11	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/12/13 14:11	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/12/13 14:11	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/12/13 14:11	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/12/13 14:11	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/12/13 14:11	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/12/13 14:11	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/12/13 14:11	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/12/13 14:11	100-41-4	
Methylene chloride	ND ug/L		200	200		07/12/13 14:11	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/12/13 14:11	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/12/13 14:11	127-18-4	
Toluene	ND ug/L		200	200		07/12/13 14:11	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/12/13 14:11	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/12/13 14:11	79-00-5	
Trichloroethene	ND ug/L		200	200		07/12/13 14:11	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/12/13 14:11	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/12/13 14:11	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/12/13 14:11	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103 %		80-120	200		07/12/13 14:11	1868-53-7	D3
4-Bromofluorobenzene (S)	98 %		80-120	200		07/12/13 14:11	460-00-4	
Toluene-d8 (S)	99 %		80-120	200		07/12/13 14:11	2037-26-5	
1,2-Dichloroethane-d4 (S)	102 %		80-120	200		07/12/13 14:11	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

<b>Sample: 316-011</b>		<b>Lab ID: 60148426001</b>	Collected: 07/09/13 08:11	Received: 07/10/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/12/13 14:11		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>257</b>	mg/L	5.0	1		07/12/13 07:18		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>13.1</b>	mg/L	5.0	1		07/15/13 07:06		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>1430</b>	mg/L	5.0	1		07/10/13 14:00		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.6</b>	Std. Units	0.10	1		07/10/13 13:45		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>799</b>	mg/L	20.0	200		07/12/13 13:42	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>53700</b>	mg/L	5000	500		07/11/13 10:56		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

Sample: TRIP BLANK		Lab ID: 60148426002	Collected: 07/09/13 08:11	Received: 07/10/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/12/13 14:32	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/12/13 14:32	75-27-4	
Bromoform	ND ug/L		1.0	1		07/12/13 14:32	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/12/13 14:32	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/12/13 14:32	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/12/13 14:32	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/12/13 14:32	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/12/13 14:32	110-75-8	
Chloroform	ND ug/L		1.0	1		07/12/13 14:32	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/12/13 14:32	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/12/13 14:32	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/12/13 14:32	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/12/13 14:32	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/12/13 14:32	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/12/13 14:32	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/12/13 14:32	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/12/13 14:32	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/12/13 14:32	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/12/13 14:32	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/12/13 14:32	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/12/13 14:32	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/12/13 14:32	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/12/13 14:32	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/12/13 14:32	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/12/13 14:32	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/12/13 14:32	127-18-4	
Toluene	ND ug/L		1.0	1		07/12/13 14:32	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/12/13 14:32	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/12/13 14:32	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/12/13 14:32	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/12/13 14:32	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/12/13 14:32	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/12/13 14:32	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102 %		80-120	1		07/12/13 14:32	1868-53-7	
4-Bromofluorobenzene (S)	95 %		80-120	1		07/12/13 14:32	460-00-4	
Toluene-d8 (S)	100 %		80-120	1		07/12/13 14:32	2037-26-5	
1,2-Dichloroethane-d4 (S)	97 %		80-120	1		07/12/13 14:32	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/12/13 14:32		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

QC Batch: MERP/7489 Analysis Method: EPA 245.1  
 QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury  
 Associated Lab Samples: 60148426001

METHOD BLANK: 1217301 Matrix: Water

Associated Lab Samples: 60148426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/10/13 12:37	

LABORATORY CONTROL SAMPLE: 1217302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1217303 1217304

Parameter	Units	60148381002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Mercury	ug/L	ND	5	5	5	5.0	5.2	100	104	70-130	4	20

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

QC Batch:	MERP/7492	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60148426001		

METHOD BLANK: 1217991 Matrix: Water

Associated Lab Samples: 60148426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/11/13 11:27	

LABORATORY CONTROL SAMPLE: 1217992

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.7	115	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1217993 1217994

Parameter	Units	60148422001 Result	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
			Spike Conc.	Conc.	Result	Result	% Rec	% Rec					
Mercury, Dissolved	ug/L	ND	5	5	1.3	1.4	23	25	70-130	6	20	M1	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

QC Batch: MPRP/23431 Analysis Method: EPA 200.7  
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
 Associated Lab Samples: 60148426001

METHOD BLANK: 1218315 Matrix: Water

Associated Lab Samples: 60148426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/15/13 15:57	
Antimony	ug/L	ND	10.0	07/15/13 15:57	
Arsenic	ug/L	ND	10.0	07/15/13 15:57	
Beryllium	ug/L	ND	1.0	07/15/13 15:57	
Cadmium	ug/L	ND	5.0	07/15/13 15:57	
Chromium	ug/L	ND	5.0	07/15/13 15:57	
Cobalt	ug/L	ND	5.0	07/15/13 15:57	
Copper	ug/L	ND	10.0	07/15/13 15:57	
Iron	ug/L	ND	50.0	07/15/13 15:57	
Lead	ug/L	ND	5.0	07/15/13 15:57	
Nickel	ug/L	ND	5.0	07/15/13 15:57	
Selenium	ug/L	ND	15.0	07/15/13 15:57	
Silver	ug/L	ND	7.0	07/15/13 15:57	
Thallium	ug/L	ND	20.0	07/15/13 15:57	
Zinc	ug/L	59.0	50.0	07/15/13 15:57	

LABORATORY CONTROL SAMPLE: 1218316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9700	97	85-115	
Antimony	ug/L	1000	1040	104	85-115	
Arsenic	ug/L	1000	970	97	85-115	
Beryllium	ug/L	1000	964	96	85-115	
Cadmium	ug/L	1000	998	100	85-115	
Chromium	ug/L	1000	941	94	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	1000	100	85-115	
Iron	ug/L	10000	9410	94	85-115	
Lead	ug/L	1000	1030	103	85-115	
Nickel	ug/L	1000	1020	102	85-115	
Selenium	ug/L	1000	1020	102	85-115	
Silver	ug/L	500	488	98	85-115	
Thallium	ug/L	1000	1060	106	85-115	
Zinc	ug/L	1000	950	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1218317 1218318

Parameter	Units	60148544001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Aluminum	ug/L	152	10000	10000	10100	10100	100	99	70-130	0	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

Parameter	Units	60148544001		1218317		1218318		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Antimony	ug/L	ND	1000	1000	1090	1100	109	110	70-130	1	7			
Arsenic	ug/L	ND	1000	1000	1040	1060	104	105	70-130	1	10			
Beryllium	ug/L	ND	1000	1000	959	959	96	96	70-130	0	7			
Cadmium	ug/L	ND	1000	1000	1040	1050	104	105	70-130	1	10			
Chromium	ug/L	ND	1000	1000	961	948	96	95	70-130	1	10			
Cobalt	ug/L	ND	1000	1000	1020	1020	102	102	70-130	0	6			
Copper	ug/L	ND	1000	1000	1040	1050	103	104	70-130	1	11			
Iron	ug/L	176	10000	10000	9590	9480	94	93	70-130	1	10			
Lead	ug/L	ND	1000	1000	1010	1010	101	101	70-130	0	10			
Nickel	ug/L	ND	1000	1000	1030	1030	102	103	70-130	0	10			
Selenium	ug/L	ND	1000	1000	1080	1100	108	110	70-130	2	10			
Silver	ug/L	ND	500	500	507	504	101	101	70-130	1	10			
Thallium	ug/L	ND	1000	1000	1000	1010	100	101	70-130	1	6			
Zinc	ug/L	ND	1000	1000	963	977	93	95	70-130	1	11			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011  
Pace Project No.: 60148426

QC Batch: MPRP/23453      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60148426001

METHOD BLANK: 1219377      Matrix: Water  
Associated Lab Samples: 60148426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/15/13 17:28	
Antimony, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Arsenic, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Beryllium, Dissolved	ug/L	ND	1.0	07/15/13 17:28	
Cadmium, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Chromium, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Cobalt, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Copper, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Iron, Dissolved	ug/L	ND	50.0	07/15/13 17:28	
Lead, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Nickel, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Selenium, Dissolved	ug/L	ND	15.0	07/15/13 17:28	
Silver, Dissolved	ug/L	ND	7.0	07/15/13 17:28	
Thallium, Dissolved	ug/L	ND	20.0	07/15/13 17:28	
Zinc, Dissolved	ug/L	ND	50.0	07/15/13 17:28	

LABORATORY CONTROL SAMPLE: 1219378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9830	98	85-115	
Antimony, Dissolved	ug/L	1000	1010	101	85-115	
Arsenic, Dissolved	ug/L	1000	951	95	85-115	
Beryllium, Dissolved	ug/L	1000	968	97	85-115	
Cadmium, Dissolved	ug/L	1000	978	98	85-115	
Chromium, Dissolved	ug/L	1000	956	96	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	960	96	85-115	
Iron, Dissolved	ug/L	10000	9360	94	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	997	100	85-115	
Silver, Dissolved	ug/L	500	477	95	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	960	96	85-115	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

QC Batch: MSV/54896 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148426001, 60148426002

METHOD BLANK: 1218840 Matrix: Water

Associated Lab Samples: 60148426001, 60148426002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1-Dichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1-Dichloroethene	ug/L	ND	1.0	07/12/13 12:46	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
1,2-Dichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,2-Dichloropropane	ug/L	ND	1.0	07/12/13 12:46	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/12/13 12:46	
Benzene	ug/L	ND	1.0	07/12/13 12:46	
Bromodichloromethane	ug/L	ND	1.0	07/12/13 12:46	
Bromoform	ug/L	ND	1.0	07/12/13 12:46	
Bromomethane	ug/L	ND	5.0	07/12/13 12:46	
Carbon tetrachloride	ug/L	ND	1.0	07/12/13 12:46	
Chlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
Chloroethane	ug/L	ND	1.0	07/12/13 12:46	
Chloroform	ug/L	ND	1.0	07/12/13 12:46	
Chloromethane	ug/L	ND	1.0	07/12/13 12:46	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/12/13 12:46	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/12/13 12:46	
Dibromochloromethane	ug/L	ND	1.0	07/12/13 12:46	
Ethylbenzene	ug/L	ND	1.0	07/12/13 12:46	
Methylene chloride	ug/L	ND	1.0	07/12/13 12:46	
Tetrachloroethene	ug/L	ND	1.0	07/12/13 12:46	
Toluene	ug/L	ND	1.0	07/12/13 12:46	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/12/13 12:46	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/12/13 12:46	
Trichloroethene	ug/L	ND	1.0	07/12/13 12:46	
Trichlorofluoromethane	ug/L	ND	1.0	07/12/13 12:46	
Vinyl chloride	ug/L	ND	1.0	07/12/13 12:46	
Xylene (Total)	ug/L	ND	3.0	07/12/13 12:46	
1,2-Dichloroethane-d4 (S)	%	101	80-120	07/12/13 12:46	
4-Bromofluorobenzene (S)	%	97	80-120	07/12/13 12:46	
Dibromofluoromethane (S)	%	103	80-120	07/12/13 12:46	
Toluene-d8 (S)	%	99	80-120	07/12/13 12:46	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

LABORATORY CONTROL SAMPLE: 1218841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.7	108	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.9	100	59-138	
1,1,2-Trichloroethane	ug/L	20	19.9	99	69-127	
1,1-Dichloroethane	ug/L	20	19.6	98	69-126	
1,1-Dichloroethene	ug/L	20	21.3	107	65-153	
1,2-Dichlorobenzene	ug/L	20	20.3	101	66-126	
1,2-Dichloroethane	ug/L	20	20.6	103	71-129	
1,2-Dichloropropane	ug/L	20	20.1	100	66-140	
1,3-Dichlorobenzene	ug/L	20	20.2	101	63-127	
1,4-Dichlorobenzene	ug/L	20	20.2	101	68-124	
2-Chloroethylvinyl ether	ug/L	20	17.8	89	33-159	
Benzene	ug/L	20	19.2	96	73-129	
Bromodichloromethane	ug/L	20	19.6	98	63-129	
Bromoform	ug/L	20	19.4	97	52-123	
Bromomethane	ug/L	20	21.1	105	10-160	
Carbon tetrachloride	ug/L	20	21.8	109	70-140	
Chlorobenzene	ug/L	20	19.9	99	68-127	
Chloroethane	ug/L	20	21.7	109	42-160	
Chloroform	ug/L	20	20.3	102	60-120	
Chloromethane	ug/L	20	15.8	79	10-160	
cis-1,2-Dichloroethene	ug/L	20	22.1	110	70-125	
cis-1,3-Dichloropropene	ug/L	20	19.5	98	66-132	
Dibromochloromethane	ug/L	20	21.2	106	63-134	
Ethylbenzene	ug/L	20	19.9	99	66-133	
Methylene chloride	ug/L	20	16.9	85	56-135	
Tetrachloroethene	ug/L	20	20.9	104	64-143	
Toluene	ug/L	20	19.6	98	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.7	103	67-149	
trans-1,3-Dichloropropene	ug/L	20	21.3	106	66-138	
Trichloroethene	ug/L	20	19.1	96	71-130	
Trichlorofluoromethane	ug/L	20	19.4	97	58-158	
Vinyl chloride	ug/L	20	17.6	88	41-160	
Xylene (Total)	ug/L	60	58.0	97	67-130	
1,2-Dichloroethane-d4 (S)	%			110	80-120	
4-Bromofluorobenzene (S)	%			103	80-120	
Dibromofluoromethane (S)	%			108	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1218842

Parameter	Units	60148422001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	4540	113	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4000	100	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4120	103	52-150	
1,1-Dichloroethane	ug/L	ND	4000	4030	101	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4520	113	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3980	100	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

MATRIX SPIKE SAMPLE:		1218842		60148422001		Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits		
1,2-Dichloroethane	ug/L	ND	4000	4160	104	4160	104	49-155		
1,2-Dichloropropane	ug/L	ND	4000	4320	108	4320	108	12-160		
1,3-Dichlorobenzene	ug/L	ND	4000	4010	100	4010	100	59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	4050	101	4050	101	18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	4820	121	4820	121	10-160		
Benzene	ug/L	ND	4000	4000	100	4000	100	37-151		
Bromodichloromethane	ug/L	ND	4000	4110	103	4110	103	35-155		
Bromoform	ug/L	ND	4000	4070	102	4070	102	45-133		
Bromomethane	ug/L	ND	4000	4410	110	4410	110	10-160		
Carbon tetrachloride	ug/L	ND	4000	4690	117	4690	117	70-140		
Chlorobenzene	ug/L	ND	4000	4140	104	4140	104	37-153		
Chloroethane	ug/L	ND	4000	4500	113	4500	113	14-160		
Chloroform	ug/L	ND	4000	4180	105	4180	105	51-138		
Chloromethane	ug/L	ND	4000	3380	85	3380	85	10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	4480	112	4480	112	19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	4080	102	4080	102	10-160		
Dibromochloromethane	ug/L	ND	4000	4320	108	4320	108	53-149		
Ethylbenzene	ug/L	ND	4000	4180	104	4180	104	37-154		
Methylene chloride	ug/L	ND	4000	3620	90	3620	90	15-156		
Tetrachloroethene	ug/L	ND	4000	4300	108	4300	108	64-148		
Toluene	ug/L	ND	4000	3980	99	3980	99	47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	4230	106	4230	106	54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	4530	113	4530	113	17-160		
Trichloroethene	ug/L	ND	4000	3810	95	3810	95	71-157		
Trichlorofluoromethane	ug/L	ND	4000	4140	104	4140	104	17-160		
Vinyl chloride	ug/L	ND	4000	3820	96	3820	96	10-160		
Xylene (Total)	ug/L	ND	12000	12000	100	12000	100	12-153		
1,2-Dichloroethane-d4 (S)	%						102	80-120		
4-Bromofluorobenzene (S)	%						98	80-120		
Dibromofluoromethane (S)	%						102	80-120		
Toluene-d8 (S)	%						97	80-120		
Preservation pH			7.0			7.0				

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

QC Batch: OEXT/39236

Analysis Method: EPA 625

QC Batch Method: EPA 625

Analysis Description: 625 MSS

Associated Lab Samples: 60148426001

METHOD BLANK: 1217933

Matrix: Water

Associated Lab Samples: 60148426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/12/13 14:53	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dichlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dimethylphenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dinitrophenol	ug/L	ND	50.0	07/12/13 14:53	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/12/13 14:53	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/12/13 14:53	
2-Chloronaphthalene	ug/L	ND	5.0	07/12/13 14:53	
2-Chlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2-Nitrophenol	ug/L	ND	5.0	07/12/13 14:53	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/12/13 14:53	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/12/13 14:53	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/12/13 14:53	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/12/13 14:53	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/12/13 14:53	
4-Nitrophenol	ug/L	ND	5.0	07/12/13 14:53	
Acenaphthene	ug/L	ND	5.0	07/12/13 14:53	
Acenaphthylene	ug/L	ND	5.0	07/12/13 14:53	
Anthracene	ug/L	ND	5.0	07/12/13 14:53	
Benzidine	ug/L	ND	50.0	07/12/13 14:53	
Benzo(a)anthracene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(a)pyrene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/12/13 14:53	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/12/13 14:53	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/12/13 14:53	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/12/13 14:53	
Butylbenzylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Chrysene	ug/L	ND	5.0	07/12/13 14:53	
Di-n-butylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Di-n-octylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/12/13 14:53	
Diethylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Dimethylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
Fluorene	ug/L	ND	5.0	07/12/13 14:53	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/12/13 14:53	
Hexachlorobenzene	ug/L	ND	5.0	07/12/13 14:53	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/12/13 14:53	
Hexachloroethane	ug/L	ND	5.0	07/12/13 14:53	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/12/13 14:53	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Project No.: 60148426

METHOD BLANK: 1217933

Matrix: Water

Associated Lab Samples: 60148426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/12/13 14:53	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/12/13 14:53	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/12/13 14:53	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/12/13 14:53	
Naphthalene	ug/L	ND	5.0	07/12/13 14:53	
Nitrobenzene	ug/L	ND	5.0	07/12/13 14:53	
Pentachlorophenol	ug/L	ND	5.0	07/12/13 14:53	
Phenanthrene	ug/L	ND	5.0	07/12/13 14:53	
Phenol	ug/L	ND	5.0	07/12/13 14:53	
Pyrene	ug/L	ND	5.0	07/12/13 14:53	
2,4,6-Tribromophenol (S)	%	84	39-119	07/12/13 14:53	
2-Fluorobiphenyl (S)	%	84	36-120	07/12/13 14:53	
2-Fluorophenol (S)	%	40	18-120	07/12/13 14:53	
Nitrobenzene-d5 (S)	%	78	32-120	07/12/13 14:53	
Phenol-d6 (S)	%	26	12-120	07/12/13 14:53	
Terphenyl-d14 (S)	%	90	44-120	07/12/13 14:53	

LABORATORY CONTROL SAMPLE: 1217934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.2	78	44-120	
2,4,6-Trichlorophenol	ug/L	50	41.2	82	48-120	
2,4-Dichlorophenol	ug/L	50	39.1	78	48-120	
2,4-Dimethylphenol	ug/L	50	35.5	71	37-119	
2,4-Dinitrophenol	ug/L	50	39J	78	15-153	
2,4-Dinitrotoluene	ug/L	50	43.2	86	54-120	
2,6-Dinitrotoluene	ug/L	50	42.8	86	52-120	
2-Chloronaphthalene	ug/L	50	41.6	83	60-118	
2-Chlorophenol	ug/L	50	34.9	70	44-120	
2-Nitrophenol	ug/L	50	41.9	84	43-120	
3,3'-Dichlorobenzidine	ug/L	50	53.4	107	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	44.3	89	31-147	
4-Bromophenylphenyl ether	ug/L	50	44.6	89	53-120	
4-Chloro-3-methylphenol	ug/L	50	38.0	76	50-120	
4-Chlorophenylphenyl ether	ug/L	50	42.3	85	54-120	
4-Nitrophenol	ug/L	50	14.9	30	10-120	
Acenaphthene	ug/L	50	42.0	84	51-120	
Acenaphthylene	ug/L	50	41.6	83	51-120	
Anthracene	ug/L	50	44.0	88	54-120	
Benzidine	ug/L	50	27.2J	54	1-124	
Benzo(a)anthracene	ug/L	50	43.7	87	54-120	
Benzo(a)pyrene	ug/L	50	43.0	86	54-120	
Benzo(b)fluoranthene	ug/L	50	44.0	88	57-120	
Benzo(g,h,i)perylene	ug/L	50	43.4	87	54-120	
Benzo(k)fluoranthene	ug/L	50	42.9	86	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

LABORATORY CONTROL SAMPLE: 1217934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	40.6	81	51-120	
bis(2-Chloroethyl) ether	ug/L	50	40.7	81	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	41.2	82	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	44.2	88	51-126	
Butylbenzylphthalate	ug/L	50	44.1	88	45-129	
Chrysene	ug/L	50	44.1	88	54-120	
Di-n-butylphthalate	ug/L	50	44.6	89	57-118	
Di-n-octylphthalate	ug/L	50	43.9	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	43.7	87	56-119	
Diethylphthalate	ug/L	50	42.5	85	55-114	
Dimethylphthalate	ug/L	50	42.9	86	54-112	
Fluoranthene	ug/L	50	44.8	90	56-120	
Fluorene	ug/L	50	42.7	85	59-120	
Hexachloro-1,3-butadiene	ug/L	50	39.3	79	41-116	
Hexachlorobenzene	ug/L	50	43.4	87	53-120	
Hexachlorocyclopentadiene	ug/L	100	60.2	60	31-120	
Hexachloroethane	ug/L	50	38.6	77	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	42.9	86	55-120	
Isophorone	ug/L	50	41.0	82	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	40.2	80	47-120	
N-Nitrosodimethylamine	ug/L	50	23.5	47	28-120	
N-Nitrosodiphenylamine	ug/L	50	42.1	84	53-120	
Naphthalene	ug/L	50	40.1	80	48-120	
Nitrobenzene	ug/L	50	40.7	81	47-120	
Pentachlorophenol	ug/L	50	41.8	84	43-127	
Phenanthrene	ug/L	50	44.2	88	55-120	
Phenol	ug/L	50	13.1	26	15-112	
Pyrene	ug/L	50	44.4	89	55-115	
2,4,6-Tribromophenol (S)	%			82	39-119	
2-Fluorobiphenyl (S)	%			84	36-120	
2-Fluorophenol (S)	%			38	18-120	
Nitrobenzene-d5 (S)	%			79	32-120	M4
Phenol-d6 (S)	%			25	12-120	
Terphenyl-d14 (S)	%			88	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

QC Batch:	WET/42303	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148426001		

METHOD BLANK: 1218244 Matrix: Water

Associated Lab Samples: 60148426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/11/13 12:07	

LABORATORY CONTROL SAMPLE: 1218245

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.0	90	78-114	

MATRIX SPIKE SAMPLE: 1218246

Parameter	Units	60148363002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	270	44	1090	1874	78-114	M1

SAMPLE DUPLICATE: 1218636

Parameter	Units	60148419003 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	6.3	3.2J		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

QC Batch:	WET/42340	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60148426001		

METHOD BLANK: 1219911 Matrix: Water

Associated Lab Samples: 60148426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/15/13 07:03	

LABORATORY CONTROL SAMPLE: 1219912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.6	108	64-132	

MATRIX SPIKE SAMPLE: 1219916

Parameter	Units	60148121001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.7	26.5	110	64-132	

SAMPLE DUPLICATE: 1219917

Parameter	Units	60148128001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	3.5J		34	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

QC Batch: WET/42288

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60148426001

METHOD BLANK: 1217629

Matrix: Water

Associated Lab Samples: 60148426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/10/13 13:59	

SAMPLE DUPLICATE: 1217630

Parameter	Units	60148421001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6.0	7.0	15	25	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

QC Batch: WET/42284 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148426001

SAMPLE DUPLICATE: 1217466

Parameter	Units	60148432001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.0	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

QC Batch: WETA/25436

Analysis Method: EPA 350.1

QC Batch Method: EPA 350.1

Analysis Description: 350.1 Ammonia

Associated Lab Samples: 60148426001

METHOD BLANK: 1219015

Matrix: Water

Associated Lab Samples: 60148426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/12/13 13:16	

LABORATORY CONTROL SAMPLE: 1219016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	103	90-110	

MATRIX SPIKE SAMPLE: 1219017

Parameter	Units	60148256001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.7	84	90-110	M1

MATRIX SPIKE SAMPLE: 1219018

Parameter	Units	60148264002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	99	90-110	

SAMPLE DUPLICATE: 1219019

Parameter	Units	60148257002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	1.5	1.5	1	18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

QC Batch:	WETA/25405	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60148426001		

METHOD BLANK: 1217491 Matrix: Water

Associated Lab Samples: 60148426001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/11/13 10:45	

LABORATORY CONTROL SAMPLE: 1217492

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	53.7	107	90-110	

MATRIX SPIKE SAMPLE: 1217494

Parameter	Units	60148259001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	92.7	50	138	91	90-110	

MATRIX SPIKE SAMPLE: 1217495

Parameter	Units	60148403003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	3320	2500	5750	97	90-110	

SAMPLE DUPLICATE: 1217493

Parameter	Units	60147815002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	55.2	54.6	1	25	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M4 A matrix spike/matrix spike duplicate was not performed for this batch due to sample dilution.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-011

Pace Project No.: 60148426

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148426001	316-011	EPA 200.7	MPRP/23431	EPA 200.7	ICP/18430
60148426001	316-011	EPA 200.7	MPRP/23453	EPA 200.7	ICP/18438
60148426001	316-011	EPA 245.1	MERP/7489	EPA 245.1	MERC/7446
60148426001	316-011	EPA 245.1	MERP/7492	EPA 245.1	MERC/7449
60148426001	316-011	EPA 625	OEXT/39236	EPA 625	MSSV/12437
60148426001	316-011	EPA 624 Low	MSV/54896		
60148426002	TRIP BLANK	EPA 624 Low	MSV/54896		
60148426001	316-011	EPA 1664A	WET/42303		
60148426001	316-011	EPA 1664A	WET/42340		
60148426001	316-011	SM 2540D	WET/42288		
60148426001	316-011	SM 4500-H+B	WET/42284		
60148426001	316-011	EPA 350.1	WETA/25436		
60148426001	316-011	EPA 410.4	WETA/25405		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148426



Client Name: Barr Eng

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  ST roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PLC

Thermometer Used: -112 / T-194 Type of Ice:  Ice Blue  None  Samples received on ice, cooling process has begun.  
(circle one)

Cooler Temperature: 2.6 Date and initials of person examining contents: 7-10-13 BA

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>pH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. Initial <u>HNO3 6.0</u> <u>H2SO4 6.0</u> Added 2.0 mL HNO3 Final <u>7.5</u> <u>3.5</u> Added 2.0 mL H2SO4
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: <u>VOA</u> coliform, TOC, <u>O&amp;G</u> WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>BA</u> Lot # of added preservative <u>12510</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>covered by label</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/10/13



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page : 1 Of 1

<b>Section A</b>	<b>Section B</b>	<b>Section C</b>
<b>Required Client Information:</b>	<b>Required Project Information:</b>	<b>Invoice Information:</b>
Company: BARR ENGINEERING	Report To: ED GALBRAITH/BARR	Attention: TABITHA PROVINCE
Address:	Copy To: SCOTT FEDAK/FEEZOR DANA BAKER/MARGARET TREANOR -BARR	Company Name: REPUBLIC SERVICES
Address:		Address: BRIDGETON, MO 63044
Email To:	Purchase Order No. PO 3727110	Pace Quote Reference: 130426_7588
Phone: (816) 285-8410	Client Project ID: BRIDGETON LF	Pace Project Manager: Brown, Angie
Requested Due Date/TAT: 10 Day (Default)	Container Order Number:	Pace Profile #: 6787 LINE 2
<b>Regulatory Agency</b>		
<b>State / Location</b>		
<b>Missouri</b>		

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9, -, ) Sample Ids must be unique	MATRIX CODE (see valid codes to left) MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analytes Test Y/N	Requested Analysis Filtered (Y/N)														Residual Chlorine (Y/N)			
				START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	COD EPA 410	pH SW 4500HHB		LF DIS. METALS 200.7/245	TOTAL METALS 200.7/245	AMMONIA EPA 350	OIG EPA 1664	625 SVOCs	VOCs EPA 624	TSS SM2540D	TPH/HEM-SGT 1664										
				DATE	TIME	DATE	TIME																															
1	3A914 2A914 316-0118P24 18P25-9 18P24-9 5D914	OT	G	7/9/13	0811			13	9	1	1	2						X	X	X	X	X	X	X	X	X	X											METALS LIST total & LF Dis:
2	TRIP BLANK							2	2																			X								Al, Sb, As, Be, Cd, Cr,		
3																																				Co, Cu, Fe, Pb, Ni, Se, Ag, Ti, Zn		
4																																			and Mercury			
5																																						
6																																						
7																																						
8																																						
9																																						
10																																						
11																																						
12																																						
ADDITIONAL COMMENTS				RELINQUISHED BY / AFFILIATION				DATE	TIME	ACCEPTED BY / AFFILIATION				DATE	TIME	SAMPLE CONDITIONS																						
SITE CONTACT: BILL ABERNATHY 314-502-1299				Bill Abernathy				7/9/13	1645	Bill Abernathy				7/10/13	1649	2-C Y Y Y																						
SITE ADDRESS: BRIDGETON LF														7-10-13	0150																							
13570 ST. CHARLES ROCK RD																																						
BRIDGETON MO 63044																																						

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:					
SIGNATURE of SAMPLER:	DATE Signed:				
Bill Abernathy					
Bill Abernathy					
7/9/13					



July 17, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF OB-272  
Pace Project No.: 60148427

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 10, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148427001	OB-272	Water	07/09/13 08:39	07/10/13 01:50
60148427002	TRIP BLANK	Water	07/09/13 08:39	07/10/13 01:50

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148427001	OB-272	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148427002	TRIP BLANK	EPA 624 Low

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

Sample: OB-272	Lab ID: 60148427001	Collected: 07/09/13 08:39	Received: 07/10/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum	6410 ug/L		150	2	07/11/13 16:30	07/15/13 16:59	7429-90-5	
Antimony	ND ug/L		50.0	5	07/11/13 16:30	07/15/13 16:49	7440-36-0	D3
Arsenic	593 ug/L		50.0	5	07/11/13 16:30	07/15/13 16:49	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/11/13 16:30	07/15/13 16:49	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/11/13 16:30	07/15/13 16:49	7440-43-9	D3
Chromium	293 ug/L		25.0	5	07/11/13 16:30	07/15/13 16:49	7440-47-3	
Cobalt	61.8 ug/L		25.0	5	07/11/13 16:30	07/15/13 16:49	7440-48-4	
Copper	ND ug/L		50.0	5	07/11/13 16:30	07/15/13 16:49	7440-50-8	D3
Iron	858000 ug/L		100	2	07/11/13 16:30	07/15/13 16:59	7439-89-6	
Lead	169 ug/L		25.0	5	07/11/13 16:30	07/15/13 16:49	7439-92-1	
Nickel	160 ug/L		25.0	5	07/11/13 16:30	07/15/13 16:49	7440-02-0	
Selenium	ND ug/L		75.0	5	07/11/13 16:30	07/15/13 16:49	7782-49-2	D3
Silver	ND ug/L		35.0	5	07/11/13 16:30	07/15/13 16:49	7440-22-4	D3
Thallium	ND ug/L		100	5	07/11/13 16:30	07/15/13 16:49	7440-28-0	D3
Zinc	19800 ug/L		1000	20	07/11/13 16:30	07/15/13 17:02	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum, Dissolved	5160 ug/L		150	2	07/12/13 16:20	07/15/13 17:51	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/12/13 16:20	07/15/13 18:22	7440-36-0	D3
Arsenic, Dissolved	544 ug/L		50.0	5	07/12/13 16:20	07/15/13 18:22	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/12/13 16:20	07/15/13 18:22	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/12/13 16:20	07/15/13 18:22	7440-43-9	D3
Chromium, Dissolved	268 ug/L		10.0	2	07/12/13 16:20	07/15/13 17:51	7440-47-3	
Cobalt, Dissolved	60.0 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:22	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/12/13 16:20	07/15/13 17:51	7440-50-8	D3
Iron, Dissolved	776000 ug/L		100	2	07/12/13 16:20	07/15/13 17:51	7439-89-6	
Lead, Dissolved	116 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:22	7439-92-1	
Nickel, Dissolved	158 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:22	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/12/13 16:20	07/15/13 18:22	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/12/13 16:20	07/15/13 17:51	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/12/13 16:20	07/15/13 18:22	7440-28-0	D3
Zinc, Dissolved	19700 ug/L		1000	20	07/12/13 16:20	07/15/13 18:45	7440-66-6	
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury	ND ug/L		0.20	1	07/10/13 08:45	07/10/13 13:13	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND ug/L		0.20	1	07/11/13 08:30	07/11/13 11:44	7439-97-6	
<b>625 MSSV</b>								
Analytical Method: EPA 625 Preparation Method: EPA 625								
Acenaphthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	83-32-9	
Acenaphthylene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	208-96-8	
Anthracene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	120-12-7	
Benzidine	ND ug/L		5000	10	07/11/13 00:00	07/12/13 17:00	92-87-5	
Benzo(a)anthracene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	56-55-3	
Benzo(a)pyrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	50-32-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

Sample: OB-272	Lab ID: 60148427001	Collected: 07/09/13 08:39	Received: 07/10/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	191-24-2	
Benzo(k)fluoranthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	101-55-3	
Butylbenzylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		600	10	07/11/13 00:00	07/12/13 17:00	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		600	10	07/11/13 00:00	07/12/13 17:00	39638-32-9	
2-Chloronaphthalene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	91-58-7	
2-Chlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	7005-72-3	
Chrysene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		2000	10	07/11/13 00:00	07/12/13 17:00	91-94-1	
2,4-Dichlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	120-83-2	
Diethylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	84-66-2	
2,4-Dimethylphenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	105-67-9	
Dimethylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	131-11-3	
Di-n-butylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		2500	10	07/11/13 00:00	07/12/13 17:00	534-52-1	
2,4-Dinitrophenol	ND ug/L		5000	10	07/11/13 00:00	07/12/13 17:00	51-28-5	
2,4-Dinitrotoluene	ND ug/L		600	10	07/11/13 00:00	07/12/13 17:00	121-14-2	
2,6-Dinitrotoluene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	606-20-2	
Di-n-octylphthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	117-81-7	
Fluoranthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	206-44-0	
Fluorene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	87-68-3	
Hexachlorobenzene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	77-47-4	
Hexachloroethane	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	193-39-5	
Isophorone	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	78-59-1	
Naphthalene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	91-20-3	
Nitrobenzene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	98-95-3	
2-Nitrophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	88-75-5	
4-Nitrophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	100-02-7	
N-Nitrosodimethylamine	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	86-30-6	
Pentachlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	87-86-5	
Phenanthrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	85-01-8	
Phenol	<b>6160</b> ug/L		500	10	07/11/13 00:00	07/12/13 17:00	108-95-2	
Pyrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:00	88-06-2	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

**Sample: OB-272**      **Lab ID: 60148427001**      Collected: 07/09/13 08:39      Received: 07/10/13 01:50      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**625 MSSV**

Analytical Method: EPA 625      Preparation Method: EPA 625

**Surrogates**

Nitrobenzene-d5 (S)	0 %		32-120	10	07/11/13 00:00	07/12/13 17:00	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	10	07/11/13 00:00	07/12/13 17:00	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	10	07/11/13 00:00	07/12/13 17:00	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	10	07/11/13 00:00	07/12/13 17:00	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	10	07/11/13 00:00	07/12/13 17:00	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	10	07/11/13 00:00	07/12/13 17:00	118-79-6	S4

**624 Volatile Organics**

Analytical Method: EPA 624 Low

Benzene	ND ug/L		200	200		07/12/13 14:53	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/12/13 14:53	75-27-4	
Bromoform	ND ug/L		200	200		07/12/13 14:53	75-25-2	
Bromomethane	ND ug/L		1000	200		07/12/13 14:53	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/12/13 14:53	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/12/13 14:53	108-90-7	
Chloroethane	ND ug/L		200	200		07/12/13 14:53	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/12/13 14:53	110-75-8	
Chloroform	ND ug/L		200	200		07/12/13 14:53	67-66-3	
Chloromethane	ND ug/L		200	200		07/12/13 14:53	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/12/13 14:53	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/12/13 14:53	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/12/13 14:53	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/12/13 14:53	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/12/13 14:53	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/12/13 14:53	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/12/13 14:53	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/12/13 14:53	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/12/13 14:53	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/12/13 14:53	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/12/13 14:53	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/12/13 14:53	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/12/13 14:53	100-41-4	
Methylene chloride	ND ug/L		200	200		07/12/13 14:53	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/12/13 14:53	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/12/13 14:53	127-18-4	
Toluene	ND ug/L		200	200		07/12/13 14:53	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/12/13 14:53	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/12/13 14:53	79-00-5	
Trichloroethene	ND ug/L		200	200		07/12/13 14:53	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/12/13 14:53	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/12/13 14:53	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/12/13 14:53	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103 %		80-120	200		07/12/13 14:53	1868-53-7	D3
4-Bromofluorobenzene (S)	94 %		80-120	200		07/12/13 14:53	460-00-4	
Toluene-d8 (S)	99 %		80-120	200		07/12/13 14:53	2037-26-5	
1,2-Dichloroethane-d4 (S)	105 %		80-120	200		07/12/13 14:53	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

<b>Sample: OB-272</b>		<b>Lab ID: 60148427001</b>	Collected: 07/09/13 08:39	Received: 07/10/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/12/13 14:53		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>64.8</b>	mg/L	5.0	1		07/12/13 07:18		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	ND	mg/L	5.0	1		07/15/13 07:06		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>490</b>	mg/L	5.0	1		07/10/13 14:01		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.4</b>	Std. Units	0.10	1		07/10/13 13:45		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>754</b>	mg/L	20.0	200		07/12/13 13:43	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>69100</b>	mg/L	5000	500		07/11/13 10:57		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

Sample: TRIP BLANK	Lab ID: 60148427002	Collected: 07/09/13 08:39	Received: 07/10/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/12/13 15:14	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/12/13 15:14	75-27-4	
Bromoform	ND ug/L		1.0	1		07/12/13 15:14	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/12/13 15:14	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/12/13 15:14	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/12/13 15:14	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/12/13 15:14	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/12/13 15:14	110-75-8	
Chloroform	ND ug/L		1.0	1		07/12/13 15:14	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/12/13 15:14	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/12/13 15:14	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/12/13 15:14	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/12/13 15:14	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/12/13 15:14	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/12/13 15:14	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/12/13 15:14	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/12/13 15:14	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/12/13 15:14	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/12/13 15:14	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/12/13 15:14	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/12/13 15:14	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/12/13 15:14	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/12/13 15:14	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/12/13 15:14	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/12/13 15:14	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/12/13 15:14	127-18-4	
Toluene	ND ug/L		1.0	1		07/12/13 15:14	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/12/13 15:14	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/12/13 15:14	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/12/13 15:14	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/12/13 15:14	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/12/13 15:14	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/12/13 15:14	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103 %		80-120	1		07/12/13 15:14	1868-53-7	
4-Bromofluorobenzene (S)	94 %		80-120	1		07/12/13 15:14	460-00-4	
Toluene-d8 (S)	100 %		80-120	1		07/12/13 15:14	2037-26-5	
1,2-Dichloroethane-d4 (S)	103 %		80-120	1		07/12/13 15:14	17060-07-0	
Preservation pH	7.0		1.0	1		07/12/13 15:14		

## REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

QC Batch: MERP/7489 Analysis Method: EPA 245.1  
 QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury  
 Associated Lab Samples: 60148427001

METHOD BLANK: 1217301 Matrix: Water

Associated Lab Samples: 60148427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/10/13 12:37	

LABORATORY CONTROL SAMPLE: 1217302

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1217303 1217304

Parameter	Units	60148381002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L	ND	5	5	5	5.0	5.2	100	104	70-130	4	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

QC Batch: MERP/7492

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury - Dissolved

Associated Lab Samples: 60148427001

METHOD BLANK: 1217991

Matrix: Water

Associated Lab Samples: 60148427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/11/13 11:27	

LABORATORY CONTROL SAMPLE: 1217992

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.7	115	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1217993

1217994

Parameter	Units	60148422001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury, Dissolved	ug/L	ND	5	5	1.3	1.4	23	25	70-130	6	20	M1

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

QC Batch: MPRP/23431 Analysis Method: EPA 200.7  
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
 Associated Lab Samples: 60148427001

METHOD BLANK: 1218315 Matrix: Water

Associated Lab Samples: 60148427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/15/13 15:57	
Antimony	ug/L	ND	10.0	07/15/13 15:57	
Arsenic	ug/L	ND	10.0	07/15/13 15:57	
Beryllium	ug/L	ND	1.0	07/15/13 15:57	
Cadmium	ug/L	ND	5.0	07/15/13 15:57	
Chromium	ug/L	ND	5.0	07/15/13 15:57	
Cobalt	ug/L	ND	5.0	07/15/13 15:57	
Copper	ug/L	ND	10.0	07/15/13 15:57	
Iron	ug/L	ND	50.0	07/15/13 15:57	
Lead	ug/L	ND	5.0	07/15/13 15:57	
Nickel	ug/L	ND	5.0	07/15/13 15:57	
Selenium	ug/L	ND	15.0	07/15/13 15:57	
Silver	ug/L	ND	7.0	07/15/13 15:57	
Thallium	ug/L	ND	20.0	07/15/13 15:57	
Zinc	ug/L	59.0	50.0	07/15/13 15:57	

LABORATORY CONTROL SAMPLE: 1218316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9700	97	85-115	
Antimony	ug/L	1000	1040	104	85-115	
Arsenic	ug/L	1000	970	97	85-115	
Beryllium	ug/L	1000	964	96	85-115	
Cadmium	ug/L	1000	998	100	85-115	
Chromium	ug/L	1000	941	94	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	1000	100	85-115	
Iron	ug/L	10000	9410	94	85-115	
Lead	ug/L	1000	1030	103	85-115	
Nickel	ug/L	1000	1020	102	85-115	
Selenium	ug/L	1000	1020	102	85-115	
Silver	ug/L	500	488	98	85-115	
Thallium	ug/L	1000	1060	106	85-115	
Zinc	ug/L	1000	950	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1218317 1218318

Parameter	Units	60148544001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Aluminum	ug/L	152	10000	10000	10100	10100	100	99	70-130	0	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

Parameter	Units	60148544001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max	RPD	Qual
		Result	Conc.	Spike	Conc.	Result	Result	% Rec	% Rec								
Antimony	ug/L	ND	1000	1000	1000	1090	1100	109	110	70-130	1	7					
Arsenic	ug/L	ND	1000	1000	1000	1040	1060	104	105	70-130	1	10					
Beryllium	ug/L	ND	1000	1000	1000	959	959	96	96	70-130	0	7					
Cadmium	ug/L	ND	1000	1000	1000	1040	1050	104	105	70-130	1	10					
Chromium	ug/L	ND	1000	1000	1000	961	948	96	95	70-130	1	10					
Cobalt	ug/L	ND	1000	1000	1000	1020	1020	102	102	70-130	0	6					
Copper	ug/L	ND	1000	1000	1000	1040	1050	103	104	70-130	1	11					
Iron	ug/L	176	10000	10000	10000	9590	9480	94	93	70-130	1	10					
Lead	ug/L	ND	1000	1000	1000	1010	1010	101	101	70-130	0	10					
Nickel	ug/L	ND	1000	1000	1000	1030	1030	102	103	70-130	0	10					
Selenium	ug/L	ND	1000	1000	1000	1080	1100	108	110	70-130	2	10					
Silver	ug/L	ND	500	500	500	507	504	101	101	70-130	1	10					
Thallium	ug/L	ND	1000	1000	1000	1000	1010	100	101	70-130	1	6					
Zinc	ug/L	ND	1000	1000	1000	963	977	93	95	70-130	1	11					

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272  
Pace Project No.: 60148427

QC Batch: MPRP/23453      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60148427001

METHOD BLANK: 1219377      Matrix: Water  
Associated Lab Samples: 60148427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/15/13 17:28	
Antimony, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Arsenic, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Beryllium, Dissolved	ug/L	ND	1.0	07/15/13 17:28	
Cadmium, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Chromium, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Cobalt, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Copper, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Iron, Dissolved	ug/L	ND	50.0	07/15/13 17:28	
Lead, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Nickel, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Selenium, Dissolved	ug/L	ND	15.0	07/15/13 17:28	
Silver, Dissolved	ug/L	ND	7.0	07/15/13 17:28	
Thallium, Dissolved	ug/L	ND	20.0	07/15/13 17:28	
Zinc, Dissolved	ug/L	ND	50.0	07/15/13 17:28	

LABORATORY CONTROL SAMPLE: 1219378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9830	98	85-115	
Antimony, Dissolved	ug/L	1000	1010	101	85-115	
Arsenic, Dissolved	ug/L	1000	951	95	85-115	
Beryllium, Dissolved	ug/L	1000	968	97	85-115	
Cadmium, Dissolved	ug/L	1000	978	98	85-115	
Chromium, Dissolved	ug/L	1000	956	96	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	960	96	85-115	
Iron, Dissolved	ug/L	10000	9360	94	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	997	100	85-115	
Silver, Dissolved	ug/L	500	477	95	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	960	96	85-115	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

QC Batch: MSV/54896 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148427001, 60148427002

METHOD BLANK: 1218840 Matrix: Water

Associated Lab Samples: 60148427001, 60148427002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1-Dichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,1-Dichloroethene	ug/L	ND	1.0	07/12/13 12:46	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
1,2-Dichloroethane	ug/L	ND	1.0	07/12/13 12:46	
1,2-Dichloropropane	ug/L	ND	1.0	07/12/13 12:46	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/12/13 12:46	
Benzene	ug/L	ND	1.0	07/12/13 12:46	
Bromodichloromethane	ug/L	ND	1.0	07/12/13 12:46	
Bromoform	ug/L	ND	1.0	07/12/13 12:46	
Bromomethane	ug/L	ND	5.0	07/12/13 12:46	
Carbon tetrachloride	ug/L	ND	1.0	07/12/13 12:46	
Chlorobenzene	ug/L	ND	1.0	07/12/13 12:46	
Chloroethane	ug/L	ND	1.0	07/12/13 12:46	
Chloroform	ug/L	ND	1.0	07/12/13 12:46	
Chloromethane	ug/L	ND	1.0	07/12/13 12:46	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/12/13 12:46	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/12/13 12:46	
Dibromochloromethane	ug/L	ND	1.0	07/12/13 12:46	
Ethylbenzene	ug/L	ND	1.0	07/12/13 12:46	
Methylene chloride	ug/L	ND	1.0	07/12/13 12:46	
Tetrachloroethene	ug/L	ND	1.0	07/12/13 12:46	
Toluene	ug/L	ND	1.0	07/12/13 12:46	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/12/13 12:46	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/12/13 12:46	
Trichloroethene	ug/L	ND	1.0	07/12/13 12:46	
Trichlorofluoromethane	ug/L	ND	1.0	07/12/13 12:46	
Vinyl chloride	ug/L	ND	1.0	07/12/13 12:46	
Xylene (Total)	ug/L	ND	3.0	07/12/13 12:46	
1,2-Dichloroethane-d4 (S)	%	101	80-120	07/12/13 12:46	
4-Bromofluorobenzene (S)	%	97	80-120	07/12/13 12:46	
Dibromofluoromethane (S)	%	103	80-120	07/12/13 12:46	
Toluene-d8 (S)	%	99	80-120	07/12/13 12:46	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

LABORATORY CONTROL SAMPLE: 1218841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.7	108	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.9	100	59-138	
1,1,2-Trichloroethane	ug/L	20	19.9	99	69-127	
1,1-Dichloroethane	ug/L	20	19.6	98	69-126	
1,1-Dichloroethene	ug/L	20	21.3	107	65-153	
1,2-Dichlorobenzene	ug/L	20	20.3	101	66-126	
1,2-Dichloroethane	ug/L	20	20.6	103	71-129	
1,2-Dichloropropane	ug/L	20	20.1	100	66-140	
1,3-Dichlorobenzene	ug/L	20	20.2	101	63-127	
1,4-Dichlorobenzene	ug/L	20	20.2	101	68-124	
2-Chloroethylvinyl ether	ug/L	20	17.8	89	33-159	
Benzene	ug/L	20	19.2	96	73-129	
Bromodichloromethane	ug/L	20	19.6	98	63-129	
Bromoform	ug/L	20	19.4	97	52-123	
Bromomethane	ug/L	20	21.1	105	10-160	
Carbon tetrachloride	ug/L	20	21.8	109	70-140	
Chlorobenzene	ug/L	20	19.9	99	68-127	
Chloroethane	ug/L	20	21.7	109	42-160	
Chloroform	ug/L	20	20.3	102	60-120	
Chloromethane	ug/L	20	15.8	79	10-160	
cis-1,2-Dichloroethene	ug/L	20	22.1	110	70-125	
cis-1,3-Dichloropropene	ug/L	20	19.5	98	66-132	
Dibromochloromethane	ug/L	20	21.2	106	63-134	
Ethylbenzene	ug/L	20	19.9	99	66-133	
Methylene chloride	ug/L	20	16.9	85	56-135	
Tetrachloroethene	ug/L	20	20.9	104	64-143	
Toluene	ug/L	20	19.6	98	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.7	103	67-149	
trans-1,3-Dichloropropene	ug/L	20	21.3	106	66-138	
Trichloroethene	ug/L	20	19.1	96	71-130	
Trichlorofluoromethane	ug/L	20	19.4	97	58-158	
Vinyl chloride	ug/L	20	17.6	88	41-160	
Xylene (Total)	ug/L	60	58.0	97	67-130	
1,2-Dichloroethane-d4 (S)	%			110	80-120	
4-Bromofluorobenzene (S)	%			103	80-120	
Dibromofluoromethane (S)	%			108	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1218842

Parameter	Units	60148422001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	4540	113	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4000	100	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4120	103	52-150	
1,1-Dichloroethane	ug/L	ND	4000	4030	101	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4520	113	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3980	100	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

MATRIX SPIKE SAMPLE:		1218842		60148422001		Spike		MS		MS		% Rec		Qualifiers	
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits							
1,2-Dichloroethane	ug/L	ND	4000	4160	104	49-155									
1,2-Dichloropropane	ug/L	ND	4000	4320	108	12-160									
1,3-Dichlorobenzene	ug/L	ND	4000	4010	100	59-146									
1,4-Dichlorobenzene	ug/L	ND	4000	4050	101	18-147									
2-Chloroethylvinyl ether	ug/L	ND	4000	4820	121	10-160									
Benzene	ug/L	ND	4000	4000	100	37-151									
Bromodichloromethane	ug/L	ND	4000	4110	103	35-155									
Bromoform	ug/L	ND	4000	4070	102	45-133									
Bromomethane	ug/L	ND	4000	4410	110	10-160									
Carbon tetrachloride	ug/L	ND	4000	4690	117	70-140									
Chlorobenzene	ug/L	ND	4000	4140	104	37-153									
Chloroethane	ug/L	ND	4000	4500	113	14-160									
Chloroform	ug/L	ND	4000	4180	105	51-138									
Chloromethane	ug/L	ND	4000	3380	85	10-160									
cis-1,2-Dichloroethene	ug/L	ND	4000	4480	112	19-160									
cis-1,3-Dichloropropene	ug/L	ND	4000	4080	102	10-160									
Dibromochloromethane	ug/L	ND	4000	4320	108	53-149									
Ethylbenzene	ug/L	ND	4000	4180	104	37-154									
Methylene chloride	ug/L	ND	4000	3620	90	15-156									
Tetrachloroethene	ug/L	ND	4000	4300	108	64-148									
Toluene	ug/L	ND	4000	3980	99	47-150									
trans-1,2-Dichloroethene	ug/L	ND	4000	4230	106	54-156									
trans-1,3-Dichloropropene	ug/L	ND	4000	4530	113	17-160									
Trichloroethene	ug/L	ND	4000	3810	95	71-157									
Trichlorofluoromethane	ug/L	ND	4000	4140	104	17-160									
Vinyl chloride	ug/L	ND	4000	3820	96	10-160									
Xylene (Total)	ug/L	ND	12000	12000	100	12-153									
1,2-Dichloroethane-d4 (S)	%				102	80-120									
4-Bromofluorobenzene (S)	%				98	80-120									
Dibromofluoromethane (S)	%				102	80-120									
Toluene-d8 (S)	%				97	80-120									
Preservation pH			7.0		7.0										

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272  
Pace Project No.: 60148427

QC Batch: OEXT/39236 Analysis Method: EPA 625  
QC Batch Method: EPA 625 Analysis Description: 625 MSS  
Associated Lab Samples: 60148427001

METHOD BLANK: 1217933 Matrix: Water  
Associated Lab Samples: 60148427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/12/13 14:53	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dichlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dimethylphenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dinitrophenol	ug/L	ND	50.0	07/12/13 14:53	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/12/13 14:53	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/12/13 14:53	
2-Chloronaphthalene	ug/L	ND	5.0	07/12/13 14:53	
2-Chlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2-Nitrophenol	ug/L	ND	5.0	07/12/13 14:53	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/12/13 14:53	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/12/13 14:53	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/12/13 14:53	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/12/13 14:53	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/12/13 14:53	
4-Nitrophenol	ug/L	ND	5.0	07/12/13 14:53	
Acenaphthene	ug/L	ND	5.0	07/12/13 14:53	
Acenaphthylene	ug/L	ND	5.0	07/12/13 14:53	
Anthracene	ug/L	ND	5.0	07/12/13 14:53	
Benzidine	ug/L	ND	50.0	07/12/13 14:53	
Benzo(a)anthracene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(a)pyrene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/12/13 14:53	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/12/13 14:53	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/12/13 14:53	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/12/13 14:53	
Butylbenzylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Chrysene	ug/L	ND	5.0	07/12/13 14:53	
Di-n-butylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Di-n-octylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/12/13 14:53	
Diethylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Dimethylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
Fluorene	ug/L	ND	5.0	07/12/13 14:53	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/12/13 14:53	
Hexachlorobenzene	ug/L	ND	5.0	07/12/13 14:53	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/12/13 14:53	
Hexachloroethane	ug/L	ND	5.0	07/12/13 14:53	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/12/13 14:53	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Project No.: 60148427

METHOD BLANK: 1217933

Matrix: Water

Associated Lab Samples: 60148427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/12/13 14:53	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/12/13 14:53	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/12/13 14:53	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/12/13 14:53	
Naphthalene	ug/L	ND	5.0	07/12/13 14:53	
Nitrobenzene	ug/L	ND	5.0	07/12/13 14:53	
Pentachlorophenol	ug/L	ND	5.0	07/12/13 14:53	
Phenanthrene	ug/L	ND	5.0	07/12/13 14:53	
Phenol	ug/L	ND	5.0	07/12/13 14:53	
Pyrene	ug/L	ND	5.0	07/12/13 14:53	
2,4,6-Tribromophenol (S)	%	84	39-119	07/12/13 14:53	
2-Fluorobiphenyl (S)	%	84	36-120	07/12/13 14:53	
2-Fluorophenol (S)	%	40	18-120	07/12/13 14:53	
Nitrobenzene-d5 (S)	%	78	32-120	07/12/13 14:53	
Phenol-d6 (S)	%	26	12-120	07/12/13 14:53	
Terphenyl-d14 (S)	%	90	44-120	07/12/13 14:53	

LABORATORY CONTROL SAMPLE: 1217934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.2	78	44-120	
2,4,6-Trichlorophenol	ug/L	50	41.2	82	48-120	
2,4-Dichlorophenol	ug/L	50	39.1	78	48-120	
2,4-Dimethylphenol	ug/L	50	35.5	71	37-119	
2,4-Dinitrophenol	ug/L	50	39J	78	15-153	
2,4-Dinitrotoluene	ug/L	50	43.2	86	54-120	
2,6-Dinitrotoluene	ug/L	50	42.8	86	52-120	
2-Chloronaphthalene	ug/L	50	41.6	83	60-118	
2-Chlorophenol	ug/L	50	34.9	70	44-120	
2-Nitrophenol	ug/L	50	41.9	84	43-120	
3,3'-Dichlorobenzidine	ug/L	50	53.4	107	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	44.3	89	31-147	
4-Bromophenylphenyl ether	ug/L	50	44.6	89	53-120	
4-Chloro-3-methylphenol	ug/L	50	38.0	76	50-120	
4-Chlorophenylphenyl ether	ug/L	50	42.3	85	54-120	
4-Nitrophenol	ug/L	50	14.9	30	10-120	
Acenaphthene	ug/L	50	42.0	84	51-120	
Acenaphthylene	ug/L	50	41.6	83	51-120	
Anthracene	ug/L	50	44.0	88	54-120	
Benzidine	ug/L	50	27.2J	54	1-124	
Benzo(a)anthracene	ug/L	50	43.7	87	54-120	
Benzo(a)pyrene	ug/L	50	43.0	86	54-120	
Benzo(b)fluoranthene	ug/L	50	44.0	88	57-120	
Benzo(g,h,i)perylene	ug/L	50	43.4	87	54-120	
Benzo(k)fluoranthene	ug/L	50	42.9	86	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

LABORATORY CONTROL SAMPLE: 1217934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	40.6	81	51-120	
bis(2-Chloroethyl) ether	ug/L	50	40.7	81	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	41.2	82	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	44.2	88	51-126	
Butylbenzylphthalate	ug/L	50	44.1	88	45-129	
Chrysene	ug/L	50	44.1	88	54-120	
Di-n-butylphthalate	ug/L	50	44.6	89	57-118	
Di-n-octylphthalate	ug/L	50	43.9	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	43.7	87	56-119	
Diethylphthalate	ug/L	50	42.5	85	55-114	
Dimethylphthalate	ug/L	50	42.9	86	54-112	
Fluoranthene	ug/L	50	44.8	90	56-120	
Fluorene	ug/L	50	42.7	85	59-120	
Hexachloro-1,3-butadiene	ug/L	50	39.3	79	41-116	
Hexachlorobenzene	ug/L	50	43.4	87	53-120	
Hexachlorocyclopentadiene	ug/L	100	60.2	60	31-120	
Hexachloroethane	ug/L	50	38.6	77	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	42.9	86	55-120	
Isophorone	ug/L	50	41.0	82	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	40.2	80	47-120	
N-Nitrosodimethylamine	ug/L	50	23.5	47	28-120	
N-Nitrosodiphenylamine	ug/L	50	42.1	84	53-120	
Naphthalene	ug/L	50	40.1	80	48-120	
Nitrobenzene	ug/L	50	40.7	81	47-120	
Pentachlorophenol	ug/L	50	41.8	84	43-127	
Phenanthrene	ug/L	50	44.2	88	55-120	
Phenol	ug/L	50	13.1	26	15-112	
Pyrene	ug/L	50	44.4	89	55-115	
2,4,6-Tribromophenol (S)	%			82	39-119	
2-Fluorobiphenyl (S)	%			84	36-120	
2-Fluorophenol (S)	%			38	18-120	
Nitrobenzene-d5 (S)	%			79	32-120	M4
Phenol-d6 (S)	%			25	12-120	
Terphenyl-d14 (S)	%			88	44-120	

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

QC Batch:	WET/42303	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148427001		

METHOD BLANK: 1218244 Matrix: Water  
Associated Lab Samples: 60148427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/11/13 12:07	

LABORATORY CONTROL SAMPLE: 1218245

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.0	90	78-114	

MATRIX SPIKE SAMPLE: 1218246

Parameter	Units	60148363002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	270	44	1090	1874	78-114	M1

SAMPLE DUPLICATE: 1218636

Parameter	Units	60148419003 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	6.3	3.2J		18	

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

QC Batch: WET/42340

Analysis Method: EPA 1664A

QC Batch Method: EPA 1664A

Analysis Description: 1664 SGT-HEM, TPH

Associated Lab Samples: 60148427001

METHOD BLANK: 1219911

Matrix: Water

Associated Lab Samples: 60148427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/15/13 07:03	

LABORATORY CONTROL SAMPLE: 1219912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.6	108	64-132	

MATRIX SPIKE SAMPLE: 1219916

Parameter	Units	60148121001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.7	26.5	110	64-132	

SAMPLE DUPLICATE: 1219917

Parameter	Units	60148128001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	3.5J		34	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

QC Batch: WET/42288

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60148427001

METHOD BLANK: 1217629

Matrix: Water

Associated Lab Samples: 60148427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/10/13 13:59	

SAMPLE DUPLICATE: 1217630

Parameter	Units	60148421001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6.0	7.0	15	25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

QC Batch: WET/42284 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148427001

SAMPLE DUPLICATE: 1217466

Parameter	Units	60148432001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.1	7.0	0	5	H6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272  
Pace Project No.: 60148427

QC Batch: WETA/25436 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60148427001

METHOD BLANK: 1219015 Matrix: Water  
Associated Lab Samples: 60148427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/12/13 13:16	

LABORATORY CONTROL SAMPLE: 1219016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	103	90-110	

MATRIX SPIKE SAMPLE: 1219017

Parameter	Units	60148256001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.7	84	90-110	M1

MATRIX SPIKE SAMPLE: 1219018

Parameter	Units	60148264002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	99	90-110	

SAMPLE DUPLICATE: 1219019

Parameter	Units	60148257002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	1.5	1.5	1	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

QC Batch:	WETA/25405	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60148427001		

METHOD BLANK: 1217491 Matrix: Water

Associated Lab Samples: 60148427001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/11/13 10:45	

LABORATORY CONTROL SAMPLE: 1217492

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	53.7	107	90-110	

MATRIX SPIKE SAMPLE: 1217494

Parameter	Units	60148259001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	92.7	50	138	91	90-110	

MATRIX SPIKE SAMPLE: 1217495

Parameter	Units	60148403003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	3320	2500	5750	97	90-110	

SAMPLE DUPLICATE: 1217493

Parameter	Units	60147815002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	55.2	54.6	1	25	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M4 A matrix spike/matrix spike duplicate was not performed for this batch due to sample dilution.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF OB-272

Pace Project No.: 60148427

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148427001	OB-272	EPA 200.7	MPRP/23431	EPA 200.7	ICP/18430
60148427001	OB-272	EPA 200.7	MPRP/23453	EPA 200.7	ICP/18438
60148427001	OB-272	EPA 245.1	MERP/7489	EPA 245.1	MERC/7446
60148427001	OB-272	EPA 245.1	MERP/7492	EPA 245.1	MERC/7449
60148427001	OB-272	EPA 625	OEXT/39236	EPA 625	MSSV/12437
60148427001	OB-272	EPA 624 Low	MSV/54896		
60148427002	TRIP BLANK	EPA 624 Low	MSV/54896		
60148427001	OB-272	EPA 1664A	WET/42303		
60148427001	OB-272	EPA 1664A	WET/42340		
60148427001	OB-272	SM 2540D	WET/42288		
60148427001	OB-272	SM 4500-H+B	WET/42284		
60148427001	OB-272	EPA 350.1	WETA/25436		
60148427001	OB-272	EPA 410.4	WETA/25405		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

WO#: 60148427



Client Name: Barr Eng

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  XRoads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PLC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 3.0

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: 7-10-13 BA

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BA 7-10-13</u> <u>Boo pH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>Initial: 6.0</u> <u>Final: 4.0</u> <u>H2503 H2504</u> <u>Added 2.5 ml H2503</u> <u>Added 2.0 ml H2504</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: <u>VOA</u> coliform, TOC, <u>O&amp;G</u> WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <u>7-10-13</u>	Initial when completed <u>BA</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative <u>12510</u>
Pace Trip Blank lot # (if purchased): <u>covered by label</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/10/13



**CHAIN-OF-CUSTODY / Analytical Request Document**

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**

**Required Client Information:**

Company:	BARR ENGINEERING
Address:	
Email To:	
Phone: (816) 285-8410	Fax
Requested Due Date/TAT:	10 Day (Default)

**Section B**

**Required Project Information:**

Report To:	ED GALBRAITH/BARR
Copy To:	SCOTT FEDAK/FEEZOR DANA BAKER/MARGARET TREANOR -BARR
Purchase Order No.	PO 3727110
Client Project ID:	BRIDGETON LF
Container Order Number:	

**Section C**

**Invoice Information:**

Attention:	TABITHA PROVINCE
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	130426_7588
Pace Project Manager:	Brown, Angie
Pace Profile #:	6787 LINE 2

Regulatory Agency	
State / Location	Missouri

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 /, -) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	CODE DW WT WW P SL OL WP AR OT TS	COLLECTED				SAMPLE TEMP AT COLLECTION	Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)											
				START DATE TIME	END DATE TIME	Preservatives																								
1	<i>3AG14 3AG14 OB-272 1BP24 1BP34 1BP45 3<sup>3</sup> 1BP34<sup>40</sup></i>	OT	G	7/9/13	0839			15	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	COD EPA 410	pH SM 4500H+B	LF DIS. METALS 200.7/245	TOTAL METALS 200.7/245	AMMONIA EPA 350	O/G EPA 1664	625 SVOCs	VOCs EPA 624	TSS SM2540D	<i>THY/HEP/SET 1664</i>	<i>60018427</i>		
2	TRIP BLANK							2	2																				METALS LIST total & LF Dis: <i>64</i>	
3																													<i>62</i>	
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	<i>[Signature]</i>	7/9/13	1600	<i>[Signature]</i> 554	7/9/13	1645	3-0	Y	Y	Y
SITE ADDRESS: BRIDGETON LF	<i>[Signature]</i>	7/9/13	1645	<i>[Signature]</i> O/Ko IPACE	7-10-13	0150				
13570 ST. CHARLES ROCK RD										
BRIDGETON MO 63044										

<b>SAMPLER NAME AND SIGNATURE</b>			
PRINT Name of SAMPLER:	<i>WILLIAM ABERNATHY</i>		
SIGNATURE of SAMPLER:	<i>[Signature]</i>	DATE Signed:	<i>7/9/13</i>
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

July 17, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-012  
Pace Project No.: 60148559

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 11, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-012

Pace Project No.: 60148559

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-012

Pace Project No.: 60148559

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148559001	316-012	Water	07/10/13 10:00	07/11/13 01:25

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-012  
Pace Project No.: 60148559

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148559001	316-012	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-012

Pace Project No.: 60148559

Sample: 316-012	Lab ID: 60148559001	Collected: 07/10/13 10:00	Received: 07/11/13 01:25	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>28200</b>	mg/L	2.0	1	07/12/13 09:24	07/17/13 11:56		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148559

QC Batch: WET/42315

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148559001

METHOD BLANK: 1218844

Matrix: Water

Associated Lab Samples: 60148559001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/17/13 11:39	

LABORATORY CONTROL SAMPLE: 1218845

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	178	90	85-115	

SAMPLE DUPLICATE: 1218846

Parameter	Units	60148559001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	28200	29200	4	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-012

Pace Project No.: 60148559

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-012

Pace Project No.: 60148559

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148559001	316-012	SM 5210B	WET/42315	SM 5210B	WET/42399

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO# : 60148559**



Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  CROSSROADS

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: WSP Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 1.2

Date and initials of person examining contents: KE 7/11/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: [Signature]



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

**Section A**

**Required Client Information:**  
 Company: **BARR ENGINEERING**  
 Address:  
 Email To:  
 Phone: (816) 285-8410 Fax  
 Requested Due Date/TAT: 10 Day (Default)

**Section B**

**Required Project Information:**  
 Report To: **ED GALBRAITH/BARR**  
 Copy To: **SCOTT FEDAK/FEEZOR**  
 DANA BAKER/MARGARET TREANOR -BARR  
 Purchase Order No. **PO 3727110**  
 Client Project ID: **BRIDGETON LF**  
 Container Order Number:

**Section C**

**Invoice Information:**  
 Attention: **TABITHA PROVINCE**  
 Company Name: **REPUBLIC SERVICES**  
 Address: **BRIDGETON, MO 63044**  
 Pace Quote Reference: **130426 7588**  
 Pace Project Manager: **Brown, Angie**  
 Pace Profile #: **6787 LINE 5**

**Regulatory Agency**  
**State / Location**  
 Missouri

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	COLLECTED START DATE TIME END DATE TIME	SAMPLER NAME AND SIGNATURE	PRESERVATIVES Unpreserved H2SO4 HNO3 HCl NaOH Na2S2O3 Methanol Other	ANALYSES TEST Y/N BOD SM 5210B	Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)
1	316-phi2	OT G	7/10/13 16:25	SCOTT C. FEDAK		X	X										
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	Scott C. Fedak	7/10/13	16:25	Tabitha Province	7/10/13	16:45	1.2	Y	Y	Y
SITE ADDRESS: BRIDGETON LF				Angie Brown	7/11/13	1:25				
13570 ST. CHARLES ROCK RD										
BRIDGETON MO 63044										

**SAMPLER NAME AND SIGNATURE**  
 PRINT Name of SAMPLER: **SCOTT C. FEDAK**  
 SIGNATURE of SAMPLER: *Scott C. Fedak* DATE Signed: **7/10/13**

TEMP in C  
 Received on Ice (Y/N)  
 Custody Sealed Cooler (Y/N)  
 Samples Intact (Y/N)



July 17, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-012  
Pace Project No.: 60148560

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 11, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-012  
Pace Project No.: 60148560

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148560001	316-012	Water	07/10/13 10:00	07/11/13 01:25
60148560002	TRIP BLANK	Water	07/10/13 10:00	07/11/13 01:25

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148560001	316-012	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148560002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

Sample: 316-012		Lab ID: 60148560001	Collected: 07/10/13 10:00	Received: 07/11/13 01:25	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	14400 ug/L		150	2	07/16/13 11:15	07/17/13 12:27	7429-90-5	
Antimony	ND ug/L		50.0	5	07/16/13 11:15	07/17/13 12:37	7440-36-0	D3
Arsenic	684 ug/L		50.0	5	07/16/13 11:15	07/17/13 12:37	7440-38-2	
Beryllium	ND ug/L		2.0	2	07/16/13 11:15	07/17/13 12:27	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/16/13 11:15	07/17/13 12:37	7440-43-9	D3
Chromium	301 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:37	7440-47-3	
Cobalt	71.2 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:37	7440-48-4	
Copper	50.4 ug/L		50.0	5	07/16/13 11:15	07/17/13 12:37	7440-50-8	
Iron	911000 ug/L		100	2	07/16/13 11:15	07/17/13 12:27	7439-89-6	
Lead	182 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:37	7439-92-1	
Nickel	175 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:37	7440-02-0	
Selenium	116 ug/L		75.0	5	07/16/13 11:15	07/17/13 12:37	7782-49-2	
Silver	ND ug/L		35.0	5	07/16/13 11:15	07/17/13 12:37	7440-22-4	D3
Thallium	ND ug/L		100	5	07/16/13 11:15	07/17/13 12:37	7440-28-0	D3
Zinc	15500 ug/L		1000	20	07/16/13 11:15	07/17/13 12:48	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	3790 ug/L		150	2	07/12/13 16:20	07/15/13 17:55	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/12/13 16:20	07/15/13 18:25	7440-36-0	D3
Arsenic, Dissolved	528 ug/L		50.0	5	07/12/13 16:20	07/15/13 18:25	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/12/13 16:20	07/15/13 18:25	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/12/13 16:20	07/15/13 18:25	7440-43-9	D3
Chromium, Dissolved	227 ug/L		10.0	2	07/12/13 16:20	07/15/13 17:55	7440-47-3	
Cobalt, Dissolved	57.2 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:25	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/12/13 16:20	07/15/13 17:55	7440-50-8	D3
Iron, Dissolved	518000 ug/L		100	2	07/12/13 16:20	07/15/13 17:55	7439-89-6	
Lead, Dissolved	89.0 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:25	7439-92-1	
Nickel, Dissolved	143 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:25	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/12/13 16:20	07/15/13 18:25	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/12/13 16:20	07/15/13 17:55	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/12/13 16:20	07/15/13 18:25	7440-28-0	D3
Zinc, Dissolved	14200 ug/L		1000	20	07/12/13 16:20	07/15/13 18:48	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	0.87 ug/L		0.20	1	07/12/13 09:00	07/12/13 14:38	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	07/15/13 09:30	07/15/13 13:44	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:21	83-32-9	
Acenaphthylene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:21	208-96-8	
Anthracene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:21	120-12-7	
Benzidine	ND ug/L		5000	10	07/11/13 00:00	07/12/13 17:21	92-87-5	
Benzo(a)anthracene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:21	56-55-3	
Benzo(a)pyrene	ND ug/L		500	10	07/11/13 00:00	07/12/13 17:21	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

Sample: 316-012		Lab ID: 60148560001	Collected: 07/10/13 10:00	Received: 07/11/13 01:25	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	101-55-3	
Butylbenzylphthalate	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	600	10	07/11/13 00:00	07/12/13 17:21	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	600	10	07/11/13 00:00	07/12/13 17:21	39638-32-9	
2-Chloronaphthalene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	91-58-7	
2-Chlorophenol	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	7005-72-3	
Chrysene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	2000	10	07/11/13 00:00	07/12/13 17:21	91-94-1	
2,4-Dichlorophenol	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	120-83-2	
Diethylphthalate	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	84-66-2	
2,4-Dimethylphenol	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	105-67-9	
Dimethylphthalate	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	131-11-3	
Di-n-butylphthalate	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	2500	10	07/11/13 00:00	07/12/13 17:21	534-52-1	
2,4-Dinitrophenol	ND	ug/L	5000	10	07/11/13 00:00	07/12/13 17:21	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	600	10	07/11/13 00:00	07/12/13 17:21	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	606-20-2	
Di-n-octylphthalate	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	117-81-7	
Fluoranthene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	206-44-0	
Fluorene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	87-68-3	
Hexachlorobenzene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	77-47-4	
Hexachloroethane	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	193-39-5	
Isophorone	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	78-59-1	
Naphthalene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	91-20-3	
Nitrobenzene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	98-95-3	
2-Nitrophenol	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	88-75-5	
4-Nitrophenol	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	86-30-6	
Pentachlorophenol	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	87-86-5	
Phenanthrene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	85-01-8	
Phenol	<b>4000</b>	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	108-95-2	
Pyrene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	500	10	07/11/13 00:00	07/12/13 17:21	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

Sample: 316-012		Lab ID: 60148560001	Collected: 07/10/13 10:00	Received: 07/11/13 01:25	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	10	07/11/13 00:00	07/12/13 17:21	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	10	07/11/13 00:00	07/12/13 17:21	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	10	07/11/13 00:00	07/12/13 17:21	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	10	07/11/13 00:00	07/12/13 17:21	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	10	07/11/13 00:00	07/12/13 17:21	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	10	07/11/13 00:00	07/12/13 17:21	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/15/13 15:25	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/15/13 15:25	75-27-4	
Bromoform	ND ug/L		200	200		07/15/13 15:25	75-25-2	
Bromomethane	ND ug/L		1000	200		07/15/13 15:25	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/15/13 15:25	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/15/13 15:25	108-90-7	
Chloroethane	ND ug/L		200	200		07/15/13 15:25	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/15/13 15:25	110-75-8	
Chloroform	ND ug/L		200	200		07/15/13 15:25	67-66-3	
Chloromethane	ND ug/L		200	200		07/15/13 15:25	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/15/13 15:25	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/15/13 15:25	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/15/13 15:25	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/15/13 15:25	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/15/13 15:25	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/15/13 15:25	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/15/13 15:25	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/15/13 15:25	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/15/13 15:25	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/15/13 15:25	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/15/13 15:25	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/15/13 15:25	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/15/13 15:25	100-41-4	
Methylene chloride	ND ug/L		200	200		07/15/13 15:25	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/15/13 15:25	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/15/13 15:25	127-18-4	
Toluene	ND ug/L		200	200		07/15/13 15:25	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/15/13 15:25	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/15/13 15:25	79-00-5	
Trichloroethene	ND ug/L		200	200		07/15/13 15:25	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/15/13 15:25	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/15/13 15:25	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/15/13 15:25	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	107 %		80-120	200		07/15/13 15:25	1868-53-7	D3
4-Bromofluorobenzene (S)	99 %		80-120	200		07/15/13 15:25	460-00-4	
Toluene-d8 (S)	99 %		80-120	200		07/15/13 15:25	2037-26-5	
1,2-Dichloroethane-d4 (S)	101 %		80-120	200		07/15/13 15:25	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

<b>Sample: 316-012</b>		<b>Lab ID: 60148560001</b>	Collected: 07/10/13 10:00	Received: 07/11/13 01:25	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/15/13 15:25		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>478</b>	mg/L	5.0	1		07/12/13 07:28		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>24.3</b>	mg/L	5.0	1		07/15/13 07:06		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>1480</b>	mg/L	5.0	1		07/11/13 13:40		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.2</b>	Std. Units	0.10	1		07/15/13 14:06		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>735</b>	mg/L	20.0	200		07/16/13 11:51	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>52100</b>	mg/L	5000	500		07/15/13 14:04		M1

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

Sample: TRIP BLANK		Lab ID: 60148560002	Collected: 07/10/13 10:00	Received: 07/11/13 01:25	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/15/13 16:07	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/15/13 16:07	75-27-4	
Bromoform	ND ug/L		1.0	1		07/15/13 16:07	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/15/13 16:07	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/15/13 16:07	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/15/13 16:07	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/15/13 16:07	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/15/13 16:07	110-75-8	
Chloroform	ND ug/L		1.0	1		07/15/13 16:07	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/15/13 16:07	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/15/13 16:07	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/15/13 16:07	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/15/13 16:07	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/15/13 16:07	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/15/13 16:07	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/15/13 16:07	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/15/13 16:07	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/15/13 16:07	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/15/13 16:07	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/15/13 16:07	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/15/13 16:07	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/15/13 16:07	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/15/13 16:07	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/15/13 16:07	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/15/13 16:07	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/15/13 16:07	127-18-4	
Toluene	ND ug/L		1.0	1		07/15/13 16:07	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/15/13 16:07	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/15/13 16:07	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/15/13 16:07	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/15/13 16:07	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/15/13 16:07	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/15/13 16:07	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	104 %		80-120	1		07/15/13 16:07	1868-53-7	
4-Bromofluorobenzene (S)	94 %		80-120	1		07/15/13 16:07	460-00-4	
Toluene-d8 (S)	100 %		80-120	1		07/15/13 16:07	2037-26-5	
1,2-Dichloroethane-d4 (S)	100 %		80-120	1		07/15/13 16:07	17060-07-0	
Preservation pH	7.0		1.0	1		07/15/13 16:07		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012  
Pace Project No.: 60148560

QC Batch: MERP/7499      Analysis Method: EPA 245.1  
QC Batch Method: EPA 245.1      Analysis Description: 245.1 Mercury  
Associated Lab Samples: 60148560001

METHOD BLANK: 1218791      Matrix: Water  
Associated Lab Samples: 60148560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/12/13 14:34	

LABORATORY CONTROL SAMPLE: 1218792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1218793      1218794

Parameter	Units	60148602001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury	ug/L	ND	5	5	4.1	4.3	82	85	70-130	4	20	

MATRIX SPIKE SAMPLE: 1218795

Parameter	Units	60148602002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	4.5	89	70-130	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

QC Batch:	MERP/7506	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60148560001		

METHOD BLANK: 1219969 Matrix: Water

Associated Lab Samples: 60148560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/15/13 13:33	

LABORATORY CONTROL SAMPLE: 1219970

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.1	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1219971 1219972

Parameter	Units	60148704001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury, Dissolved	ug/L	ND	5	5	0.85	0.76	16	14	70-130	11	20	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012  
Pace Project No.: 60148560

QC Batch: MPRP/23464      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60148560001

METHOD BLANK: 1220120      Matrix: Water  
Associated Lab Samples: 60148560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/17/13 11:03	
Antimony	ug/L	ND	10.0	07/17/13 11:03	
Arsenic	ug/L	ND	10.0	07/17/13 11:03	
Beryllium	ug/L	ND	1.0	07/17/13 11:03	
Cadmium	ug/L	ND	5.0	07/17/13 11:03	
Chromium	ug/L	ND	5.0	07/17/13 11:03	
Cobalt	ug/L	ND	5.0	07/17/13 11:03	
Copper	ug/L	ND	10.0	07/17/13 11:03	
Iron	ug/L	ND	50.0	07/17/13 11:03	
Lead	ug/L	ND	5.0	07/17/13 11:03	
Nickel	ug/L	ND	5.0	07/17/13 11:03	
Selenium	ug/L	ND	15.0	07/17/13 11:03	
Silver	ug/L	ND	7.0	07/17/13 11:03	
Thallium	ug/L	ND	20.0	07/17/13 11:03	
Zinc	ug/L	ND	50.0	07/17/13 11:03	

LABORATORY CONTROL SAMPLE: 1220121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10300	103	85-115	
Antimony	ug/L	1000	1030	103	85-115	
Arsenic	ug/L	1000	963	96	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	994	99	85-115	
Chromium	ug/L	1000	978	98	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	976	98	85-115	
Iron	ug/L	10000	10300	103	85-115	
Lead	ug/L	1000	1040	104	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1000	100	85-115	
Silver	ug/L	500	494	99	85-115	
Thallium	ug/L	1000	1060	106	85-115	
Zinc	ug/L	1000	997	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1220122      1220123

Parameter	Units	60148640002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Aluminum	ug/L	737	10000	10000	10000	11000	10900	103	102	70-130	1	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:											
1220122			1220123								
Parameter	Units	60148640002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Antimony	ug/L	ND	1000	1000	1070	1060	107	105	70-130	1	7
Arsenic	ug/L	16.0	1000	1000	1040	1030	102	101	70-130	1	10
Beryllium	ug/L	ND	1000	1000	1020	1010	102	101	70-130	1	7
Cadmium	ug/L	ND	1000	1000	1030	1020	103	102	70-130	1	10
Chromium	ug/L	0.040	1000	1000	1030	1010	99	97	70-130	1	10
		mg/L									
Cobalt	ug/L	ND	1000	1000	1010	998	101	100	70-130	1	6
Copper	ug/L	ND	1000	1000	1020	1000	101	100	70-130	2	11
Iron	ug/L	ND	10000	10000	10300	10200	102	101	70-130	1	10
Lead	ug/L	ND	1000	1000	981	972	98	97	70-130	1	10
Nickel	ug/L	0.41	1000	1000	1430	1410	102	100	70-130	1	10
		mg/L									
Selenium	ug/L	ND	1000	1000	1060	1050	106	105	70-130	1	10
Silver	ug/L	ND	500	500	520	514	104	103	70-130	1	10
Thallium	ug/L	ND	1000	1000	926	920	93	92	70-130	1	6
Zinc	ug/L	0.16	1000	1000	1190	1180	103	102	70-130	1	11
		mg/L									

MATRIX SPIKE SAMPLE: 1220124								
Parameter	Units	60148588002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Aluminum	ug/L		ND	10200	102	70-130		
Antimony	ug/L		ND	1000	1050	70-130		
Arsenic	ug/L		ND	1000	978	70-130		
Beryllium	ug/L		ND	1000	1000	70-130		
Cadmium	ug/L		ND	1000	996	70-130		
Chromium	ug/L		ND	1000	975	70-130		
Cobalt	ug/L		ND	1000	1010	70-130		
Copper	ug/L		19.4	1000	996	70-130		
Iron	ug/L		54.5	10000	10100	70-130		
Lead	ug/L		ND	1000	1020	70-130		
Nickel	ug/L		ND	1000	1020	70-130		
Selenium	ug/L		ND	1000	1020	70-130		
Silver	ug/L		ND	500	497	70-130		
Thallium	ug/L		ND	1000	1030	70-130		
Zinc	ug/L		ND	1000	989	70-130		

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

QC Batch:	MPRP/23453	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 Metals, Dissolved
Associated Lab Samples:	60148560001		

METHOD BLANK: 1219377 Matrix: Water

Associated Lab Samples: 60148560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/15/13 17:28	
Antimony, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Arsenic, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Beryllium, Dissolved	ug/L	ND	1.0	07/15/13 17:28	
Cadmium, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Chromium, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Cobalt, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Copper, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Iron, Dissolved	ug/L	ND	50.0	07/15/13 17:28	
Lead, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Nickel, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Selenium, Dissolved	ug/L	ND	15.0	07/15/13 17:28	
Silver, Dissolved	ug/L	ND	7.0	07/15/13 17:28	
Thallium, Dissolved	ug/L	ND	20.0	07/15/13 17:28	
Zinc, Dissolved	ug/L	ND	50.0	07/15/13 17:28	

LABORATORY CONTROL SAMPLE: 1219378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9830	98	85-115	
Antimony, Dissolved	ug/L	1000	1010	101	85-115	
Arsenic, Dissolved	ug/L	1000	951	95	85-115	
Beryllium, Dissolved	ug/L	1000	968	97	85-115	
Cadmium, Dissolved	ug/L	1000	978	98	85-115	
Chromium, Dissolved	ug/L	1000	956	96	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	960	96	85-115	
Iron, Dissolved	ug/L	10000	9360	94	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	997	100	85-115	
Silver, Dissolved	ug/L	500	477	95	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	960	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1219379 1219380

Parameter	Units	60148688001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Aluminum, Dissolved	ug/L	3460	10000	10000	13300	13800	98	103	70-130	4	8		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

Parameter	60148688001		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony, Dissolved	ug/L	ND	1000	1000	984	992	96	97	70-130	1	7		
Arsenic, Dissolved	ug/L	512	1000	1000	1570	1600	106	108	70-130	2	10		
Beryllium, Dissolved	ug/L	ND	1000	1000	878	887	88	89	70-130	1	7		
Cadmium, Dissolved	ug/L	ND	1000	1000	1020	1040	101	103	70-130	2	10		
Chromium, Dissolved	ug/L	212	1000	1000	1090	1150	88	94	70-130	5	10		
Cobalt, Dissolved	ug/L	49.6	1000	1000	970	982	92	93	70-130	1	6		
Copper, Dissolved	ug/L	ND	1000	1000	1030	1080	102	107	70-130	5	11		
Iron, Dissolved	ug/L	489000	10000	10000	503000	518000	140	290	70-130	3	10	M1	
Lead, Dissolved	ug/L	91.8	1000	1000	932	939	84	85	70-130	1	10		
Nickel, Dissolved	ug/L	129	1000	1000	1050	1060	92	94	70-130	1	10		
Selenium, Dissolved	ug/L	ND	1000	1000	1140	1140	114	114	70-130	0	10		
Silver, Dissolved	ug/L	ND	500	500	49.3	52.9	10	11	70-130	7	10	M1	
Thallium, Dissolved	ug/L	ND	1000	1000	750	764	75	76	70-130	2	6		
Zinc, Dissolved	ug/L	13000	1000	1000	13800	14000	78	101	70-130	2	11		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

QC Batch: MSV/54925 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148560001, 60148560002

METHOD BLANK: 1220068 Matrix: Water

Associated Lab Samples: 60148560001, 60148560002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1-Dichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1-Dichloroethene	ug/L	ND	1.0	07/15/13 11:10	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
1,2-Dichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,2-Dichloropropane	ug/L	ND	1.0	07/15/13 11:10	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/15/13 11:10	
Benzene	ug/L	ND	1.0	07/15/13 11:10	
Bromodichloromethane	ug/L	ND	1.0	07/15/13 11:10	
Bromoform	ug/L	ND	1.0	07/15/13 11:10	
Bromomethane	ug/L	ND	5.0	07/15/13 11:10	
Carbon tetrachloride	ug/L	ND	1.0	07/15/13 11:10	
Chlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
Chloroethane	ug/L	ND	1.0	07/15/13 11:10	
Chloroform	ug/L	ND	1.0	07/15/13 11:10	
Chloromethane	ug/L	ND	1.0	07/15/13 11:10	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/15/13 11:10	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/15/13 11:10	
Dibromochloromethane	ug/L	ND	1.0	07/15/13 11:10	
Ethylbenzene	ug/L	ND	1.0	07/15/13 11:10	
Methylene chloride	ug/L	ND	1.0	07/15/13 11:10	
Tetrachloroethene	ug/L	ND	1.0	07/15/13 11:10	
Toluene	ug/L	ND	1.0	07/15/13 11:10	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/15/13 11:10	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/15/13 11:10	
Trichloroethene	ug/L	ND	1.0	07/15/13 11:10	
Trichlorofluoromethane	ug/L	ND	1.0	07/15/13 11:10	
Vinyl chloride	ug/L	ND	1.0	07/15/13 11:10	
Xylene (Total)	ug/L	ND	3.0	07/15/13 11:10	
1,2-Dichloroethane-d4 (S)	%	106	80-120	07/15/13 11:10	
4-Bromofluorobenzene (S)	%	95	80-120	07/15/13 11:10	
Dibromofluoromethane (S)	%	102	80-120	07/15/13 11:10	
Toluene-d8 (S)	%	100	80-120	07/15/13 11:10	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

LABORATORY CONTROL SAMPLE: 1220069

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	24.2	121	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	21.6	108	59-138	
1,1,2-Trichloroethane	ug/L	20	22.1	111	69-127	
1,1-Dichloroethane	ug/L	20	21.6	108	69-126	
1,1-Dichloroethene	ug/L	20	22.0	110	65-153	
1,2-Dichlorobenzene	ug/L	20	21.3	106	66-126	
1,2-Dichloroethane	ug/L	20	23.0	115	71-129	
1,2-Dichloropropane	ug/L	20	23.1	116	66-140	
1,3-Dichlorobenzene	ug/L	20	21.7	109	63-127	
1,4-Dichlorobenzene	ug/L	20	21.3	107	68-124	
2-Chloroethylvinyl ether	ug/L	20	15.0	75	33-159	
Benzene	ug/L	20	21.5	107	73-129	
Bromodichloromethane	ug/L	20	23.3	116	63-129	
Bromoform	ug/L	20	24.1	121	52-123	
Bromomethane	ug/L	20	23.1	115	10-160	
Carbon tetrachloride	ug/L	20	25.2	126	70-140	
Chlorobenzene	ug/L	20	22.1	111	68-127	
Chloroethane	ug/L	20	23.4	117	42-160	
Chloroform	ug/L	20	22.5	113	60-120	
Chloromethane	ug/L	20	17.8	89	10-160	
cis-1,2-Dichloroethene	ug/L	20	23.4	117	70-125	
cis-1,3-Dichloropropene	ug/L	20	23.0	115	66-132	
Dibromochloromethane	ug/L	20	25.6	128	63-134	
Ethylbenzene	ug/L	20	22.3	111	66-133	
Methylene chloride	ug/L	20	19.1	96	56-135	
Tetrachloroethene	ug/L	20	22.8	114	64-143	
Toluene	ug/L	20	21.9	109	70-130	
trans-1,2-Dichloroethene	ug/L	20	22.2	111	67-149	
trans-1,3-Dichloropropene	ug/L	20	25.5	127	66-138	
Trichloroethene	ug/L	20	20.3	102	71-130	
Trichlorofluoromethane	ug/L	20	20.5	102	58-158	
Vinyl chloride	ug/L	20	19.3	96	41-160	
Xylene (Total)	ug/L	60	65.2	109	67-130	
1,2-Dichloroethane-d4 (S)	%			105	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Dibromofluoromethane (S)	%			101	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1220070

Parameter	Units	60148560001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3800	95	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3840	96	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3600	90	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3430	86	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3500	87	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3560	89	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

MATRIX SPIKE SAMPLE:		1220070						
Parameter	Units	60148560001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
1,2-Dichloroethane	ug/L	ND	4000	3550	89	49-155		
1,2-Dichloropropane	ug/L	ND	4000	3540	89	12-160		
1,3-Dichlorobenzene	ug/L	ND	4000	3660	91	59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	3660	91	18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	3230	81	10-160		
Benzene	ug/L	ND	4000	3360	84	37-151		
Bromodichloromethane	ug/L	ND	4000	3570	89	35-155		
Bromoform	ug/L	ND	4000	3710	93	45-133		
Bromomethane	ug/L	ND	4000	2580	64	10-160		
Carbon tetrachloride	ug/L	ND	4000	3970	99	70-140		
Chlorobenzene	ug/L	ND	4000	3480	87	37-153		
Chloroethane	ug/L	ND	4000	3700	92	14-160		
Chloroform	ug/L	ND	4000	3560	89	51-138		
Chloromethane	ug/L	ND	4000	2810	70	10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	3750	94	19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	3520	88	10-160		
Dibromochloromethane	ug/L	ND	4000	3860	96	53-149		
Ethylbenzene	ug/L	ND	4000	3420	86	37-154		
Methylene chloride	ug/L	ND	4000	2930	73	15-156		
Tetrachloroethene	ug/L	ND	4000	3580	90	64-148		
Toluene	ug/L	ND	4000	3420	86	47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	3460	87	54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	4020	101	17-160		
Trichloroethene	ug/L	ND	4000	3260	82	71-157		
Trichlorofluoromethane	ug/L	ND	4000	3410	85	17-160		
Vinyl chloride	ug/L	ND	4000	3110	78	10-160		
Xylene (Total)	ug/L	ND	12000	10000	83	12-153		
1,2-Dichloroethane-d4 (S)	%				101	80-120		
4-Bromofluorobenzene (S)	%				101	80-120		
Dibromofluoromethane (S)	%				105	80-120		
Toluene-d8 (S)	%				100	80-120		
Preservation pH			7.0		7.0			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

QC Batch: OEXT/39236

Analysis Method: EPA 625

QC Batch Method: EPA 625

Analysis Description: 625 MSS

Associated Lab Samples: 60148560001

METHOD BLANK: 1217933

Matrix: Water

Associated Lab Samples: 60148560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/12/13 14:53	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dichlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dimethylphenol	ug/L	ND	5.0	07/12/13 14:53	
2,4-Dinitrophenol	ug/L	ND	50.0	07/12/13 14:53	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/12/13 14:53	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/12/13 14:53	
2-Chloronaphthalene	ug/L	ND	5.0	07/12/13 14:53	
2-Chlorophenol	ug/L	ND	5.0	07/12/13 14:53	
2-Nitrophenol	ug/L	ND	5.0	07/12/13 14:53	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/12/13 14:53	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/12/13 14:53	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/12/13 14:53	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/12/13 14:53	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/12/13 14:53	
4-Nitrophenol	ug/L	ND	5.0	07/12/13 14:53	
Acenaphthene	ug/L	ND	5.0	07/12/13 14:53	
Acenaphthylene	ug/L	ND	5.0	07/12/13 14:53	
Anthracene	ug/L	ND	5.0	07/12/13 14:53	
Benzidine	ug/L	ND	50.0	07/12/13 14:53	
Benzo(a)anthracene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(a)pyrene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/12/13 14:53	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/12/13 14:53	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/12/13 14:53	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/12/13 14:53	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/12/13 14:53	
Butylbenzylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Chrysene	ug/L	ND	5.0	07/12/13 14:53	
Di-n-butylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Di-n-octylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/12/13 14:53	
Diethylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Dimethylphthalate	ug/L	ND	5.0	07/12/13 14:53	
Fluoranthene	ug/L	ND	5.0	07/12/13 14:53	
Fluorene	ug/L	ND	5.0	07/12/13 14:53	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/12/13 14:53	
Hexachlorobenzene	ug/L	ND	5.0	07/12/13 14:53	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/12/13 14:53	
Hexachloroethane	ug/L	ND	5.0	07/12/13 14:53	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/12/13 14:53	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Project No.: 60148560

METHOD BLANK: 1217933

Matrix: Water

Associated Lab Samples: 60148560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/12/13 14:53	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/12/13 14:53	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/12/13 14:53	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/12/13 14:53	
Naphthalene	ug/L	ND	5.0	07/12/13 14:53	
Nitrobenzene	ug/L	ND	5.0	07/12/13 14:53	
Pentachlorophenol	ug/L	ND	5.0	07/12/13 14:53	
Phenanthrene	ug/L	ND	5.0	07/12/13 14:53	
Phenol	ug/L	ND	5.0	07/12/13 14:53	
Pyrene	ug/L	ND	5.0	07/12/13 14:53	
2,4,6-Tribromophenol (S)	%	84	39-119	07/12/13 14:53	
2-Fluorobiphenyl (S)	%	84	36-120	07/12/13 14:53	
2-Fluorophenol (S)	%	40	18-120	07/12/13 14:53	
Nitrobenzene-d5 (S)	%	78	32-120	07/12/13 14:53	
Phenol-d6 (S)	%	26	12-120	07/12/13 14:53	
Terphenyl-d14 (S)	%	90	44-120	07/12/13 14:53	

LABORATORY CONTROL SAMPLE: 1217934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.2	78	44-120	
2,4,6-Trichlorophenol	ug/L	50	41.2	82	48-120	
2,4-Dichlorophenol	ug/L	50	39.1	78	48-120	
2,4-Dimethylphenol	ug/L	50	35.5	71	37-119	
2,4-Dinitrophenol	ug/L	50	39J	78	15-153	
2,4-Dinitrotoluene	ug/L	50	43.2	86	54-120	
2,6-Dinitrotoluene	ug/L	50	42.8	86	52-120	
2-Chloronaphthalene	ug/L	50	41.6	83	60-118	
2-Chlorophenol	ug/L	50	34.9	70	44-120	
2-Nitrophenol	ug/L	50	41.9	84	43-120	
3,3'-Dichlorobenzidine	ug/L	50	53.4	107	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	44.3	89	31-147	
4-Bromophenylphenyl ether	ug/L	50	44.6	89	53-120	
4-Chloro-3-methylphenol	ug/L	50	38.0	76	50-120	
4-Chlorophenylphenyl ether	ug/L	50	42.3	85	54-120	
4-Nitrophenol	ug/L	50	14.9	30	10-120	
Acenaphthene	ug/L	50	42.0	84	51-120	
Acenaphthylene	ug/L	50	41.6	83	51-120	
Anthracene	ug/L	50	44.0	88	54-120	
Benzidine	ug/L	50	27.2J	54	1-124	
Benzo(a)anthracene	ug/L	50	43.7	87	54-120	
Benzo(a)pyrene	ug/L	50	43.0	86	54-120	
Benzo(b)fluoranthene	ug/L	50	44.0	88	57-120	
Benzo(g,h,i)perylene	ug/L	50	43.4	87	54-120	
Benzo(k)fluoranthene	ug/L	50	42.9	86	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

LABORATORY CONTROL SAMPLE: 1217934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	40.6	81	51-120	
bis(2-Chloroethyl) ether	ug/L	50	40.7	81	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	41.2	82	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	44.2	88	51-126	
Butylbenzylphthalate	ug/L	50	44.1	88	45-129	
Chrysene	ug/L	50	44.1	88	54-120	
Di-n-butylphthalate	ug/L	50	44.6	89	57-118	
Di-n-octylphthalate	ug/L	50	43.9	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	43.7	87	56-119	
Diethylphthalate	ug/L	50	42.5	85	55-114	
Dimethylphthalate	ug/L	50	42.9	86	54-112	
Fluoranthene	ug/L	50	44.8	90	56-120	
Fluorene	ug/L	50	42.7	85	59-120	
Hexachloro-1,3-butadiene	ug/L	50	39.3	79	41-116	
Hexachlorobenzene	ug/L	50	43.4	87	53-120	
Hexachlorocyclopentadiene	ug/L	100	60.2	60	31-120	
Hexachloroethane	ug/L	50	38.6	77	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	42.9	86	55-120	
Isophorone	ug/L	50	41.0	82	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	40.2	80	47-120	
N-Nitrosodimethylamine	ug/L	50	23.5	47	28-120	
N-Nitrosodiphenylamine	ug/L	50	42.1	84	53-120	
Naphthalene	ug/L	50	40.1	80	48-120	
Nitrobenzene	ug/L	50	40.7	81	47-120	
Pentachlorophenol	ug/L	50	41.8	84	43-127	
Phenanthrene	ug/L	50	44.2	88	55-120	
Phenol	ug/L	50	13.1	26	15-112	
Pyrene	ug/L	50	44.4	89	55-115	
2,4,6-Tribromophenol (S)	%			82	39-119	
2-Fluorobiphenyl (S)	%			84	36-120	
2-Fluorophenol (S)	%			38	18-120	
Nitrobenzene-d5 (S)	%			79	32-120	M4
Phenol-d6 (S)	%			25	12-120	
Terphenyl-d14 (S)	%			88	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

QC Batch:	WET/42309	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148560001		

METHOD BLANK: 1218655 Matrix: Water

Associated Lab Samples: 60148560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/12/13 07:26	

LABORATORY CONTROL SAMPLE: 1218656

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	39.5	99	78-114	

MATRIX SPIKE SAMPLE: 1218657

Parameter	Units	60148491003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	57.8	55.6	118	109	78-114	

SAMPLE DUPLICATE: 1218659

Parameter	Units	60148537002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	1.6J		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

QC Batch:	WET/42340	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60148560001		

METHOD BLANK: 1219911 Matrix: Water

Associated Lab Samples: 60148560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/15/13 07:03	

LABORATORY CONTROL SAMPLE: 1219912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.6	108	64-132	

MATRIX SPIKE SAMPLE: 1219916

Parameter	Units	60148121001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.7	26.5	110	64-132	

SAMPLE DUPLICATE: 1219917

Parameter	Units	60148128001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	3.5J		34	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

QC Batch: WET/42306

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60148560001

METHOD BLANK: 1218292

Matrix: Water

Associated Lab Samples: 60148560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/11/13 13:35	

SAMPLE DUPLICATE: 1218293

Parameter	Units	60148577001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		25	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

QC Batch: WET/42342 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148560001

SAMPLE DUPLICATE: 1219946

Parameter	Units	60148567001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.1	8.2	1	5	H6

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012  
Pace Project No.: 60148560

QC Batch: WETA/25456 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60148560001

METHOD BLANK: 1220457 Matrix: Water  
Associated Lab Samples: 60148560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/16/13 11:25	

LABORATORY CONTROL SAMPLE: 1220458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	106	90-110	

MATRIX SPIKE SAMPLE: 1220459

Parameter	Units	60148534002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.2	110	90-110	

MATRIX SPIKE SAMPLE: 1220460

Parameter	Units	60148536002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	8.0	4	10.4	58	90-110	M1

SAMPLE DUPLICATE: 1220461

Parameter	Units	60148538002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

QC Batch:	WETA/25422	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60148560001		

METHOD BLANK: 1218201 Matrix: Water

Associated Lab Samples: 60148560001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/15/13 14:02	

LABORATORY CONTROL SAMPLE: 1218202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	52.5	105	90-110	

MATRIX SPIKE SAMPLE: 1218203

Parameter	Units	60148560001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	52100	25000	73200	84	90-110	M1

SAMPLE DUPLICATE: 1218204

Parameter	Units	60148502001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	30.7	31.2	2	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M4 A matrix spike/matrix spike duplicate was not performed for this batch due to sample dilution.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-012

Pace Project No.: 60148560

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148560001	316-012	EPA 200.7	MPRP/23464	EPA 200.7	ICP/18460
60148560001	316-012	EPA 200.7	MPRP/23453	EPA 200.7	ICP/18438
60148560001	316-012	EPA 245.1	MERP/7499	EPA 245.1	MERC/7458
60148560001	316-012	EPA 245.1	MERP/7506	EPA 245.1	MERC/7463
60148560001	316-012	EPA 625	OEXT/39236	EPA 625	MSSV/12437
60148560001	316-012	EPA 624 Low	MSV/54925		
60148560002	TRIP BLANK	EPA 624 Low	MSV/54925		
60148560001	316-012	EPA 1664A	WET/42309		
60148560001	316-012	EPA 1664A	WET/42340		
60148560001	316-012	SM 2540D	WET/42306		
60148560001	316-012	SM 4500-H+B	WET/42342		
60148560001	316-012	EPA 350.1	WETA/25456		
60148560001	316-012	EPA 410.4	WETA/25422		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148560



Client Name: Ball Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  ROADS

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: VVet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 1.2

Date and initials of person examining contents: KE 7/11/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>pH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial pH for (BP35) $\approx$ 4.5 of (BP3N) $\approx$ 5.5, added 2.5 mL of preservative to each sample respectively. BP35 final pH is approx. 2.5 of BP3N is 3.5
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: VOA, coliform, TOC, <u>O&amp;D</u> , WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>KE</u> Lot # of added preservative <u>12516 H2504</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>Jul 8</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/11/13



July 19, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-013  
Pace Project No.: 60148687

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-013

Pace Project No.: 60148687

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-013  
Pace Project No.: 60148687

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148687001	316-013	Water	07/11/13 15:15	07/12/13 01:15

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-013

Pace Project No.: 60148687

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148687001	316-013	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-013

Pace Project No.: 60148687

Sample: 316-013	Lab ID: 60148687001	Collected: 07/11/13 15:15	Received: 07/12/13 01:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>29100</b>	mg/L	2.0	1	07/13/13 10:52	07/18/13 13:33		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148687

QC Batch: WET/42335

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148687001

METHOD BLANK: 1219470

Matrix: Water

Associated Lab Samples: 60148687001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/18/13 13:23	

LABORATORY CONTROL SAMPLE: 1219471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	177	89	85-115	

SAMPLE DUPLICATE: 1219472

Parameter	Units	60148775002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	16.5	16.1	3	17	

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## QUALIFIERS

Project: BRIDGETON LF 316-013

Pace Project No.: 60148687

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-013

Pace Project No.: 60148687

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Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148687001	316-013	SM 5210B	WET/42335	SM 5210B	WET/42430

## REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148687



Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  ZIP

Thermometer Used: F112 / T-194 Type of Ice:  Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 3.0

Date and initials of person examining contents: 7-12-13 BA

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOO</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: 7/15/13





July 18, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-013  
Pace Project No.: 60148688

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 12, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148688001	316-013	Water	07/11/13 15:15	07/12/13 01:15
60148688002	TRIP BLANK	Water	07/11/13 15:15	07/12/13 01:15

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148688001	316-013	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148688002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

Sample: 316-013		Lab ID: 60148688001	Collected: 07/11/13 15:15	Received: 07/12/13 01:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	9040 ug/L		150	2	07/16/13 11:15	07/17/13 12:30	7429-90-5	
Antimony	53.4 ug/L		50.0	5	07/16/13 11:15	07/17/13 12:41	7440-36-0	
Arsenic	623 ug/L		50.0	5	07/16/13 11:15	07/17/13 12:41	7440-38-2	
Beryllium	ND ug/L		2.0	2	07/16/13 11:15	07/17/13 12:30	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/16/13 11:15	07/17/13 12:41	7440-43-9	D3
Chromium	271 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:41	7440-47-3	
Cobalt	58.6 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:41	7440-48-4	
Copper	ND ug/L		50.0	5	07/16/13 11:15	07/17/13 12:41	7440-50-8	D3
Iron	820000 ug/L		100	2	07/16/13 11:15	07/17/13 12:30	7439-89-6	
Lead	150 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:41	7439-92-1	
Nickel	152 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:41	7440-02-0	
Selenium	94.4 ug/L		75.0	5	07/16/13 11:15	07/17/13 12:41	7782-49-2	
Silver	ND ug/L		35.0	5	07/16/13 11:15	07/17/13 12:41	7440-22-4	D3
Thallium	ND ug/L		100	5	07/16/13 11:15	07/17/13 12:41	7440-28-0	D3
Zinc	14100 ug/L		1000	20	07/16/13 11:15	07/17/13 12:51	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	3460 ug/L		150	2	07/12/13 16:20	07/15/13 17:58	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/12/13 16:20	07/15/13 18:29	7440-36-0	D3
Arsenic, Dissolved	512 ug/L		50.0	5	07/12/13 16:20	07/15/13 18:29	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/12/13 16:20	07/15/13 18:29	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/12/13 16:20	07/15/13 18:29	7440-43-9	D3
Chromium, Dissolved	212 ug/L		10.0	2	07/12/13 16:20	07/15/13 17:58	7440-47-3	
Cobalt, Dissolved	49.6 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:29	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/12/13 16:20	07/15/13 17:58	7440-50-8	D3
Iron, Dissolved	489000 ug/L		100	2	07/12/13 16:20	07/15/13 17:58	7439-89-6	M1
Lead, Dissolved	91.8 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:29	7439-92-1	
Nickel, Dissolved	129 ug/L		25.0	5	07/12/13 16:20	07/15/13 18:29	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/12/13 16:20	07/15/13 18:29	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/12/13 16:20	07/15/13 17:58	7440-22-4	D3,M1
Thallium, Dissolved	ND ug/L		100	5	07/12/13 16:20	07/15/13 18:29	7440-28-0	D3
Zinc, Dissolved	13000 ug/L		1000	20	07/12/13 16:20	07/15/13 18:58	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	0.31 ug/L		0.20	1	07/15/13 09:30	07/15/13 14:04	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	07/15/13 09:30	07/15/13 13:47	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		2500	50	07/15/13 00:00	07/16/13 18:15	83-32-9	
Acenaphthylene	ND ug/L		2500	50	07/15/13 00:00	07/16/13 18:15	208-96-8	
Anthracene	ND ug/L		2500	50	07/15/13 00:00	07/16/13 18:15	120-12-7	
Benzidine	ND ug/L		25000	50	07/15/13 00:00	07/16/13 18:15	92-87-5	
Benzo(a)anthracene	ND ug/L		2500	50	07/15/13 00:00	07/16/13 18:15	56-55-3	
Benzo(a)pyrene	ND ug/L		2500	50	07/15/13 00:00	07/16/13 18:15	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

Sample: 316-013		Lab ID: 60148688001	Collected: 07/11/13 15:15	Received: 07/12/13 01:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	101-55-3	
Butylbenzylphthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	3000	50	07/15/13 00:00	07/16/13 18:15	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	3000	50	07/15/13 00:00	07/16/13 18:15	39638-32-9	
2-Chloronaphthalene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	91-58-7	
2-Chlorophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	7005-72-3	
Chrysene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	10000	50	07/15/13 00:00	07/16/13 18:15	91-94-1	
2,4-Dichlorophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	120-83-2	
Diethylphthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	84-66-2	
2,4-Dimethylphenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	105-67-9	
Dimethylphthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	131-11-3	
Di-n-butylphthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	12500	50	07/15/13 00:00	07/16/13 18:15	534-52-1	
2,4-Dinitrophenol	ND	ug/L	25000	50	07/15/13 00:00	07/16/13 18:15	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	3000	50	07/15/13 00:00	07/16/13 18:15	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	606-20-2	
Di-n-octylphthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	117-81-7	
Fluoranthene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	206-44-0	
Fluorene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	87-68-3	
Hexachlorobenzene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	77-47-4	
Hexachloroethane	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	193-39-5	
Isophorone	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	78-59-1	
Naphthalene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	91-20-3	
Nitrobenzene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	98-95-3	
2-Nitrophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	88-75-5	
4-Nitrophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	86-30-6	
Pentachlorophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	87-86-5	
Phenanthrene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	85-01-8	
Phenol	<b>15600</b>	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	108-95-2	
Pyrene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:15	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

Sample: 316-013		Lab ID: 60148688001	Collected: 07/11/13 15:15	Received: 07/12/13 01:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	50	07/15/13 00:00	07/16/13 18:15	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	50	07/15/13 00:00	07/16/13 18:15	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	50	07/15/13 00:00	07/16/13 18:15	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	50	07/15/13 00:00	07/16/13 18:15	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	50	07/15/13 00:00	07/16/13 18:15	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	50	07/15/13 00:00	07/16/13 18:15	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/15/13 17:11	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/15/13 17:11	75-27-4	
Bromoform	ND ug/L		200	200		07/15/13 17:11	75-25-2	
Bromomethane	ND ug/L		1000	200		07/15/13 17:11	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/15/13 17:11	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/15/13 17:11	108-90-7	
Chloroethane	ND ug/L		200	200		07/15/13 17:11	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/15/13 17:11	110-75-8	
Chloroform	ND ug/L		200	200		07/15/13 17:11	67-66-3	
Chloromethane	ND ug/L		200	200		07/15/13 17:11	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/15/13 17:11	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/15/13 17:11	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/15/13 17:11	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/15/13 17:11	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/15/13 17:11	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/15/13 17:11	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/15/13 17:11	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/15/13 17:11	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/15/13 17:11	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/15/13 17:11	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/15/13 17:11	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/15/13 17:11	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/15/13 17:11	100-41-4	
Methylene chloride	ND ug/L		200	200		07/15/13 17:11	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/15/13 17:11	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/15/13 17:11	127-18-4	
Toluene	ND ug/L		200	200		07/15/13 17:11	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/15/13 17:11	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/15/13 17:11	79-00-5	
Trichloroethene	ND ug/L		200	200		07/15/13 17:11	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/15/13 17:11	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/15/13 17:11	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/15/13 17:11	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	106 %		80-120	200		07/15/13 17:11	1868-53-7	D3
4-Bromofluorobenzene (S)	100 %		80-120	200		07/15/13 17:11	460-00-4	
Toluene-d8 (S)	99 %		80-120	200		07/15/13 17:11	2037-26-5	
1,2-Dichloroethane-d4 (S)	99 %		80-120	200		07/15/13 17:11	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

<b>Sample: 316-013</b>		<b>Lab ID: 60148688001</b>	Collected: 07/11/13 15:15	Received: 07/12/13 01:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Preservation pH	<b>7.0</b>		1.0	200		07/15/13 17:11		
<b>HEM, Oil and Grease</b>		Analytical Method: EPA 1664A						
Oil and Grease	<b>298</b>	mg/L	5.0	1		07/15/13 06:58		
<b>1664 SGT-HEM, TPH</b>		Analytical Method: EPA 1664A						
Total Petroleum Hydrocarbons	<b>13.8</b>	mg/L	5.0	1		07/15/13 07:08		
<b>2540D Total Suspended Solids</b>		Analytical Method: SM 2540D						
Total Suspended Solids	<b>730</b>	mg/L	5.0	1		07/15/13 09:34		
<b>4500H+ pH, Electrometric</b>		Analytical Method: SM 4500-H+B						
pH at 25 Degrees C	<b>5.2</b>	Std. Units	0.10	1		07/15/13 15:07		H6
<b>350.1 Ammonia</b>		Analytical Method: EPA 350.1						
Nitrogen, Ammonia	<b>709</b>	mg/L	20.0	200		07/12/13 13:47	7664-41-7	
<b>410.4 COD</b>		Analytical Method: EPA 410.4						
Chemical Oxygen Demand	<b>51700</b>	mg/L	5000	500		07/16/13 14:11		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

Sample: TRIP BLANK	Lab ID: 60148688002	Collected: 07/11/13 15:15	Received: 07/12/13 01:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/15/13 17:32	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/15/13 17:32	75-27-4	
Bromoform	ND ug/L		1.0	1		07/15/13 17:32	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/15/13 17:32	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/15/13 17:32	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/15/13 17:32	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/15/13 17:32	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/15/13 17:32	110-75-8	
Chloroform	ND ug/L		1.0	1		07/15/13 17:32	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/15/13 17:32	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/15/13 17:32	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/15/13 17:32	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/15/13 17:32	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/15/13 17:32	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/15/13 17:32	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/15/13 17:32	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/15/13 17:32	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/15/13 17:32	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/15/13 17:32	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/15/13 17:32	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/15/13 17:32	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/15/13 17:32	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/15/13 17:32	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/15/13 17:32	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/15/13 17:32	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/15/13 17:32	127-18-4	
Toluene	ND ug/L		1.0	1		07/15/13 17:32	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/15/13 17:32	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/15/13 17:32	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/15/13 17:32	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/15/13 17:32	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/15/13 17:32	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/15/13 17:32	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102 %		80-120	1		07/15/13 17:32	1868-53-7	
4-Bromofluorobenzene (S)	97 %		80-120	1		07/15/13 17:32	460-00-4	
Toluene-d8 (S)	98 %		80-120	1		07/15/13 17:32	2037-26-5	
1,2-Dichloroethane-d4 (S)	95 %		80-120	1		07/15/13 17:32	17060-07-0	
Preservation pH	<b>7.0</b>			1.0	1	07/15/13 17:32		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

QC Batch: MERP/7507

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Associated Lab Samples: 60148688001

METHOD BLANK: 1219973

Matrix: Water

Associated Lab Samples: 60148688001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/15/13 13:49	

LABORATORY CONTROL SAMPLE: 1219974

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1219975

1219976

Parameter	Units	60148704001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L	ND	5	5	0.87	0.77	16	14	70-130	12	20	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

QC Batch:	MERP/7506	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60148688001		

METHOD BLANK: 1219969 Matrix: Water

Associated Lab Samples: 60148688001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/15/13 13:33	

LABORATORY CONTROL SAMPLE: 1219970

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.1	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1219971 1219972

Parameter	Units	60148704001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury, Dissolved	ug/L	ND	5	5	0.85	0.76	16	14	70-130	11	20	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013  
Pace Project No.: 60148688

QC Batch: MPRP/23464 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60148688001

METHOD BLANK: 1220120 Matrix: Water  
Associated Lab Samples: 60148688001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/17/13 11:03	
Antimony	ug/L	ND	10.0	07/17/13 11:03	
Arsenic	ug/L	ND	10.0	07/17/13 11:03	
Beryllium	ug/L	ND	1.0	07/17/13 11:03	
Cadmium	ug/L	ND	5.0	07/17/13 11:03	
Chromium	ug/L	ND	5.0	07/17/13 11:03	
Cobalt	ug/L	ND	5.0	07/17/13 11:03	
Copper	ug/L	ND	10.0	07/17/13 11:03	
Iron	ug/L	ND	50.0	07/17/13 11:03	
Lead	ug/L	ND	5.0	07/17/13 11:03	
Nickel	ug/L	ND	5.0	07/17/13 11:03	
Selenium	ug/L	ND	15.0	07/17/13 11:03	
Silver	ug/L	ND	7.0	07/17/13 11:03	
Thallium	ug/L	ND	20.0	07/17/13 11:03	
Zinc	ug/L	ND	50.0	07/17/13 11:03	

LABORATORY CONTROL SAMPLE: 1220121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10300	103	85-115	
Antimony	ug/L	1000	1030	103	85-115	
Arsenic	ug/L	1000	963	96	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	994	99	85-115	
Chromium	ug/L	1000	978	98	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	976	98	85-115	
Iron	ug/L	10000	10300	103	85-115	
Lead	ug/L	1000	1040	104	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1000	100	85-115	
Silver	ug/L	500	494	99	85-115	
Thallium	ug/L	1000	1060	106	85-115	
Zinc	ug/L	1000	997	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1220122 1220123

Parameter	Units	60148640002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum	ug/L	737	10000	10000	10000	11000	10900	103	102	70-130	1	8

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:											
1220122			1220123								
Parameter	Units	60148640002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Antimony	ug/L	ND	1000	1000	1070	1060	107	105	70-130	1	7
Arsenic	ug/L	16.0	1000	1000	1040	1030	102	101	70-130	1	10
Beryllium	ug/L	ND	1000	1000	1020	1010	102	101	70-130	1	7
Cadmium	ug/L	ND	1000	1000	1030	1020	103	102	70-130	1	10
Chromium	ug/L	0.040	1000	1000	1030	1010	99	97	70-130	1	10
		mg/L									
Cobalt	ug/L	ND	1000	1000	1010	998	101	100	70-130	1	6
Copper	ug/L	ND	1000	1000	1020	1000	101	100	70-130	2	11
Iron	ug/L	ND	10000	10000	10300	10200	102	101	70-130	1	10
Lead	ug/L	ND	1000	1000	981	972	98	97	70-130	1	10
Nickel	ug/L	0.41	1000	1000	1430	1410	102	100	70-130	1	10
		mg/L									
Selenium	ug/L	ND	1000	1000	1060	1050	106	105	70-130	1	10
Silver	ug/L	ND	500	500	520	514	104	103	70-130	1	10
Thallium	ug/L	ND	1000	1000	926	920	93	92	70-130	1	6
Zinc	ug/L	0.16	1000	1000	1190	1180	103	102	70-130	1	11
		mg/L									

MATRIX SPIKE SAMPLE: 1220124								
Parameter	Units	60148588002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Aluminum	ug/L		ND	10200	102	70-130		
Antimony	ug/L		ND	1000	1050	70-130		
Arsenic	ug/L		ND	1000	978	70-130		
Beryllium	ug/L		ND	1000	1000	70-130		
Cadmium	ug/L		ND	1000	996	70-130		
Chromium	ug/L		ND	1000	975	70-130		
Cobalt	ug/L		ND	1000	1010	70-130		
Copper	ug/L		19.4	1000	996	70-130		
Iron	ug/L		54.5	10000	10100	70-130		
Lead	ug/L		ND	1000	1020	70-130		
Nickel	ug/L		ND	1000	1020	70-130		
Selenium	ug/L		ND	1000	1020	70-130		
Silver	ug/L		ND	500	497	70-130		
Thallium	ug/L		ND	1000	1030	70-130		
Zinc	ug/L		ND	1000	989	70-130		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013  
Pace Project No.: 60148688

QC Batch: MPRP/23453      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60148688001

METHOD BLANK: 1219377      Matrix: Water  
Associated Lab Samples: 60148688001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/15/13 17:28	
Antimony, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Arsenic, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Beryllium, Dissolved	ug/L	ND	1.0	07/15/13 17:28	
Cadmium, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Chromium, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Cobalt, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Copper, Dissolved	ug/L	ND	10.0	07/15/13 17:28	
Iron, Dissolved	ug/L	ND	50.0	07/15/13 17:28	
Lead, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Nickel, Dissolved	ug/L	ND	5.0	07/15/13 17:28	
Selenium, Dissolved	ug/L	ND	15.0	07/15/13 17:28	
Silver, Dissolved	ug/L	ND	7.0	07/15/13 17:28	
Thallium, Dissolved	ug/L	ND	20.0	07/15/13 17:28	
Zinc, Dissolved	ug/L	ND	50.0	07/15/13 17:28	

LABORATORY CONTROL SAMPLE: 1219378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9830	98	85-115	
Antimony, Dissolved	ug/L	1000	1010	101	85-115	
Arsenic, Dissolved	ug/L	1000	951	95	85-115	
Beryllium, Dissolved	ug/L	1000	968	97	85-115	
Cadmium, Dissolved	ug/L	1000	978	98	85-115	
Chromium, Dissolved	ug/L	1000	956	96	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	960	96	85-115	
Iron, Dissolved	ug/L	10000	9360	94	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	997	100	85-115	
Silver, Dissolved	ug/L	500	477	95	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	960	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1219379      1219380

Parameter	Units	60148688001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	3460	10000	10000	13300	13800	98	103	70-130	4	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

Parameter	60148688001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Antimony, Dissolved	ug/L	ND	1000	1000	984	992	96	97	70-130	1	7			
Arsenic, Dissolved	ug/L	512	1000	1000	1570	1600	106	108	70-130	2	10			
Beryllium, Dissolved	ug/L	ND	1000	1000	878	887	88	89	70-130	1	7			
Cadmium, Dissolved	ug/L	ND	1000	1000	1020	1040	101	103	70-130	2	10			
Chromium, Dissolved	ug/L	212	1000	1000	1090	1150	88	94	70-130	5	10			
Cobalt, Dissolved	ug/L	49.6	1000	1000	970	982	92	93	70-130	1	6			
Copper, Dissolved	ug/L	ND	1000	1000	1030	1080	102	107	70-130	5	11			
Iron, Dissolved	ug/L	489000	10000	10000	503000	518000	140	290	70-130	3	10	M1		
Lead, Dissolved	ug/L	91.8	1000	1000	932	939	84	85	70-130	1	10			
Nickel, Dissolved	ug/L	129	1000	1000	1050	1060	92	94	70-130	1	10			
Selenium, Dissolved	ug/L	ND	1000	1000	1140	1140	114	114	70-130	0	10			
Silver, Dissolved	ug/L	ND	500	500	49.3	52.9	10	11	70-130	7	10	M1		
Thallium, Dissolved	ug/L	ND	1000	1000	750	764	75	76	70-130	2	6			
Zinc, Dissolved	ug/L	13000	1000	1000	13800	14000	78	101	70-130	2	11			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

QC Batch: MSV/54925 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148688001, 60148688002

METHOD BLANK: 1220068 Matrix: Water

Associated Lab Samples: 60148688001, 60148688002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1-Dichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1-Dichloroethene	ug/L	ND	1.0	07/15/13 11:10	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
1,2-Dichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,2-Dichloropropane	ug/L	ND	1.0	07/15/13 11:10	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/15/13 11:10	
Benzene	ug/L	ND	1.0	07/15/13 11:10	
Bromodichloromethane	ug/L	ND	1.0	07/15/13 11:10	
Bromoform	ug/L	ND	1.0	07/15/13 11:10	
Bromomethane	ug/L	ND	5.0	07/15/13 11:10	
Carbon tetrachloride	ug/L	ND	1.0	07/15/13 11:10	
Chlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
Chloroethane	ug/L	ND	1.0	07/15/13 11:10	
Chloroform	ug/L	ND	1.0	07/15/13 11:10	
Chloromethane	ug/L	ND	1.0	07/15/13 11:10	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/15/13 11:10	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/15/13 11:10	
Dibromochloromethane	ug/L	ND	1.0	07/15/13 11:10	
Ethylbenzene	ug/L	ND	1.0	07/15/13 11:10	
Methylene chloride	ug/L	ND	1.0	07/15/13 11:10	
Tetrachloroethene	ug/L	ND	1.0	07/15/13 11:10	
Toluene	ug/L	ND	1.0	07/15/13 11:10	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/15/13 11:10	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/15/13 11:10	
Trichloroethene	ug/L	ND	1.0	07/15/13 11:10	
Trichlorofluoromethane	ug/L	ND	1.0	07/15/13 11:10	
Vinyl chloride	ug/L	ND	1.0	07/15/13 11:10	
Xylene (Total)	ug/L	ND	3.0	07/15/13 11:10	
1,2-Dichloroethane-d4 (S)	%	106	80-120	07/15/13 11:10	
4-Bromofluorobenzene (S)	%	95	80-120	07/15/13 11:10	
Dibromofluoromethane (S)	%	102	80-120	07/15/13 11:10	
Toluene-d8 (S)	%	100	80-120	07/15/13 11:10	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

LABORATORY CONTROL SAMPLE: 1220069

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	24.2	121	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	21.6	108	59-138	
1,1,2-Trichloroethane	ug/L	20	22.1	111	69-127	
1,1-Dichloroethane	ug/L	20	21.6	108	69-126	
1,1-Dichloroethene	ug/L	20	22.0	110	65-153	
1,2-Dichlorobenzene	ug/L	20	21.3	106	66-126	
1,2-Dichloroethane	ug/L	20	23.0	115	71-129	
1,2-Dichloropropane	ug/L	20	23.1	116	66-140	
1,3-Dichlorobenzene	ug/L	20	21.7	109	63-127	
1,4-Dichlorobenzene	ug/L	20	21.3	107	68-124	
2-Chloroethylvinyl ether	ug/L	20	15.0	75	33-159	
Benzene	ug/L	20	21.5	107	73-129	
Bromodichloromethane	ug/L	20	23.3	116	63-129	
Bromoform	ug/L	20	24.1	121	52-123	
Bromomethane	ug/L	20	23.1	115	10-160	
Carbon tetrachloride	ug/L	20	25.2	126	70-140	
Chlorobenzene	ug/L	20	22.1	111	68-127	
Chloroethane	ug/L	20	23.4	117	42-160	
Chloroform	ug/L	20	22.5	113	60-120	
Chloromethane	ug/L	20	17.8	89	10-160	
cis-1,2-Dichloroethene	ug/L	20	23.4	117	70-125	
cis-1,3-Dichloropropene	ug/L	20	23.0	115	66-132	
Dibromochloromethane	ug/L	20	25.6	128	63-134	
Ethylbenzene	ug/L	20	22.3	111	66-133	
Methylene chloride	ug/L	20	19.1	96	56-135	
Tetrachloroethene	ug/L	20	22.8	114	64-143	
Toluene	ug/L	20	21.9	109	70-130	
trans-1,2-Dichloroethene	ug/L	20	22.2	111	67-149	
trans-1,3-Dichloropropene	ug/L	20	25.5	127	66-138	
Trichloroethene	ug/L	20	20.3	102	71-130	
Trichlorofluoromethane	ug/L	20	20.5	102	58-158	
Vinyl chloride	ug/L	20	19.3	96	41-160	
Xylene (Total)	ug/L	60	65.2	109	67-130	
1,2-Dichloroethane-d4 (S)	%			105	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Dibromofluoromethane (S)	%			101	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1220070

Parameter	Units	60148560001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3800	95	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3840	96	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3600	90	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3430	86	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3500	87	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3560	89	18-145	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

MATRIX SPIKE SAMPLE:		1220070		60148560001		Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits		
1,2-Dichloroethane	ug/L	ND	4000	3550	89			49-155		
1,2-Dichloropropane	ug/L	ND	4000	3540	89			12-160		
1,3-Dichlorobenzene	ug/L	ND	4000	3660	91			59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	3660	91			18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	3230	81			10-160		
Benzene	ug/L	ND	4000	3360	84			37-151		
Bromodichloromethane	ug/L	ND	4000	3570	89			35-155		
Bromoform	ug/L	ND	4000	3710	93			45-133		
Bromomethane	ug/L	ND	4000	2580	64			10-160		
Carbon tetrachloride	ug/L	ND	4000	3970	99			70-140		
Chlorobenzene	ug/L	ND	4000	3480	87			37-153		
Chloroethane	ug/L	ND	4000	3700	92			14-160		
Chloroform	ug/L	ND	4000	3560	89			51-138		
Chloromethane	ug/L	ND	4000	2810	70			10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	3750	94			19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	3520	88			10-160		
Dibromochloromethane	ug/L	ND	4000	3860	96			53-149		
Ethylbenzene	ug/L	ND	4000	3420	86			37-154		
Methylene chloride	ug/L	ND	4000	2930	73			15-156		
Tetrachloroethene	ug/L	ND	4000	3580	90			64-148		
Toluene	ug/L	ND	4000	3420	86			47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	3460	87			54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	4020	101			17-160		
Trichloroethene	ug/L	ND	4000	3260	82			71-157		
Trichlorofluoromethane	ug/L	ND	4000	3410	85			17-160		
Vinyl chloride	ug/L	ND	4000	3110	78			10-160		
Xylene (Total)	ug/L	ND	12000	10000	83			12-153		
1,2-Dichloroethane-d4 (S)	%				101			80-120		
4-Bromofluorobenzene (S)	%				101			80-120		
Dibromofluoromethane (S)	%				105			80-120		
Toluene-d8 (S)	%				100			80-120		
Preservation pH			7.0			7.0				

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

QC Batch: OEXT/39295 Analysis Method: EPA 625  
 QC Batch Method: EPA 625 Analysis Description: 625 MSS  
 Associated Lab Samples: 60148688001

METHOD BLANK: 1219936 Matrix: Water

Associated Lab Samples: 60148688001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/16/13 10:09	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/16/13 10:09	
2,4-Dichlorophenol	ug/L	ND	5.0	07/16/13 10:09	
2,4-Dimethylphenol	ug/L	ND	5.0	07/16/13 10:09	
2,4-Dinitrophenol	ug/L	ND	50.0	07/16/13 10:09	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/16/13 10:09	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/16/13 10:09	
2-Chloronaphthalene	ug/L	ND	5.0	07/16/13 10:09	
2-Chlorophenol	ug/L	ND	5.0	07/16/13 10:09	
2-Nitrophenol	ug/L	ND	5.0	07/16/13 10:09	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/16/13 10:09	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/16/13 10:09	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/16/13 10:09	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/16/13 10:09	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/16/13 10:09	
4-Nitrophenol	ug/L	ND	5.0	07/16/13 10:09	
Acenaphthene	ug/L	ND	5.0	07/16/13 10:09	
Acenaphthylene	ug/L	ND	5.0	07/16/13 10:09	
Anthracene	ug/L	ND	5.0	07/16/13 10:09	
Benzidine	ug/L	ND	50.0	07/16/13 10:09	
Benzo(a)anthracene	ug/L	ND	5.0	07/16/13 10:09	
Benzo(a)pyrene	ug/L	ND	5.0	07/16/13 10:09	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/16/13 10:09	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/16/13 10:09	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/16/13 10:09	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/16/13 10:09	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/16/13 10:09	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/16/13 10:09	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/16/13 10:09	
Butylbenzylphthalate	ug/L	ND	5.0	07/16/13 10:09	
Chrysene	ug/L	ND	5.0	07/16/13 10:09	
Di-n-butylphthalate	ug/L	ND	5.0	07/16/13 10:09	
Di-n-octylphthalate	ug/L	ND	5.0	07/16/13 10:09	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/16/13 10:09	
Diethylphthalate	ug/L	ND	5.0	07/16/13 10:09	
Dimethylphthalate	ug/L	ND	5.0	07/16/13 10:09	
Fluoranthene	ug/L	ND	5.0	07/16/13 10:09	
Fluorene	ug/L	ND	5.0	07/16/13 10:09	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/16/13 10:09	
Hexachlorobenzene	ug/L	ND	5.0	07/16/13 10:09	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/16/13 10:09	
Hexachloroethane	ug/L	ND	5.0	07/16/13 10:09	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/16/13 10:09	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Project No.: 60148688

METHOD BLANK: 1219936

Matrix: Water

Associated Lab Samples: 60148688001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/16/13 10:09	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/16/13 10:09	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/16/13 10:09	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/16/13 10:09	
Naphthalene	ug/L	ND	5.0	07/16/13 10:09	
Nitrobenzene	ug/L	ND	5.0	07/16/13 10:09	
Pentachlorophenol	ug/L	ND	5.0	07/16/13 10:09	
Phenanthrene	ug/L	ND	5.0	07/16/13 10:09	
Phenol	ug/L	ND	5.0	07/16/13 10:09	
Pyrene	ug/L	ND	5.0	07/16/13 10:09	
2,4,6-Tribromophenol (S)	%	98	39-119	07/16/13 10:09	
2-Fluorobiphenyl (S)	%	94	36-120	07/16/13 10:09	
2-Fluorophenol (S)	%	51	18-120	07/16/13 10:09	
Nitrobenzene-d5 (S)	%	88	32-120	07/16/13 10:09	
Phenol-d6 (S)	%	33	12-120	07/16/13 10:09	
Terphenyl-d14 (S)	%	109	44-120	07/16/13 10:09	

LABORATORY CONTROL SAMPLE: 1219937

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	41.9	84	44-120	
2,4,6-Trichlorophenol	ug/L	50	43.9	88	48-120	
2,4-Dichlorophenol	ug/L	50	43.6	87	48-120	
2,4-Dimethylphenol	ug/L	50	40.2	80	37-119	
2,4-Dinitrophenol	ug/L	50	43.6J	87	15-153	
2,4-Dinitrotoluene	ug/L	50	49.1	98	54-120	
2,6-Dinitrotoluene	ug/L	50	48.4	97	52-120	
2-Chloronaphthalene	ug/L	50	44.7	89	60-118	
2-Chlorophenol	ug/L	50	41.7	83	44-120	
2-Nitrophenol	ug/L	50	46.5	93	43-120	
3,3'-Dichlorobenzidine	ug/L	50	62.4	125	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	52.2	104	31-147	
4-Bromophenylphenyl ether	ug/L	50	50.1	100	53-120	
4-Chloro-3-methylphenol	ug/L	50	47.1	94	50-120	
4-Chlorophenylphenyl ether	ug/L	50	46.8	94	54-120	
4-Nitrophenol	ug/L	50	21.5	43	10-120	
Acenaphthene	ug/L	50	45.6	91	51-120	
Acenaphthylene	ug/L	50	45.2	90	51-120	
Anthracene	ug/L	50	50.6	101	54-120	
Benzidine	ug/L	50	26.4J	53	1-124	
Benzo(a)anthracene	ug/L	50	53.5	107	54-120	
Benzo(a)pyrene	ug/L	50	52.7	105	54-120	
Benzo(b)fluoranthene	ug/L	50	52.6	105	57-120	
Benzo(g,h,i)perylene	ug/L	50	52.5	105	54-120	
Benzo(k)fluoranthene	ug/L	50	53.9	108	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

LABORATORY CONTROL SAMPLE: 1219937

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	46.9	94	51-120	
bis(2-Chloroethyl) ether	ug/L	50	46.2	92	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	47.8	96	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	52.1	104	51-126	
Butylbenzylphthalate	ug/L	50	52.6	105	45-129	
Chrysene	ug/L	50	52.9	106	54-120	
Di-n-butylphthalate	ug/L	50	52.1	104	57-118	
Di-n-octylphthalate	ug/L	50	52.5	105	48-130	
Dibenz(a,h)anthracene	ug/L	50	51.7	103	56-119	
Diethylphthalate	ug/L	50	49.2	98	55-114	
Dimethylphthalate	ug/L	50	48.1	96	54-112	
Fluoranthene	ug/L	50	52.5	105	56-120	
Fluorene	ug/L	50	47.0	94	59-120	
Hexachloro-1,3-butadiene	ug/L	50	40.6	81	41-116	
Hexachlorobenzene	ug/L	50	49.4	99	53-120	
Hexachlorocyclopentadiene	ug/L	100	51.0	51	31-120	
Hexachloroethane	ug/L	50	40.7	81	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	51.3	103	55-120	
Isophorone	ug/L	50	47.5	95	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	49.1	98	47-120	
N-Nitrosodimethylamine	ug/L	50	31.5	63	28-120	
N-Nitrosodiphenylamine	ug/L	50	47.4	95	53-120	
Naphthalene	ug/L	50	43.6	87	48-120	
Nitrobenzene	ug/L	50	46.3	93	47-120	
Pentachlorophenol	ug/L	50	47.6	95	43-127	
Phenanthrene	ug/L	50	50.9	102	55-120	
Phenol	ug/L	50	18.5	37	15-112	
Pyrene	ug/L	50	52.7	105	55-115	
2,4,6-Tribromophenol (S)	%			97	39-119	
2-Fluorobiphenyl (S)	%			93	36-120	
2-Fluorophenol (S)	%			53	18-120	
Nitrobenzene-d5 (S)	%			91	32-120	M4
Phenol-d6 (S)	%			36	12-120	
Terphenyl-d14 (S)	%			107	44-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

QC Batch: WET/42338

Analysis Method: EPA 1664A

QC Batch Method: EPA 1664A

Analysis Description: 1664 HEM, Oil and Grease

Associated Lab Samples: 60148688001

METHOD BLANK: 1219901

Matrix: Water

Associated Lab Samples: 60148688001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/15/13 06:56	

LABORATORY CONTROL SAMPLE: 1219902

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	38.9	97	78-114	

MATRIX SPIKE SAMPLE: 1219903

Parameter	Units	60148495002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	43	42.5	96	78-114	

SAMPLE DUPLICATE: 1219904

Parameter	Units	60148671001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

QC Batch:	WET/42340	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60148688001		

METHOD BLANK: 1219911 Matrix: Water

Associated Lab Samples: 60148688001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/15/13 07:03	

LABORATORY CONTROL SAMPLE: 1219912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.6	108	64-132	

MATRIX SPIKE SAMPLE: 1219916

Parameter	Units	60148121001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.7	26.5	110	64-132	

SAMPLE DUPLICATE: 1219917

Parameter	Units	60148128001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	3.5J		34	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

QC Batch: WET/42350

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60148688001

METHOD BLANK: 1219994

Matrix: Water

Associated Lab Samples: 60148688001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/15/13 09:31	

SAMPLE DUPLICATE: 1219995

Parameter	Units	60148708003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	15.0	16.0	6	25	

SAMPLE DUPLICATE: 1219996

Parameter	Units	60148688001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	730	850	15	25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

QC Batch: WET/42343 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148688001

SAMPLE DUPLICATE: 1219947

Parameter	Units	60148571002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.2	7.2	0	5	H6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013  
Pace Project No.: 60148688

QC Batch: WETA/25436 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60148688001

METHOD BLANK: 1219015 Matrix: Water  
Associated Lab Samples: 60148688001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/12/13 13:16	

LABORATORY CONTROL SAMPLE: 1219016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	103	90-110	

MATRIX SPIKE SAMPLE: 1219017

Parameter	Units	60148256001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.7	84	90-110	M1

MATRIX SPIKE SAMPLE: 1219018

Parameter	Units	60148264002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	99	90-110	

SAMPLE DUPLICATE: 1219019

Parameter	Units	60148257002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	1.5	1.5	1	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

QC Batch:	WETA/25449	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60148688001		

METHOD BLANK: 1220177 Matrix: Water

Associated Lab Samples: 60148688001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/16/13 13:14	

LABORATORY CONTROL SAMPLE: 1220178

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	46.3	93	90-110	

MATRIX SPIKE SAMPLE: 1220179

Parameter	Units	60148671001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	34.8	50	84.3	99	90-110	

MATRIX SPIKE SAMPLE: 1220181

Parameter	Units	60148841002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	1050	500	1210	33	90-110	M1

SAMPLE DUPLICATE: 1220180

Parameter	Units	60148841001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	1080	1050	3	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M4 A matrix spike/matrix spike duplicate was not performed for this batch due to sample dilution.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-013

Pace Project No.: 60148688

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148688001	316-013	EPA 200.7	MPRP/23464	EPA 200.7	ICP/18460
60148688001	316-013	EPA 200.7	MPRP/23453	EPA 200.7	ICP/18438
60148688001	316-013	EPA 245.1	MERP/7507	EPA 245.1	MERC/7464
60148688001	316-013	EPA 245.1	MERP/7506	EPA 245.1	MERC/7463
60148688001	316-013	EPA 625	OEXT/39295	EPA 625	MSSV/12459
60148688001	316-013	EPA 624 Low	MSV/54925		
60148688002	TRIP BLANK	EPA 624 Low	MSV/54925		
60148688001	316-013	EPA 1664A	WET/42338		
60148688001	316-013	EPA 1664A	WET/42340		
60148688001	316-013	SM 2540D	WET/42350		
60148688001	316-013	SM 4500-H+B	WET/42343		
60148688001	316-013	EPA 350.1	WETA/25436		
60148688001	316-013	EPA 410.4	WETA/25449		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148688



Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  VIA

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  ZPLC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 3.0  
Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: 7-12-13 BA

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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>pH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial <u>6.0</u> <u>6.0</u> Added 2.5 mL HNO3
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Final <u>4.8</u> <u>1.5</u> Added 2.0 mL H2SO4
Exceptions: <u>VOA</u> , coliform, TOC, <u>O&amp;G</u> , WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>BA</u> Lot # of added preservative <u>12510-1-3</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
		16. <u>lot 5</u>
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/15/13





July 22, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-014  
Pace Project No.: 60148776

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148776001	316-014	Water	07/12/13 14:30	07/13/13 01:30
60148776002	TRIP BLANK	Water	07/12/13 14:30	07/13/13 01:30

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148776001	316-014	EPA 200.7	JGP	15
		EPA 200.7	TDS	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148776002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

Sample: 316-014		Lab ID: 60148776001	Collected: 07/12/13 14:30	Received: 07/13/13 01:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	22700 ug/L		150	2	07/16/13 11:15	07/17/13 12:34	7429-90-5	
Antimony	53.9 ug/L		50.0	5	07/16/13 11:15	07/17/13 12:44	7440-36-0	D9
Arsenic	679 ug/L		50.0	5	07/16/13 11:15	07/17/13 12:44	7440-38-2	
Beryllium	ND ug/L		2.0	2	07/16/13 11:15	07/17/13 12:34	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/16/13 11:15	07/17/13 12:44	7440-43-9	D3
Chromium	295 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:44	7440-47-3	
Cobalt	67.8 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:44	7440-48-4	
Copper	82.2 ug/L		50.0	5	07/16/13 11:15	07/17/13 12:44	7440-50-8	
Iron	896000 ug/L		100	2	07/16/13 11:15	07/17/13 12:34	7439-89-6	
Lead	239 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:44	7439-92-1	
Nickel	176 ug/L		25.0	5	07/16/13 11:15	07/17/13 12:44	7440-02-0	
Selenium	97.4 ug/L		75.0	5	07/16/13 11:15	07/17/13 12:44	7782-49-2	
Silver	ND ug/L		35.0	5	07/16/13 11:15	07/17/13 12:44	7440-22-4	D3
Thallium	ND ug/L		100	5	07/16/13 11:15	07/17/13 12:44	7440-28-0	D3
Zinc	14400 ug/L		1000	20	07/16/13 11:15	07/17/13 12:54	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	4250 ug/L		150	2	07/17/13 15:40	07/18/13 10:42	7429-90-5	
Antimony, Dissolved	65.3 ug/L		50.0	5	07/17/13 15:40	07/18/13 10:50	7440-36-0	
Arsenic, Dissolved	673 ug/L		50.0	5	07/17/13 15:40	07/18/13 10:50	7440-38-2	
Beryllium, Dissolved	ND ug/L		2.0	2	07/17/13 15:40	07/18/13 10:42	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/17/13 15:40	07/18/13 10:50	7440-43-9	D3
Chromium, Dissolved	237 ug/L		25.0	5	07/17/13 15:40	07/18/13 10:50	7440-47-3	
Cobalt, Dissolved	41.3 ug/L		25.0	5	07/17/13 15:40	07/18/13 10:50	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/17/13 15:40	07/18/13 10:42	7440-50-8	
Iron, Dissolved	621000 ug/L		100	2	07/17/13 15:40	07/18/13 10:42	7439-89-6	M1
Lead, Dissolved	89.8 ug/L		25.0	5	07/17/13 15:40	07/18/13 10:50	7439-92-1	
Nickel, Dissolved	150 ug/L		25.0	5	07/17/13 15:40	07/18/13 10:50	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/17/13 15:40	07/18/13 10:50	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/17/13 15:40	07/18/13 10:42	7440-22-4	D3,M1
Thallium, Dissolved	ND ug/L		40.0	2	07/17/13 15:40	07/18/13 10:42	7440-28-0	D3
Zinc, Dissolved	14000 ug/L		1000	20	07/17/13 15:40	07/18/13 10:57	7440-66-6	M1
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	4.8 ug/L		0.20	1	07/15/13 09:30	07/15/13 14:13	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	07/16/13 08:30	07/16/13 14:06	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		2500	50	07/15/13 00:00	07/16/13 18:36	83-32-9	
Acenaphthylene	ND ug/L		2500	50	07/15/13 00:00	07/16/13 18:36	208-96-8	
Anthracene	ND ug/L		2500	50	07/15/13 00:00	07/16/13 18:36	120-12-7	
Benzidine	ND ug/L		25000	50	07/15/13 00:00	07/16/13 18:36	92-87-5	
Benzo(a)anthracene	ND ug/L		2500	50	07/15/13 00:00	07/16/13 18:36	56-55-3	
Benzo(a)pyrene	ND ug/L		2500	50	07/15/13 00:00	07/16/13 18:36	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

Sample: 316-014		Lab ID: 60148776001	Collected: 07/12/13 14:30	Received: 07/13/13 01:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	101-55-3	
Butylbenzylphthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	3000	50	07/15/13 00:00	07/16/13 18:36	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	3000	50	07/15/13 00:00	07/16/13 18:36	39638-32-9	
2-Chloronaphthalene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	91-58-7	
2-Chlorophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	7005-72-3	
Chrysene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	10000	50	07/15/13 00:00	07/16/13 18:36	91-94-1	
2,4-Dichlorophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	120-83-2	
Diethylphthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	84-66-2	
2,4-Dimethylphenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	105-67-9	
Dimethylphthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	131-11-3	
Di-n-butylphthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	12500	50	07/15/13 00:00	07/16/13 18:36	534-52-1	
2,4-Dinitrophenol	ND	ug/L	25000	50	07/15/13 00:00	07/16/13 18:36	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	3000	50	07/15/13 00:00	07/16/13 18:36	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	606-20-2	
Di-n-octylphthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	117-81-7	
Fluoranthene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	206-44-0	
Fluorene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	87-68-3	
Hexachlorobenzene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	77-47-4	
Hexachloroethane	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	193-39-5	
Isophorone	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	78-59-1	
Naphthalene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	91-20-3	
Nitrobenzene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	98-95-3	
2-Nitrophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	88-75-5	
4-Nitrophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	86-30-6	
Pentachlorophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	87-86-5	
Phenanthrene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	85-01-8	
Phenol	<b>14600</b>	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	108-95-2	
Pyrene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	2500	50	07/15/13 00:00	07/16/13 18:36	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

**Sample: 316-014**      **Lab ID: 60148776001**      Collected: 07/12/13 14:30      Received: 07/13/13 01:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
------------	---------	-------	--------------	----	----------	----------	---------	------

**625 MSSV**

Analytical Method: EPA 625      Preparation Method: EPA 625

**Surrogates**

Nitrobenzene-d5 (S)	0 %		32-120	50	07/15/13 00:00	07/16/13 18:36	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	50	07/15/13 00:00	07/16/13 18:36	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	50	07/15/13 00:00	07/16/13 18:36	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	50	07/15/13 00:00	07/16/13 18:36	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	50	07/15/13 00:00	07/16/13 18:36	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	50	07/15/13 00:00	07/16/13 18:36	118-79-6	S4

**624 Volatile Organics**

Analytical Method: EPA 624 Low

Benzene	ND ug/L		200	200		07/15/13 17:54	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/15/13 17:54	75-27-4	
Bromoform	ND ug/L		200	200		07/15/13 17:54	75-25-2	
Bromomethane	ND ug/L		1000	200		07/15/13 17:54	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/15/13 17:54	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/15/13 17:54	108-90-7	
Chloroethane	ND ug/L		200	200		07/15/13 17:54	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/15/13 17:54	110-75-8	
Chloroform	ND ug/L		200	200		07/15/13 17:54	67-66-3	
Chloromethane	ND ug/L		200	200		07/15/13 17:54	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/15/13 17:54	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/15/13 17:54	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/15/13 17:54	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/15/13 17:54	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/15/13 17:54	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/15/13 17:54	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/15/13 17:54	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/15/13 17:54	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/15/13 17:54	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/15/13 17:54	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/15/13 17:54	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/15/13 17:54	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/15/13 17:54	100-41-4	
Methylene chloride	ND ug/L		200	200		07/15/13 17:54	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/15/13 17:54	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/15/13 17:54	127-18-4	
Toluene	ND ug/L		200	200		07/15/13 17:54	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/15/13 17:54	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/15/13 17:54	79-00-5	
Trichloroethene	ND ug/L		200	200		07/15/13 17:54	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/15/13 17:54	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/15/13 17:54	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/15/13 17:54	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103 %		80-120	200		07/15/13 17:54	1868-53-7	D3
4-Bromofluorobenzene (S)	95 %		80-120	200		07/15/13 17:54	460-00-4	
Toluene-d8 (S)	101 %		80-120	200		07/15/13 17:54	2037-26-5	
1,2-Dichloroethane-d4 (S)	104 %		80-120	200		07/15/13 17:54	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

<b>Sample: 316-014</b>		<b>Lab ID: 60148776001</b>	Collected: 07/12/13 14:30	Received: 07/13/13 01:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/15/13 17:54		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>410</b>	mg/L	5.0	1		07/15/13 06:58		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>38.4</b>	mg/L	5.0	1		07/15/13 07:09		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>1020</b>	mg/L	5.0	1		07/17/13 08:48		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.4</b>	Std. Units	0.10	1		07/16/13 15:00		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>664</b>	mg/L	20.0	200		07/16/13 11:55	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>54300</b>	mg/L	5000	500		07/16/13 14:14		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

Sample: TRIP BLANK	Lab ID: 60148776002	Collected: 07/12/13 14:30	Received: 07/13/13 01:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/15/13 18:15	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/15/13 18:15	75-27-4	
Bromoform	ND ug/L		1.0	1		07/15/13 18:15	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/15/13 18:15	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/15/13 18:15	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/15/13 18:15	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/15/13 18:15	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/15/13 18:15	110-75-8	
Chloroform	ND ug/L		1.0	1		07/15/13 18:15	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/15/13 18:15	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/15/13 18:15	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/15/13 18:15	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/15/13 18:15	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/15/13 18:15	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/15/13 18:15	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/15/13 18:15	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/15/13 18:15	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/15/13 18:15	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/15/13 18:15	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/15/13 18:15	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/15/13 18:15	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/15/13 18:15	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/15/13 18:15	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/15/13 18:15	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/15/13 18:15	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/15/13 18:15	127-18-4	
Toluene	ND ug/L		1.0	1		07/15/13 18:15	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/15/13 18:15	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/15/13 18:15	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/15/13 18:15	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/15/13 18:15	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/15/13 18:15	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/15/13 18:15	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	105 %		80-120	1		07/15/13 18:15	1868-53-7	
4-Bromofluorobenzene (S)	97 %		80-120	1		07/15/13 18:15	460-00-4	
Toluene-d8 (S)	100 %		80-120	1		07/15/13 18:15	2037-26-5	
1,2-Dichloroethane-d4 (S)	106 %		80-120	1		07/15/13 18:15	17060-07-0	
Preservation pH	7.0			1		07/15/13 18:15		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch: MERP/7507      Analysis Method: EPA 245.1  
 QC Batch Method: EPA 245.1      Analysis Description: 245.1 Mercury  
 Associated Lab Samples: 60148776001

METHOD BLANK: 1219973      Matrix: Water

Associated Lab Samples: 60148776001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/15/13 13:49	

LABORATORY CONTROL SAMPLE: 1219974

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1219975      1219976

Parameter	Units	60148704001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD
Mercury	ug/L	ND	5	5	5	0.87	0.77	16	14	70-130	12	20 M1

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch: MERP/7511

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury - Dissolved

Associated Lab Samples: 60148776001

METHOD BLANK: 1220503

Matrix: Water

Associated Lab Samples: 60148776001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/16/13 13:51	

LABORATORY CONTROL SAMPLE: 1220504

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.3	105	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1220505

1220506

Parameter	Units	60148807001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/L	ND		5	5	3.9	4.4	77	86	70-130	11	20	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch: MPRP/23464 Analysis Method: EPA 200.7  
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
 Associated Lab Samples: 60148776001

METHOD BLANK: 1220120 Matrix: Water

Associated Lab Samples: 60148776001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/17/13 11:03	
Antimony	ug/L	ND	10.0	07/17/13 11:03	
Arsenic	ug/L	ND	10.0	07/17/13 11:03	
Beryllium	ug/L	ND	1.0	07/17/13 11:03	
Cadmium	ug/L	ND	5.0	07/17/13 11:03	
Chromium	ug/L	ND	5.0	07/17/13 11:03	
Cobalt	ug/L	ND	5.0	07/17/13 11:03	
Copper	ug/L	ND	10.0	07/17/13 11:03	
Iron	ug/L	ND	50.0	07/17/13 11:03	
Lead	ug/L	ND	5.0	07/17/13 11:03	
Nickel	ug/L	ND	5.0	07/17/13 11:03	
Selenium	ug/L	ND	15.0	07/17/13 11:03	
Silver	ug/L	ND	7.0	07/17/13 11:03	
Thallium	ug/L	ND	20.0	07/17/13 11:03	
Zinc	ug/L	ND	50.0	07/17/13 11:03	

LABORATORY CONTROL SAMPLE: 1220121

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10300	103	85-115	
Antimony	ug/L	1000	1030	103	85-115	
Arsenic	ug/L	1000	963	96	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	994	99	85-115	
Chromium	ug/L	1000	978	98	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	976	98	85-115	
Iron	ug/L	10000	10300	103	85-115	
Lead	ug/L	1000	1040	104	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1000	100	85-115	
Silver	ug/L	500	494	99	85-115	
Thallium	ug/L	1000	1060	106	85-115	
Zinc	ug/L	1000	997	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1220122 1220123

Parameter	Units	60148640002 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Aluminum	ug/L	737	10000	10000	11000	10900	103	102	70-130	1	8	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1220122												1220123	
Parameter	Units	60148640002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD			
Antimony	ug/L	ND	1000	1000	1070	1060	107	105	70-130	1	7		
Arsenic	ug/L	16.0	1000	1000	1040	1030	102	101	70-130	1	10		
Beryllium	ug/L	ND	1000	1000	1020	1010	102	101	70-130	1	7		
Cadmium	ug/L	ND	1000	1000	1030	1020	103	102	70-130	1	10		
Chromium	ug/L	0.040	1000	1000	1030	1010	99	97	70-130	1	10		
		mg/L											
Cobalt	ug/L	ND	1000	1000	1010	998	101	100	70-130	1	6		
Copper	ug/L	ND	1000	1000	1020	1000	101	100	70-130	2	11		
Iron	ug/L	ND	10000	10000	10300	10200	102	101	70-130	1	10		
Lead	ug/L	ND	1000	1000	981	972	98	97	70-130	1	10		
Nickel	ug/L	0.41	1000	1000	1430	1410	102	100	70-130	1	10		
		mg/L											
Selenium	ug/L	ND	1000	1000	1060	1050	106	105	70-130	1	10		
Silver	ug/L	ND	500	500	520	514	104	103	70-130	1	10		
Thallium	ug/L	ND	1000	1000	926	920	93	92	70-130	1	6		
Zinc	ug/L	0.16	1000	1000	1190	1180	103	102	70-130	1	11		
		mg/L											

MATRIX SPIKE SAMPLE: 1220124										
Parameter	Units	60148588002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers			
Aluminum	ug/L		ND	10000	10200	102	70-130			
Antimony	ug/L		ND	1000	1050	105	70-130			
Arsenic	ug/L		ND	1000	978	98	70-130			
Beryllium	ug/L		ND	1000	1000	100	70-130			
Cadmium	ug/L		ND	1000	996	100	70-130			
Chromium	ug/L		ND	1000	975	97	70-130			
Cobalt	ug/L		ND	1000	1010	101	70-130			
Copper	ug/L		19.4	1000	996	98	70-130			
Iron	ug/L		54.5	10000	10100	100	70-130			
Lead	ug/L		ND	1000	1020	102	70-130			
Nickel	ug/L		ND	1000	1020	101	70-130			
Selenium	ug/L		ND	1000	1020	101	70-130			
Silver	ug/L		ND	500	497	99	70-130			
Thallium	ug/L		ND	1000	1030	103	70-130			
Zinc	ug/L		ND	1000	989	98	70-130			

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch: MPRP/23508

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Dissolved

Associated Lab Samples: 60148776001

METHOD BLANK: 1221466

Matrix: Water

Associated Lab Samples: 60148776001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/18/13 10:38	
Antimony, Dissolved	ug/L	ND	10.0	07/18/13 10:38	
Arsenic, Dissolved	ug/L	ND	10.0	07/18/13 10:38	
Beryllium, Dissolved	ug/L	ND	1.0	07/18/13 10:38	
Cadmium, Dissolved	ug/L	ND	5.0	07/18/13 10:38	
Chromium, Dissolved	ug/L	ND	5.0	07/18/13 10:38	
Cobalt, Dissolved	ug/L	ND	5.0	07/18/13 10:38	
Copper, Dissolved	ug/L	ND	10.0	07/18/13 10:38	
Iron, Dissolved	ug/L	ND	50.0	07/18/13 10:38	
Lead, Dissolved	ug/L	ND	5.0	07/18/13 10:38	
Nickel, Dissolved	ug/L	ND	5.0	07/18/13 10:38	
Selenium, Dissolved	ug/L	ND	15.0	07/18/13 10:38	
Silver, Dissolved	ug/L	ND	7.0	07/18/13 10:38	
Thallium, Dissolved	ug/L	ND	20.0	07/18/13 10:38	
Zinc, Dissolved	ug/L	ND	50.0	07/18/13 10:38	

LABORATORY CONTROL SAMPLE: 1221467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9900	99	85-115	
Antimony, Dissolved	ug/L	1000	1010	101	85-115	
Arsenic, Dissolved	ug/L	1000	963	96	85-115	
Beryllium, Dissolved	ug/L	1000	963	96	85-115	
Cadmium, Dissolved	ug/L	1000	989	99	85-115	
Chromium, Dissolved	ug/L	1000	996	100	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	976	98	85-115	
Iron, Dissolved	ug/L	10000	9800	98	85-115	
Lead, Dissolved	ug/L	1000	1020	102	85-115	
Nickel, Dissolved	ug/L	1000	1030	103	85-115	
Selenium, Dissolved	ug/L	1000	972	97	85-115	
Silver, Dissolved	ug/L	500	490	98	85-115	
Thallium, Dissolved	ug/L	1000	1030	103	85-115	
Zinc, Dissolved	ug/L	1000	1000	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1221468

1221469

Parameter	Units	60148776001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	4250	10000	10000	10000	14700	14700	104	104	70-130	0	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

Parameter	60148776001		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony, Dissolved	ug/L	65.3	1000	1000	1030	1050	96	99	70-130	2	7		
Arsenic, Dissolved	ug/L	673	1000	1000	1750	1760	107	109	70-130	1	10		
Beryllium, Dissolved	ug/L	ND	1000	1000	906	900	91	90	70-130	1	7		
Cadmium, Dissolved	ug/L	ND	1000	1000	1030	1040	103	103	70-130	0	10		
Chromium, Dissolved	ug/L	237	1000	1000	1130	1150	90	91	70-130	1	10		
Cobalt, Dissolved	ug/L	41.3	1000	1000	962	962	92	92	70-130	0	6		
Copper, Dissolved	ug/L	ND	1000	1000	1090	1090	109	109	70-130	0	11		
Iron, Dissolved	ug/L	621000	10000	10000	596000	595000	-250	-264	70-130	0	10	M1	
Lead, Dissolved	ug/L	89.8	1000	1000	924	960	83	87	70-130	4	10		
Nickel, Dissolved	ug/L	150	1000	1000	1040	1040	89	89	70-130	0	10		
Selenium, Dissolved	ug/L	ND	1000	1000	1280	1290	121	122	70-130	1	10		
Silver, Dissolved	ug/L	ND	500	500	57.1	58.3	11	12	70-130	2	10	M1	
Thallium, Dissolved	ug/L	ND	1000	1000	718	708	72	71	70-130	1	6		
Zinc, Dissolved	ug/L	14000	1000	1000	13900	14000	-9	6	70-130	1	11	M1	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch: MSV/54925 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148776001, 60148776002

METHOD BLANK: 1220068 Matrix: Water

Associated Lab Samples: 60148776001, 60148776002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1-Dichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,1-Dichloroethene	ug/L	ND	1.0	07/15/13 11:10	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
1,2-Dichloroethane	ug/L	ND	1.0	07/15/13 11:10	
1,2-Dichloropropane	ug/L	ND	1.0	07/15/13 11:10	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/15/13 11:10	
Benzene	ug/L	ND	1.0	07/15/13 11:10	
Bromodichloromethane	ug/L	ND	1.0	07/15/13 11:10	
Bromoform	ug/L	ND	1.0	07/15/13 11:10	
Bromomethane	ug/L	ND	5.0	07/15/13 11:10	
Carbon tetrachloride	ug/L	ND	1.0	07/15/13 11:10	
Chlorobenzene	ug/L	ND	1.0	07/15/13 11:10	
Chloroethane	ug/L	ND	1.0	07/15/13 11:10	
Chloroform	ug/L	ND	1.0	07/15/13 11:10	
Chloromethane	ug/L	ND	1.0	07/15/13 11:10	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/15/13 11:10	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/15/13 11:10	
Dibromochloromethane	ug/L	ND	1.0	07/15/13 11:10	
Ethylbenzene	ug/L	ND	1.0	07/15/13 11:10	
Methylene chloride	ug/L	ND	1.0	07/15/13 11:10	
Tetrachloroethene	ug/L	ND	1.0	07/15/13 11:10	
Toluene	ug/L	ND	1.0	07/15/13 11:10	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/15/13 11:10	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/15/13 11:10	
Trichloroethene	ug/L	ND	1.0	07/15/13 11:10	
Trichlorofluoromethane	ug/L	ND	1.0	07/15/13 11:10	
Vinyl chloride	ug/L	ND	1.0	07/15/13 11:10	
Xylene (Total)	ug/L	ND	3.0	07/15/13 11:10	
1,2-Dichloroethane-d4 (S)	%	106	80-120	07/15/13 11:10	
4-Bromofluorobenzene (S)	%	95	80-120	07/15/13 11:10	
Dibromofluoromethane (S)	%	102	80-120	07/15/13 11:10	
Toluene-d8 (S)	%	100	80-120	07/15/13 11:10	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

LABORATORY CONTROL SAMPLE: 1220069

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	24.2	121	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	21.6	108	59-138	
1,1,2-Trichloroethane	ug/L	20	22.1	111	69-127	
1,1-Dichloroethane	ug/L	20	21.6	108	69-126	
1,1-Dichloroethene	ug/L	20	22.0	110	65-153	
1,2-Dichlorobenzene	ug/L	20	21.3	106	66-126	
1,2-Dichloroethane	ug/L	20	23.0	115	71-129	
1,2-Dichloropropane	ug/L	20	23.1	116	66-140	
1,3-Dichlorobenzene	ug/L	20	21.7	109	63-127	
1,4-Dichlorobenzene	ug/L	20	21.3	107	68-124	
2-Chloroethylvinyl ether	ug/L	20	15.0	75	33-159	
Benzene	ug/L	20	21.5	107	73-129	
Bromodichloromethane	ug/L	20	23.3	116	63-129	
Bromoform	ug/L	20	24.1	121	52-123	
Bromomethane	ug/L	20	23.1	115	10-160	
Carbon tetrachloride	ug/L	20	25.2	126	70-140	
Chlorobenzene	ug/L	20	22.1	111	68-127	
Chloroethane	ug/L	20	23.4	117	42-160	
Chloroform	ug/L	20	22.5	113	60-120	
Chloromethane	ug/L	20	17.8	89	10-160	
cis-1,2-Dichloroethene	ug/L	20	23.4	117	70-125	
cis-1,3-Dichloropropene	ug/L	20	23.0	115	66-132	
Dibromochloromethane	ug/L	20	25.6	128	63-134	
Ethylbenzene	ug/L	20	22.3	111	66-133	
Methylene chloride	ug/L	20	19.1	96	56-135	
Tetrachloroethene	ug/L	20	22.8	114	64-143	
Toluene	ug/L	20	21.9	109	70-130	
trans-1,2-Dichloroethene	ug/L	20	22.2	111	67-149	
trans-1,3-Dichloropropene	ug/L	20	25.5	127	66-138	
Trichloroethene	ug/L	20	20.3	102	71-130	
Trichlorofluoromethane	ug/L	20	20.5	102	58-158	
Vinyl chloride	ug/L	20	19.3	96	41-160	
Xylene (Total)	ug/L	60	65.2	109	67-130	
1,2-Dichloroethane-d4 (S)	%			105	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Dibromofluoromethane (S)	%			101	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1220070

Parameter	Units	60148560001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3800	95	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3840	96	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3600	90	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3430	86	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3500	87	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3560	89	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

MATRIX SPIKE SAMPLE:		1220070						
Parameter	Units	60148560001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
1,2-Dichloroethane	ug/L	ND	4000	3550	89	49-155		
1,2-Dichloropropane	ug/L	ND	4000	3540	89	12-160		
1,3-Dichlorobenzene	ug/L	ND	4000	3660	91	59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	3660	91	18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	3230	81	10-160		
Benzene	ug/L	ND	4000	3360	84	37-151		
Bromodichloromethane	ug/L	ND	4000	3570	89	35-155		
Bromoform	ug/L	ND	4000	3710	93	45-133		
Bromomethane	ug/L	ND	4000	2580	64	10-160		
Carbon tetrachloride	ug/L	ND	4000	3970	99	70-140		
Chlorobenzene	ug/L	ND	4000	3480	87	37-153		
Chloroethane	ug/L	ND	4000	3700	92	14-160		
Chloroform	ug/L	ND	4000	3560	89	51-138		
Chloromethane	ug/L	ND	4000	2810	70	10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	3750	94	19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	3520	88	10-160		
Dibromochloromethane	ug/L	ND	4000	3860	96	53-149		
Ethylbenzene	ug/L	ND	4000	3420	86	37-154		
Methylene chloride	ug/L	ND	4000	2930	73	15-156		
Tetrachloroethene	ug/L	ND	4000	3580	90	64-148		
Toluene	ug/L	ND	4000	3420	86	47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	3460	87	54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	4020	101	17-160		
Trichloroethene	ug/L	ND	4000	3260	82	71-157		
Trichlorofluoromethane	ug/L	ND	4000	3410	85	17-160		
Vinyl chloride	ug/L	ND	4000	3110	78	10-160		
Xylene (Total)	ug/L	ND	12000	10000	83	12-153		
1,2-Dichloroethane-d4 (S)	%				101	80-120		
4-Bromofluorobenzene (S)	%				101	80-120		
Dibromofluoromethane (S)	%				105	80-120		
Toluene-d8 (S)	%				100	80-120		
Preservation pH			7.0		7.0			

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch:	OEXT/39295	Analysis Method:	EPA 625
QC Batch Method:	EPA 625	Analysis Description:	625 MSS
Associated Lab Samples:	60148776001		

METHOD BLANK: 1219936 Matrix: Water

Associated Lab Samples: 60148776001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/16/13 10:09	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/16/13 10:09	
2,4-Dichlorophenol	ug/L	ND	5.0	07/16/13 10:09	
2,4-Dimethylphenol	ug/L	ND	5.0	07/16/13 10:09	
2,4-Dinitrophenol	ug/L	ND	50.0	07/16/13 10:09	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/16/13 10:09	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/16/13 10:09	
2-Chloronaphthalene	ug/L	ND	5.0	07/16/13 10:09	
2-Chlorophenol	ug/L	ND	5.0	07/16/13 10:09	
2-Nitrophenol	ug/L	ND	5.0	07/16/13 10:09	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/16/13 10:09	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/16/13 10:09	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/16/13 10:09	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/16/13 10:09	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/16/13 10:09	
4-Nitrophenol	ug/L	ND	5.0	07/16/13 10:09	
Acenaphthene	ug/L	ND	5.0	07/16/13 10:09	
Acenaphthylene	ug/L	ND	5.0	07/16/13 10:09	
Anthracene	ug/L	ND	5.0	07/16/13 10:09	
Benzidine	ug/L	ND	50.0	07/16/13 10:09	
Benzo(a)anthracene	ug/L	ND	5.0	07/16/13 10:09	
Benzo(a)pyrene	ug/L	ND	5.0	07/16/13 10:09	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/16/13 10:09	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/16/13 10:09	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/16/13 10:09	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/16/13 10:09	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/16/13 10:09	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/16/13 10:09	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/16/13 10:09	
Butylbenzylphthalate	ug/L	ND	5.0	07/16/13 10:09	
Chrysene	ug/L	ND	5.0	07/16/13 10:09	
Di-n-butylphthalate	ug/L	ND	5.0	07/16/13 10:09	
Di-n-octylphthalate	ug/L	ND	5.0	07/16/13 10:09	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/16/13 10:09	
Diethylphthalate	ug/L	ND	5.0	07/16/13 10:09	
Dimethylphthalate	ug/L	ND	5.0	07/16/13 10:09	
Fluoranthene	ug/L	ND	5.0	07/16/13 10:09	
Fluorene	ug/L	ND	5.0	07/16/13 10:09	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/16/13 10:09	
Hexachlorobenzene	ug/L	ND	5.0	07/16/13 10:09	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/16/13 10:09	
Hexachloroethane	ug/L	ND	5.0	07/16/13 10:09	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/16/13 10:09	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Project No.: 60148776

METHOD BLANK: 1219936

Matrix: Water

Associated Lab Samples: 60148776001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/16/13 10:09	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/16/13 10:09	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/16/13 10:09	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/16/13 10:09	
Naphthalene	ug/L	ND	5.0	07/16/13 10:09	
Nitrobenzene	ug/L	ND	5.0	07/16/13 10:09	
Pentachlorophenol	ug/L	ND	5.0	07/16/13 10:09	
Phenanthrene	ug/L	ND	5.0	07/16/13 10:09	
Phenol	ug/L	ND	5.0	07/16/13 10:09	
Pyrene	ug/L	ND	5.0	07/16/13 10:09	
2,4,6-Tribromophenol (S)	%	98	39-119	07/16/13 10:09	
2-Fluorobiphenyl (S)	%	94	36-120	07/16/13 10:09	
2-Fluorophenol (S)	%	51	18-120	07/16/13 10:09	
Nitrobenzene-d5 (S)	%	88	32-120	07/16/13 10:09	
Phenol-d6 (S)	%	33	12-120	07/16/13 10:09	
Terphenyl-d14 (S)	%	109	44-120	07/16/13 10:09	

LABORATORY CONTROL SAMPLE: 1219937

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	41.9	84	44-120	
2,4,6-Trichlorophenol	ug/L	50	43.9	88	48-120	
2,4-Dichlorophenol	ug/L	50	43.6	87	48-120	
2,4-Dimethylphenol	ug/L	50	40.2	80	37-119	
2,4-Dinitrophenol	ug/L	50	43.6J	87	15-153	
2,4-Dinitrotoluene	ug/L	50	49.1	98	54-120	
2,6-Dinitrotoluene	ug/L	50	48.4	97	52-120	
2-Chloronaphthalene	ug/L	50	44.7	89	60-118	
2-Chlorophenol	ug/L	50	41.7	83	44-120	
2-Nitrophenol	ug/L	50	46.5	93	43-120	
3,3'-Dichlorobenzidine	ug/L	50	62.4	125	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	52.2	104	31-147	
4-Bromophenylphenyl ether	ug/L	50	50.1	100	53-120	
4-Chloro-3-methylphenol	ug/L	50	47.1	94	50-120	
4-Chlorophenylphenyl ether	ug/L	50	46.8	94	54-120	
4-Nitrophenol	ug/L	50	21.5	43	10-120	
Acenaphthene	ug/L	50	45.6	91	51-120	
Acenaphthylene	ug/L	50	45.2	90	51-120	
Anthracene	ug/L	50	50.6	101	54-120	
Benzidine	ug/L	50	26.4J	53	1-124	
Benzo(a)anthracene	ug/L	50	53.5	107	54-120	
Benzo(a)pyrene	ug/L	50	52.7	105	54-120	
Benzo(b)fluoranthene	ug/L	50	52.6	105	57-120	
Benzo(g,h,i)perylene	ug/L	50	52.5	105	54-120	
Benzo(k)fluoranthene	ug/L	50	53.9	108	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

LABORATORY CONTROL SAMPLE: 1219937

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	46.9	94	51-120	
bis(2-Chloroethyl) ether	ug/L	50	46.2	92	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	47.8	96	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	52.1	104	51-126	
Butylbenzylphthalate	ug/L	50	52.6	105	45-129	
Chrysene	ug/L	50	52.9	106	54-120	
Di-n-butylphthalate	ug/L	50	52.1	104	57-118	
Di-n-octylphthalate	ug/L	50	52.5	105	48-130	
Dibenz(a,h)anthracene	ug/L	50	51.7	103	56-119	
Diethylphthalate	ug/L	50	49.2	98	55-114	
Dimethylphthalate	ug/L	50	48.1	96	54-112	
Fluoranthene	ug/L	50	52.5	105	56-120	
Fluorene	ug/L	50	47.0	94	59-120	
Hexachloro-1,3-butadiene	ug/L	50	40.6	81	41-116	
Hexachlorobenzene	ug/L	50	49.4	99	53-120	
Hexachlorocyclopentadiene	ug/L	100	51.0	51	31-120	
Hexachloroethane	ug/L	50	40.7	81	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	51.3	103	55-120	
Isophorone	ug/L	50	47.5	95	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	49.1	98	47-120	
N-Nitrosodimethylamine	ug/L	50	31.5	63	28-120	
N-Nitrosodiphenylamine	ug/L	50	47.4	95	53-120	
Naphthalene	ug/L	50	43.6	87	48-120	
Nitrobenzene	ug/L	50	46.3	93	47-120	
Pentachlorophenol	ug/L	50	47.6	95	43-127	
Phenanthrene	ug/L	50	50.9	102	55-120	
Phenol	ug/L	50	18.5	37	15-112	
Pyrene	ug/L	50	52.7	105	55-115	
2,4,6-Tribromophenol (S)	%			97	39-119	
2-Fluorobiphenyl (S)	%			93	36-120	
2-Fluorophenol (S)	%			53	18-120	
Nitrobenzene-d5 (S)	%			91	32-120	M4
Phenol-d6 (S)	%			36	12-120	
Terphenyl-d14 (S)	%			107	44-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch:	WET/42338	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148776001		

METHOD BLANK: 1219901 Matrix: Water

Associated Lab Samples: 60148776001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/15/13 06:56	

LABORATORY CONTROL SAMPLE: 1219902

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	38.9	97	78-114	

MATRIX SPIKE SAMPLE: 1219903

Parameter	Units	60148495002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	43	42.5	96	78-114	

SAMPLE DUPLICATE: 1219904

Parameter	Units	60148671001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch:	WET/42340	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60148776001		

METHOD BLANK: 1219911 Matrix: Water

Associated Lab Samples: 60148776001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/15/13 07:03	

LABORATORY CONTROL SAMPLE: 1219912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.6	108	64-132	

MATRIX SPIKE SAMPLE: 1219916

Parameter	Units	60148121001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.7	26.5	110	64-132	

SAMPLE DUPLICATE: 1219917

Parameter	Units	60148128001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	3.5J		34	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch: WET/42393

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60148776001

METHOD BLANK: 1221160

Matrix: Water

Associated Lab Samples: 60148776001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/17/13 08:46	

SAMPLE DUPLICATE: 1221161

Parameter	Units	5083634001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6.0	ND		25	

SAMPLE DUPLICATE: 1221162

Parameter	Units	60148850001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	2110	2100	0	25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch: WET/42374 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148776001

SAMPLE DUPLICATE: 1220635

Parameter	Units	60148784001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch: WETA/25456 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60148776001

METHOD BLANK: 1220457 Matrix: Water

Associated Lab Samples: 60148776001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/16/13 11:25	

LABORATORY CONTROL SAMPLE: 1220458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	106	90-110	

MATRIX SPIKE SAMPLE: 1220459

Parameter	Units	60148534002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.2	110	90-110	

MATRIX SPIKE SAMPLE: 1220460

Parameter	Units	60148536002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	8.0	4	10.4	58	90-110	M1

SAMPLE DUPLICATE: 1220461

Parameter	Units	60148538002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

QC Batch:	WETA/25449	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60148776001		

METHOD BLANK: 1220177 Matrix: Water

Associated Lab Samples: 60148776001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/16/13 13:14	

LABORATORY CONTROL SAMPLE: 1220178

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	46.3	93	90-110	

MATRIX SPIKE SAMPLE: 1220179

Parameter	Units	60148671001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	34.8	50	84.3	99	90-110	

MATRIX SPIKE SAMPLE: 1220181

Parameter	Units	60148841002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	1050	500	1210	33	90-110	M1

SAMPLE DUPLICATE: 1220180

Parameter	Units	60148841001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	1080	1050	3	25	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D9 Dissolved result is greater than the total. Data is within laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M4 A matrix spike/matrix spike duplicate was not performed for this batch due to sample dilution.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-014

Pace Project No.: 60148776

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148776001	316-014	EPA 200.7	MPRP/23464	EPA 200.7	ICP/18460
60148776001	316-014	EPA 200.7	MPRP/23508	EPA 200.7	ICP/18474
60148776001	316-014	EPA 245.1	MERP/7507	EPA 245.1	MERC/7464
60148776001	316-014	EPA 245.1	MERP/7511	EPA 245.1	MERC/7468
60148776001	316-014	EPA 625	OEXT/39295	EPA 625	MSSV/12459
60148776001	316-014	EPA 624 Low	MSV/54925		
60148776002	TRIP BLANK	EPA 624 Low	MSV/54925		
60148776001	316-014	EPA 1664A	WET/42338		
60148776001	316-014	EPA 1664A	WET/42340		
60148776001	316-014	SM 2540D	WET/42393		
60148776001	316-014	SM 4500-H+B	WET/42374		
60148776001	316-014	EPA 350.1	WETA/25456		
60148776001	316-014	EPA 410.4	WETA/25449		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148776



Client Name: Barr Eng.

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other [x] Roads

Tracking #: Pace Shipping Label Used? Yes [ ] No [x]

Custody Seal on Cooler/Box Present: Yes [x] No [ ] Seals intact: Yes [x] No [ ]

Packing Material: Bubble Wrap [ ] Bubble Bags [x] Foam [x] None [ ] Other [x] PLP

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue None [ ] Samples received on ice, cooling process has begun.

Cooler Temperature: 3.0

Date and initials of person examining contents: 7-13-13 BA

Temperature should be above freezing to 6°C

Table with 17 rows of inspection items and checkboxes. Items include Chain of Custody, Short Hold Time analyses, Rush Turn Around Time, etc.

Client Notification/ Resolution: Copy COC to Client? Y [ ] N [x] Field Data Required? Y [ ] N [x]

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: [Signature]

Date: 7/13



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 Of 1

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: BARR ENGINEERING		Report To: ED GALBRAITH/BARR		Attention: TABITHA PROVINCE	
Address:		Copy To: SCOTT FEDAK/FEEZOR		Company Name: REPUBLIC SERVICES	
		DANA BAKER/MARGARET TREANOR -BARR		Address: BRIDGETON, MO 63044	
Email To:		Purchase Order No. PO 3727110		Pace Quote Reference: 130426_7588	
Phone: (816) 285-8410 Fax		Client Project ID: BRIDGETON LF		Pace Project Manager: Brown, Angie	
Requested Due Date/TAT: 10 Day (Default)		Container Order Number:		Pace Profile #: 6787 LINE 2	

<b>Regulatory Agency</b>
<b>State / Location</b>
Missouri

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	Preservatives										Y/N	Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)
						START		END			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	COD EPA 410		pH SM 4500H+B	LF DIS. METALS 200.7/245	TOTAL METALS 200.7/245	AMMONIA EPA 350	O/G EPA 1664	625 SVOCs	VOCs EPA 624	TSS SM2540D	TPH/HEM-SGT 1664		
						DATE	TIME	DATE	TIME																							
1	310-014				G			7/12/13	1430	14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		METALS LIST total & LF Dis:
2	TRIP BLANK									2	X											X										Al, Sb, As, Be, Cd, Cr,
3																															Co, Cu, Fe, Pb, Ni, Se, Ag, Tl, Zn	
4																															and Mercury	
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	Scott C. Fedak / Feezor	7/12/13	1630	MA 554 Berill	7/14/13	1630	3-0	Y	Y	Y
SITE ADDRESS: BRIDGETON LF					7-13-13	0130				
13570 ST. CHARLES ROCK RD										
BRIDGETON MO 63044										

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER: SCOTT C. FEDAK					
SIGNATURE of SAMPLER: Scott C. Fedak	DATE Signed: 7/12/13				

July 19, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-014  
Pace Project No.: 60148777

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 13, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,  
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## CERTIFICATIONS

Project: BRIDGETON LF 316-014

Pace Project No.: 60148777

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

---

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-014

Pace Project No.: 60148777

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
60148777001	316-014	Water	07/12/13 14:30	07/13/13 01:30

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-014

Pace Project No.: 60148777

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148777001	316-014	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-014

Pace Project No.: 60148777

Sample: 316-014	Lab ID: 60148777001	Collected: 07/12/13 14:30	Received: 07/13/13 01:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>28700</b>	mg/L	2.0	1	07/13/13 11:26	07/18/13 14:13		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-014

Pace Project No.: 60148777

QC Batch: WET/42335

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148777001

METHOD BLANK: 1219470

Matrix: Water

Associated Lab Samples: 60148777001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/18/13 13:23	

LABORATORY CONTROL SAMPLE: 1219471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	177	89	85-115	

SAMPLE DUPLICATE: 1219472

Parameter	Units	60148775002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	16.5	16.1	3	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-014

Pace Project No.: 60148777

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-014

Pace Project No.: 60148777

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148777001	316-014	SM 5210B	WET/42335	SM 5210B	WET/42430

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148777



Client Name: Barr Eng.

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other [X] Roads

Tracking #: Pace Shipping Label Used? Yes [ ] No [X]

Custody Seal on Cooler/Box Present: Yes [X] No [ ] Seals intact: Yes [X] No [ ]

Packing Material: Bubble Wrap [ ] Bubble Bags [X] Foam [X] None [ ] Other [X] ZPLC

Thermometer Used: 112 / T-194 Type of Ice: Wet Blue None [ ] Samples received on ice, cooling process has begun.

Cooler Temperature: 3.0

Date and initials of person examining contents: 7-13-13 BA

Temperature should be above freezing to 6°C

Table with 17 rows of inspection items and checkboxes. Items include Chain of Custody, Short Hold Time analyses (<72hr), Rush Turn Around Time, and Project sampled in USDA Regulated Area.

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date:





July 22, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-015R  
Pace Project No.: 60148847

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 15, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148847

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148847

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148847001	316-015R	Water	07/15/13 08:07	07/15/13 14:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148847

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148847001	316-015R	SM 5210B	JMC1	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148847

Sample: 316-015R	Lab ID: 60148847001	Collected: 07/15/13 08:07	Received: 07/15/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>27100</b>	mg/L	2.0	1	07/15/13 16:30	07/20/13 10:04		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148847

QC Batch: WET/42357

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148847001

METHOD BLANK: 1220315

Matrix: Water

Associated Lab Samples: 60148847001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/20/13 09:47	

LABORATORY CONTROL SAMPLE: 1220316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	170	86	85-115	

SAMPLE DUPLICATE: 1220317

Parameter	Units	60148848001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	30400	29600	3	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148847

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148847

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148847001	316-015R	SM 5210B	WET/42357	SM 5210B	WET/42471

### REPORT OF LABORATORY ANALYSIS

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



**Sample Condition Upon Receipt**

WO#: 60148847



Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 22.0

(circle one)

Date and initials of person examining contents: KE 7/15/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>KE 7/15/13</u> <u>627 OT</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: [Signature]



### CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company: BARR ENGINEERING		Report To: ED GALBRAITH/BARR		Attention: TABITHA PROVINCE	
Address:		Copy To: SCOTT FEDAK/FEEZOR		Company Name: REPUBLIC SERVICES	
		DANA BAKER/MARGARET TREANOR -BARR		Address: BRIDGETON, MO 63044	
Email To:		Purchase Order No: PO 3727110		Pace Quote Reference: 130426 7588	
Phone: (816) 285-8410 Fax:		Client Project ID: BRIDGETON LF		Pace Project Manager: Brown, Angie	
Requested Due Date/TAT: 10 Day (Default)		Container Order Number:		Pace Profile #: 6787 LINE 5	

Regulatory Agency
State / Location
Missouri

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	COLLECTED	START DATE TIME	END DATE TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Requested Analysis Filtered (Y/N)											Residual Chlorine (Y/N)	
								Preservatives								Analyses Test	BOD SM 5210B			Residual Chlorine (Y/N)
								Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other					
1	316-015R	OT G	7/15/13 0807	—	—	1	1											X	1 (BP2U)	(u)
2																				
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				
11																				
12																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	<i>[Signature]</i>	7/15/13	1005	Bill Serie 412	7-15-13	10:05				
SITE ADDRESS: BRIDGETON LF				Kyle G / PASI	7/15/13	14:00	220	Y	Y	Y
13570 ST. CHARLES ROCK RD										
BRIDGETON MO 63044										

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	SIGNATURE of SAMPLER: <i>[Signature]</i> WILLIAM ABERNATHY				
	DATE Signed: 7/15/13				

July 22, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF OB-278  
Pace Project No.: 60148848

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 15, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF OB-278

Pace Project No.: 60148848

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF OB-278

Pace Project No.: 60148848

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148848001	OB-278	Water	07/15/13 06:36	07/15/13 14:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF OB-278

Pace Project No.: 60148848

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148848001	OB-278	SM 5210B	JMC1	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-278

Pace Project No.: 60148848

Sample: <b>OB-278</b>	Lab ID: <b>60148848001</b>	Collected: 07/15/13 06:36	Received: 07/15/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>30400</b>	mg/L	2.0	1	07/15/13 16:28	07/20/13 09:52		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148848

QC Batch: WET/42357

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148848001

METHOD BLANK: 1220315

Matrix: Water

Associated Lab Samples: 60148848001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/20/13 09:47	

LABORATORY CONTROL SAMPLE: 1220316

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	170	86	85-115	

SAMPLE DUPLICATE: 1220317

Parameter	Units	60148848001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	30400	29600	3	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF OB-278

Pace Project No.: 60148848

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF OB-278

Pace Project No.: 60148848

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148848001	OB-278	SM 5210B	WET/42357	SM 5210B	WET/42471

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148848
Barcode
60148848

Client Name: Barr Eng

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other [X] Road

Tracking #: Pace Shipping Label Used? Yes [X] No [ ]

Custody Seal on Cooler/Box Present: Yes [X] No [ ] Seals intact: Yes [X] No [ ]

Packing Material: Bubble Wrap [ ] Bubble Bags [X] Foam [X] None [ ] Other [ ]

Thermometer Used: T-192 / T-194 Type of Ice: Wet [X] Blue [ ] None [ ] Samples received on ice, cooling process has begun.

Cooler Temperature: 16.0

Date and initials of person examining contents: KE 7/15/13

Temperature should be above freezing to 6°C

Table with 17 rows of checklist items and checkboxes. Items include Chain of Custody present, Chain of Custody filled out, Chain of Custody relinquished, Sampler name & signature on COC, Samples arrived within holding time, Short Hold Time analyses (<72hr), Rush Turn Around Time requested, Sufficient volume, Correct containers used, Pace containers used, Containers intact, Unpreserved 5035A soils frozen w/in 48hrs?, Filtered volume received for dissolved tests?, Sample labels match COC, Includes date/time/ID/analyses Matrix: WT, All containers needing preservation have been checked, All containers needing preservation are found to be in compliance with EPA recommendation, Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics, Trip Blank present, Pace Trip Blank lot # (if purchased), Headspace in VOA vials (>6mm), Project sampled in USDA Regulated Area.

Client Notification/ Resolution: Copy COC to Client? Y [ ] N [X] Field Data Required? Y [ ] N [X]

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: [Signature] Date: 7/16



July 22, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF OB-278  
Pace Project No.: 60148849

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 15, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

---

### **Kansas Certification IDs**

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WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148849001	OB-278	Water	07/15/13 06:36	07/15/13 14:51
60148849002	TRIP BLANK	Water	07/15/13 06:36	07/15/13 14:51

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148849001	OB-278	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148849002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

Sample: OB-278		Lab ID: 60148849001	Collected: 07/15/13 06:36	Received: 07/15/13 14:51	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	8940 ug/L		150	2	07/18/13 09:20	07/19/13 11:18	7429-90-5	
Antimony	ND ug/L		50.0	5	07/18/13 09:20	07/19/13 11:29	7440-36-0	D3
Arsenic	716 ug/L		50.0	5	07/18/13 09:20	07/19/13 11:29	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/18/13 09:20	07/19/13 11:29	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/18/13 09:20	07/19/13 11:29	7440-43-9	D3
Chromium	314 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:29	7440-47-3	
Cobalt	67.6 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:29	7440-48-4	
Copper	ND ug/L		50.0	5	07/18/13 09:20	07/19/13 11:29	7440-50-8	D3
Iron	115000 ug/L		250	5	07/18/13 09:20	07/19/13 11:29	7439-89-6	
Lead	282 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:29	7439-92-1	
Nickel	163 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:29	7440-02-0	
Selenium	ND ug/L		75.0	5	07/18/13 09:20	07/19/13 11:29	7782-49-2	D3
Silver	ND ug/L		35.0	5	07/18/13 09:20	07/19/13 11:29	7440-22-4	D3
Thallium	ND ug/L		100	5	07/18/13 09:20	07/19/13 11:29	7440-28-0	D3
Zinc	17900 ug/L		1000	20	07/18/13 09:20	07/19/13 11:40	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	5040 ug/L		150	2	07/18/13 16:00	07/19/13 12:34	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/18/13 16:00	07/19/13 12:55	7440-36-0	D3
Arsenic, Dissolved	640 ug/L		50.0	5	07/18/13 16:00	07/19/13 12:55	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/18/13 16:00	07/19/13 12:55	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/18/13 16:00	07/19/13 12:55	7440-43-9	D3
Chromium, Dissolved	266 ug/L		25.0	5	07/18/13 16:00	07/19/13 12:55	7440-47-3	
Cobalt, Dissolved	58.6 ug/L		25.0	5	07/18/13 16:00	07/19/13 12:55	7440-48-4	
Copper, Dissolved	ND ug/L		50.0	5	07/18/13 16:00	07/19/13 12:55	7440-50-8	D3
Iron, Dissolved	707000 ug/L		100	2	07/18/13 16:00	07/19/13 12:34	7439-89-6	M1
Lead, Dissolved	138 ug/L		25.0	5	07/18/13 16:00	07/19/13 12:55	7439-92-1	
Nickel, Dissolved	152 ug/L		25.0	5	07/18/13 16:00	07/19/13 12:55	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/18/13 16:00	07/19/13 12:55	7782-49-2	D3
Silver, Dissolved	ND ug/L		35.0	5	07/18/13 16:00	07/19/13 12:55	7440-22-4	D3,M1
Thallium, Dissolved	ND ug/L		100	5	07/18/13 16:00	07/19/13 12:55	7440-28-0	D3
Zinc, Dissolved	17300 ug/L		1000	20	07/18/13 16:00	07/19/13 13:22	7440-66-6	M1
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	0.71 ug/L		0.20	1	07/16/13 08:30	07/16/13 14:38	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	07/19/13 08:30	07/19/13 11:48	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	83-32-9	
Acenaphthylene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	208-96-8	
Anthracene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	120-12-7	
Benzidine	ND ug/L		10000	20	07/16/13 00:00	07/17/13 15:56	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	50-32-8	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

Sample: OB-278	Lab ID: 60148849001	Collected: 07/15/13 06:36	Received: 07/15/13 14:51	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	191-24-2	
Benzo(k)fluoranthene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	101-55-3	
Butylbenzylphthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		1200	20	07/16/13 00:00	07/17/13 15:56	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		1200	20	07/16/13 00:00	07/17/13 15:56	39638-32-9	
2-Chloronaphthalene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	91-58-7	
2-Chlorophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	7005-72-3	
Chrysene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		4000	20	07/16/13 00:00	07/17/13 15:56	91-94-1	
2,4-Dichlorophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	120-83-2	
Diethylphthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	84-66-2	
2,4-Dimethylphenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	105-67-9	
Dimethylphthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	131-11-3	
Di-n-butylphthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		5000	20	07/16/13 00:00	07/17/13 15:56	534-52-1	
2,4-Dinitrophenol	ND ug/L		10000	20	07/16/13 00:00	07/17/13 15:56	51-28-5	
2,4-Dinitrotoluene	ND ug/L		1200	20	07/16/13 00:00	07/17/13 15:56	121-14-2	
2,6-Dinitrotoluene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	606-20-2	
Di-n-octylphthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	117-81-7	
Fluoranthene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	206-44-0	
Fluorene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	87-68-3	
Hexachlorobenzene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	77-47-4	
Hexachloroethane	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	193-39-5	
Isophorone	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	78-59-1	
Naphthalene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	91-20-3	
Nitrobenzene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	98-95-3	
2-Nitrophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	88-75-5	
4-Nitrophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	100-02-7	
N-Nitrosodimethylamine	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	86-30-6	
Pentachlorophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	87-86-5	
Phenanthrene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	85-01-8	
Phenol	<b>5020</b> ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	108-95-2	
Pyrene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 15:56	88-06-2	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

Sample: OB-278		Lab ID: 60148849001	Collected: 07/15/13 06:36	Received: 07/15/13 14:51	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/16/13 00:00	07/17/13 15:56	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/16/13 00:00	07/17/13 15:56	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/16/13 00:00	07/17/13 15:56	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/16/13 00:00	07/17/13 15:56	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/16/13 00:00	07/17/13 15:56	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/16/13 00:00	07/17/13 15:56	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/19/13 10:30	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/19/13 10:30	75-27-4	
Bromoform	ND ug/L		200	200		07/19/13 10:30	75-25-2	
Bromomethane	ND ug/L		1000	200		07/19/13 10:30	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/19/13 10:30	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/19/13 10:30	108-90-7	
Chloroethane	ND ug/L		200	200		07/19/13 10:30	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/19/13 10:30	110-75-8	
Chloroform	ND ug/L		200	200		07/19/13 10:30	67-66-3	
Chloromethane	ND ug/L		200	200		07/19/13 10:30	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/19/13 10:30	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/19/13 10:30	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/19/13 10:30	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/19/13 10:30	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/19/13 10:30	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/19/13 10:30	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/19/13 10:30	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/19/13 10:30	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/19/13 10:30	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/19/13 10:30	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/19/13 10:30	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/19/13 10:30	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/19/13 10:30	100-41-4	
Methylene chloride	ND ug/L		200	200		07/19/13 10:30	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/19/13 10:30	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/19/13 10:30	127-18-4	
Toluene	ND ug/L		200	200		07/19/13 10:30	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/19/13 10:30	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/19/13 10:30	79-00-5	
Trichloroethene	ND ug/L		200	200		07/19/13 10:30	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/19/13 10:30	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/19/13 10:30	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/19/13 10:30	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	109 %		80-120	200		07/19/13 10:30	1868-53-7	D3
4-Bromofluorobenzene (S)	96 %		80-120	200		07/19/13 10:30	460-00-4	
Toluene-d8 (S)	104 %		80-120	200		07/19/13 10:30	2037-26-5	
1,2-Dichloroethane-d4 (S)	111 %		80-120	200		07/19/13 10:30	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

<b>Sample: OB-278</b>		<b>Lab ID: 60148849001</b>	Collected: 07/15/13 06:36	Received: 07/15/13 14:51	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>5.0</b>		1.0	200		07/19/13 10:30		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>410</b>	mg/L	5.0	1		07/16/13 09:51		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>7.4</b>	mg/L	5.0	1		07/19/13 14:40		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>1720</b>	mg/L	5.0	1		07/17/13 08:48		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.3</b>	Std. Units	0.10	1		07/16/13 15:00		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>704</b>	mg/L	20.0	200		07/16/13 11:58	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>56500</b>	mg/L	5000	500		07/17/13 07:19		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

Sample: TRIP BLANK		Lab ID: 60148849002	Collected: 07/15/13 06:36	Received: 07/15/13 14:51	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND	ug/L	1.0	1		07/19/13 11:12	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		07/19/13 11:12	75-27-4	
Bromoform	ND	ug/L	1.0	1		07/19/13 11:12	75-25-2	
Bromomethane	ND	ug/L	5.0	1		07/19/13 11:12	74-83-9	
Carbon tetrachloride	ND	ug/L	1.0	1		07/19/13 11:12	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		07/19/13 11:12	108-90-7	
Chloroethane	ND	ug/L	1.0	1		07/19/13 11:12	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		07/19/13 11:12	110-75-8	
Chloroform	ND	ug/L	1.0	1		07/19/13 11:12	67-66-3	
Chloromethane	ND	ug/L	1.0	1		07/19/13 11:12	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		07/19/13 11:12	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		07/19/13 11:12	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		07/19/13 11:12	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		07/19/13 11:12	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		07/19/13 11:12	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		07/19/13 11:12	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		07/19/13 11:12	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		07/19/13 11:12	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		07/19/13 11:12	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		07/19/13 11:12	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		07/19/13 11:12	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		07/19/13 11:12	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		07/19/13 11:12	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		07/19/13 11:12	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		07/19/13 11:12	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		07/19/13 11:12	127-18-4	
Toluene	ND	ug/L	1.0	1		07/19/13 11:12	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		07/19/13 11:12	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		07/19/13 11:12	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		07/19/13 11:12	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		07/19/13 11:12	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		07/19/13 11:12	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		07/19/13 11:12	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	105 %		80-120	1		07/19/13 11:12	1868-53-7	
4-Bromofluorobenzene (S)	95 %		80-120	1		07/19/13 11:12	460-00-4	
Toluene-d8 (S)	99 %		80-120	1		07/19/13 11:12	2037-26-5	
1,2-Dichloroethane-d4 (S)	110 %		80-120	1		07/19/13 11:12	17060-07-0	
Preservation pH	7.0		1.0	1		07/19/13 11:12		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

QC Batch:	MERP/7512	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60148849001		

METHOD BLANK: 1220507 Matrix: Water

Associated Lab Samples: 60148849001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/16/13 14:15	

LABORATORY CONTROL SAMPLE: 1220508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.3	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1220509 1220510

Parameter	Units	60148807001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury	ug/L	ND	5	5	4.2	4.0	84	78	70-130	7	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

QC Batch:	MERP/7524	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60148849001		

METHOD BLANK: 1222629 Matrix: Water  
Associated Lab Samples: 60148849001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/19/13 11:38	

LABORATORY CONTROL SAMPLE: 1222630

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.2	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222631 1222632

Parameter	Units	60148928001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	0.46	0.39	9	8	70-130	16	20	M1

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

QC Batch: MPRP/23509 Analysis Method: EPA 200.7  
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
 Associated Lab Samples: 60148849001

METHOD BLANK: 1221470 Matrix: Water

Associated Lab Samples: 60148849001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/19/13 10:53	
Antimony	ug/L	ND	10.0	07/19/13 10:53	
Arsenic	ug/L	ND	10.0	07/19/13 10:53	
Beryllium	ug/L	ND	1.0	07/19/13 10:53	
Cadmium	ug/L	ND	5.0	07/19/13 10:53	
Chromium	ug/L	ND	5.0	07/19/13 10:53	
Cobalt	ug/L	ND	5.0	07/19/13 10:53	
Copper	ug/L	ND	10.0	07/19/13 10:53	
Iron	ug/L	ND	50.0	07/19/13 10:53	
Lead	ug/L	ND	5.0	07/19/13 10:53	
Nickel	ug/L	ND	5.0	07/19/13 10:53	
Selenium	ug/L	ND	15.0	07/19/13 10:53	
Silver	ug/L	ND	7.0	07/19/13 10:53	
Thallium	ug/L	ND	20.0	07/19/13 10:53	
Zinc	ug/L	ND	50.0	07/19/13 10:53	

LABORATORY CONTROL SAMPLE: 1221471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10900	109	85-115	
Antimony	ug/L	1000	1080	108	85-115	
Arsenic	ug/L	1000	986	99	85-115	
Beryllium	ug/L	1000	1040	104	85-115	
Cadmium	ug/L	1000	1020	102	85-115	
Chromium	ug/L	1000	999	100	85-115	
Cobalt	ug/L	1000	1050	105	85-115	
Copper	ug/L	1000	1020	102	85-115	
Iron	ug/L	10000	10700	107	85-115	
Lead	ug/L	1000	1050	105	85-115	
Nickel	ug/L	1000	1040	104	85-115	
Selenium	ug/L	1000	997	100	85-115	
Silver	ug/L	500	513	103	85-115	
Thallium	ug/L	1000	1070	107	85-115	
Zinc	ug/L	1000	964	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1221472 1221473

Parameter	Units	60148911001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum	ug/L	247	10000	10000	10500	10800	103	105	70-130	2	8

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

Parameter	Units	60148911001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max	RPD	Qual
		Result	Conc.	Spike	Conc.	Result	Result	% Rec	% Rec								
Antimony	ug/L	ND	1000	1000	1000	1090	1100	108	110	70-130	1	7					
Arsenic	ug/L	28.3	1000	1000	1000	1080	1100	106	107	70-130	1	10					
Beryllium	ug/L	ND	1000	1000	1000	970	991	97	99	70-130	2	7					
Cadmium	ug/L	ND	1000	1000	1000	1050	1070	105	107	70-130	2	10					
Chromium	ug/L	25.5	1000	1000	1000	987	1010	96	99	70-130	3	10					
Cobalt	ug/L	ND	1000	1000	1000	943	962	94	96	70-130	2	6					
Copper	ug/L	121	1000	1000	1000	1150	1160	103	104	70-130	1	11					
Iron	ug/L	2330	10000	10000	10000	11900	12200	96	99	70-130	2	10					
Lead	ug/L	9.4	1000	1000	1000	917	937	91	93	70-130	2	10					
Nickel	ug/L	9.8	1000	1000	1000	941	960	93	95	70-130	2	10					
Selenium	ug/L	ND	1000	1000	1000	1040	1050	104	105	70-130	1	10					
Silver	ug/L	ND	500	500	500	561	572	112	114	70-130	2	10					
Thallium	ug/L	ND	1000	1000	1000	813	831	81	83	70-130	2	6					
Zinc	ug/L	213	1000	1000	1000	1140	1170	93	96	70-130	3	11					

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278  
Pace Project No.: 60148849

QC Batch: MPRP/23525 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60148849001

METHOD BLANK: 1222176 Matrix: Water  
Associated Lab Samples: 60148849001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/19/13 12:27	
Antimony, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Arsenic, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Beryllium, Dissolved	ug/L	ND	1.0	07/19/13 12:27	
Cadmium, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Chromium, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Cobalt, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Copper, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Iron, Dissolved	ug/L	ND	50.0	07/19/13 12:27	
Lead, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Nickel, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Selenium, Dissolved	ug/L	ND	15.0	07/19/13 12:27	
Silver, Dissolved	ug/L	ND	7.0	07/19/13 12:27	
Thallium, Dissolved	ug/L	ND	20.0	07/19/13 12:27	
Zinc, Dissolved	ug/L	ND	50.0	07/19/13 12:27	

LABORATORY CONTROL SAMPLE: 1222177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10700	107	85-115	
Antimony, Dissolved	ug/L	1000	1050	105	85-115	
Arsenic, Dissolved	ug/L	1000	969	97	85-115	
Beryllium, Dissolved	ug/L	1000	1010	101	85-115	
Cadmium, Dissolved	ug/L	1000	1000	100	85-115	
Chromium, Dissolved	ug/L	1000	996	100	85-115	
Cobalt, Dissolved	ug/L	1000	1030	103	85-115	
Copper, Dissolved	ug/L	1000	991	99	85-115	
Iron, Dissolved	ug/L	10000	10400	104	85-115	
Lead, Dissolved	ug/L	1000	1030	103	85-115	
Nickel, Dissolved	ug/L	1000	1030	103	85-115	
Selenium, Dissolved	ug/L	1000	986	99	85-115	
Silver, Dissolved	ug/L	500	502	100	85-115	
Thallium, Dissolved	ug/L	1000	1050	105	85-115	
Zinc, Dissolved	ug/L	1000	963	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222178 1222179

Parameter	Units	60148849001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	5040	10000	10000	10000	15800	15400	108	104	70-130	3	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

Parameter	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222178			1222179			MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
	60148849001 Units	Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony, Dissolved	ug/L	ND	1000	1000	1140	1120	110	108	70-130	2	7	
Arsenic, Dissolved	ug/L	640	1000	1000	1760	1700	112	106	70-130	3	10	
Beryllium, Dissolved	ug/L	ND	1000	1000	974	952	97	95	70-130	2	7	
Cadmium, Dissolved	ug/L	ND	1000	1000	1130	1100	112	109	70-130	3	10	
Chromium, Dissolved	ug/L	266	1000	1000	1260	1220	99	96	70-130	3	10	
Cobalt, Dissolved	ug/L	58.6	1000	1000	1070	1040	101	98	70-130	2	6	
Copper, Dissolved	ug/L	ND	1000	1000	1120	1080	110	106	70-130	4	11	
Iron, Dissolved	ug/L	707000	10000	10000	682000	657000	-248	-494	70-130	4	10	M1
Lead, Dissolved	ug/L	138	1000	1000	1070	1040	93	90	70-130	3	10	
Nickel, Dissolved	ug/L	152	1000	1000	1140	1110	99	96	70-130	3	10	
Selenium, Dissolved	ug/L	ND	1000	1000	1230	1190	123	119	70-130	3	10	
Silver, Dissolved	ug/L	ND	500	500	41.6	34.4J	8	7	70-130		10	M1
Thallium, Dissolved	ug/L	ND	1000	1000	852	835	85	84	70-130	2	6	
Zinc, Dissolved	ug/L	17300	1000	1000	17700	16700	44	-59	70-130	6	11	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

QC Batch: MSV/55026 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148849001, 60148849002

METHOD BLANK: 1222577 Matrix: Water

Associated Lab Samples: 60148849001, 60148849002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1-Dichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichloropropane	ug/L	ND	1.0	07/19/13 09:47	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/19/13 09:47	
Benzene	ug/L	ND	1.0	07/19/13 09:47	
Bromodichloromethane	ug/L	ND	1.0	07/19/13 09:47	
Bromoform	ug/L	ND	1.0	07/19/13 09:47	
Bromomethane	ug/L	ND	5.0	07/19/13 09:47	
Carbon tetrachloride	ug/L	ND	1.0	07/19/13 09:47	
Chlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
Chloroethane	ug/L	ND	1.0	07/19/13 09:47	
Chloroform	ug/L	ND	1.0	07/19/13 09:47	
Chloromethane	ug/L	ND	1.0	07/19/13 09:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/19/13 09:47	
Dibromochloromethane	ug/L	ND	1.0	07/19/13 09:47	
Ethylbenzene	ug/L	ND	1.0	07/19/13 09:47	
Methylene chloride	ug/L	ND	1.0	07/19/13 09:47	
Tetrachloroethene	ug/L	ND	1.0	07/19/13 09:47	
Toluene	ug/L	ND	1.0	07/19/13 09:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/19/13 09:47	
Trichloroethene	ug/L	ND	1.0	07/19/13 09:47	
Trichlorofluoromethane	ug/L	ND	1.0	07/19/13 09:47	
Vinyl chloride	ug/L	ND	1.0	07/19/13 09:47	
Xylene (Total)	ug/L	ND	3.0	07/19/13 09:47	
1,2-Dichloroethane-d4 (S)	%	105	80-120	07/19/13 09:47	
4-Bromofluorobenzene (S)	%	94	80-120	07/19/13 09:47	
Dibromofluoromethane (S)	%	104	80-120	07/19/13 09:47	
Toluene-d8 (S)	%	99	80-120	07/19/13 09:47	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

LABORATORY CONTROL SAMPLE: 1222578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	24.9	125	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.1	95	59-138	
1,1,2-Trichloroethane	ug/L	20	19.3	97	69-127	
1,1-Dichloroethane	ug/L	20	20.2	101	69-126	
1,1-Dichloroethene	ug/L	20	21.2	106	65-153	
1,2-Dichlorobenzene	ug/L	20	20.3	101	66-126	
1,2-Dichloroethane	ug/L	20	21.6	108	71-129	
1,2-Dichloropropane	ug/L	20	20.1	100	66-140	
1,3-Dichlorobenzene	ug/L	20	20.6	103	63-127	
1,4-Dichlorobenzene	ug/L	20	20.6	103	68-124	
2-Chloroethylvinyl ether	ug/L	20	22.9	115	33-159	
Benzene	ug/L	20	20.2	101	73-129	
Bromodichloromethane	ug/L	20	21.4	107	63-129	
Bromoform	ug/L	20	22.4	112	52-123	
Bromomethane	ug/L	20	20.8	104	10-160	
Carbon tetrachloride	ug/L	20	25.6	128	70-140	
Chlorobenzene	ug/L	20	20.8	104	68-127	
Chloroethane	ug/L	20	23.1	115	42-160	
Chloroform	ug/L	20	21.8	109	60-120	
Chloromethane	ug/L	20	16.2	81	10-160	
cis-1,2-Dichloroethene	ug/L	20	22.2	111	70-125	
cis-1,3-Dichloropropene	ug/L	20	20.8	104	66-132	
Dibromochloromethane	ug/L	20	23.0	115	63-134	
Ethylbenzene	ug/L	20	20.8	104	66-133	
Methylene chloride	ug/L	20	17.8	89	56-135	
Tetrachloroethene	ug/L	20	22.7	114	64-143	
Toluene	ug/L	20	20.0	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.5	103	67-149	
trans-1,3-Dichloropropene	ug/L	20	23.7	119	66-138	
Trichloroethene	ug/L	20	19.9	99	71-130	
Trichlorofluoromethane	ug/L	20	21.8	109	58-158	
Vinyl chloride	ug/L	20	17.8	89	41-160	
Xylene (Total)	ug/L	60	60.3	101	67-130	
1,2-Dichloroethane-d4 (S)	%			116	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			111	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1222579

Parameter	Units	60148849001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	5140	128	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4130	103	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4290	107	52-150	
1,1-Dichloroethane	ug/L	ND	4000	4420	111	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4490	112	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	4170	104	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

MATRIX SPIKE SAMPLE:		1222579		60148849001		Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits		
1,2-Dichloroethane	ug/L	ND	4000	4770	119	49-155				
1,2-Dichloropropane	ug/L	ND	4000	4420	111	12-160				
1,3-Dichlorobenzene	ug/L	ND	4000	4170	104	59-146				
1,4-Dichlorobenzene	ug/L	ND	4000	4250	106	18-147				
2-Chloroethylvinyl ether	ug/L	ND	4000	4400	110	10-160				
Benzene	ug/L	ND	4000	4220	105	37-151				
Bromodichloromethane	ug/L	ND	4000	4670	117	35-155				
Bromoform	ug/L	ND	4000	4790	120	45-133				
Bromomethane	ug/L	ND	4000	3360	84	10-160				
Carbon tetrachloride	ug/L	ND	4000	5360	134	70-140				
Chlorobenzene	ug/L	ND	4000	4320	108	37-153				
Chloroethane	ug/L	ND	4000	4240	106	14-160				
Chloroform	ug/L	ND	4000	4680	117	51-138				
Chloromethane	ug/L	ND	4000	2360	59	10-160				
cis-1,2-Dichloroethene	ug/L	ND	4000	4900	123	19-160				
cis-1,3-Dichloropropene	ug/L	ND	4000	4560	114	10-160				
Dibromochloromethane	ug/L	ND	4000	4810	120	53-149				
Ethylbenzene	ug/L	ND	4000	4340	109	37-154				
Methylene chloride	ug/L	ND	4000	3830	95	15-156				
Tetrachloroethene	ug/L	ND	4000	4560	114	64-148				
Toluene	ug/L	ND	4000	4330	108	47-150				
trans-1,2-Dichloroethene	ug/L	ND	4000	4310	108	54-156				
trans-1,3-Dichloropropene	ug/L	ND	4000	4900	123	17-160				
Trichloroethene	ug/L	ND	4000	4160	104	71-157				
Trichlorofluoromethane	ug/L	ND	4000	4000	100	17-160				
Vinyl chloride	ug/L	ND	4000	2820	70	10-160				
Xylene (Total)	ug/L	ND	12000	12500	105	12-153				
1,2-Dichloroethane-d4 (S)	%				116	80-120				
4-Bromofluorobenzene (S)	%				100	80-120				
Dibromofluoromethane (S)	%				109	80-120				
Toluene-d8 (S)	%				100	80-120				
Preservation pH			5.0		5.0					

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278  
Pace Project No.: 60148849

QC Batch: OEXT/39313      Analysis Method: EPA 625  
QC Batch Method: EPA 625      Analysis Description: 625 MSS  
Associated Lab Samples: 60148849001

METHOD BLANK: 1220406      Matrix: Water  
Associated Lab Samples: 60148849001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/17/13 14:53	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/17/13 14:53	
2,4-Dichlorophenol	ug/L	ND	5.0	07/17/13 14:53	
2,4-Dimethylphenol	ug/L	ND	5.0	07/17/13 14:53	
2,4-Dinitrophenol	ug/L	ND	50.0	07/17/13 14:53	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/17/13 14:53	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/17/13 14:53	
2-Chloronaphthalene	ug/L	ND	5.0	07/17/13 14:53	
2-Chlorophenol	ug/L	ND	5.0	07/17/13 14:53	
2-Nitrophenol	ug/L	ND	5.0	07/17/13 14:53	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/17/13 14:53	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/17/13 14:53	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/17/13 14:53	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/17/13 14:53	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/17/13 14:53	
4-Nitrophenol	ug/L	ND	5.0	07/17/13 14:53	
Acenaphthene	ug/L	ND	5.0	07/17/13 14:53	
Acenaphthylene	ug/L	ND	5.0	07/17/13 14:53	
Anthracene	ug/L	ND	5.0	07/17/13 14:53	
Benzidine	ug/L	ND	50.0	07/17/13 14:53	
Benzo(a)anthracene	ug/L	ND	5.0	07/17/13 14:53	
Benzo(a)pyrene	ug/L	ND	5.0	07/17/13 14:53	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/17/13 14:53	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/17/13 14:53	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/17/13 14:53	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/17/13 14:53	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/17/13 14:53	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/17/13 14:53	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/17/13 14:53	
Butylbenzylphthalate	ug/L	ND	5.0	07/17/13 14:53	
Chrysene	ug/L	ND	5.0	07/17/13 14:53	
Di-n-butylphthalate	ug/L	ND	5.0	07/17/13 14:53	
Di-n-octylphthalate	ug/L	ND	5.0	07/17/13 14:53	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/17/13 14:53	
Diethylphthalate	ug/L	ND	5.0	07/17/13 14:53	
Dimethylphthalate	ug/L	ND	5.0	07/17/13 14:53	
Fluoranthene	ug/L	ND	5.0	07/17/13 14:53	
Fluorene	ug/L	ND	5.0	07/17/13 14:53	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/17/13 14:53	
Hexachlorobenzene	ug/L	ND	5.0	07/17/13 14:53	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/17/13 14:53	
Hexachloroethane	ug/L	ND	5.0	07/17/13 14:53	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/17/13 14:53	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Project No.: 60148849

METHOD BLANK: 1220406

Matrix: Water

Associated Lab Samples: 60148849001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/17/13 14:53	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/17/13 14:53	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/17/13 14:53	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/17/13 14:53	
Naphthalene	ug/L	ND	5.0	07/17/13 14:53	
Nitrobenzene	ug/L	ND	5.0	07/17/13 14:53	
Pentachlorophenol	ug/L	ND	5.0	07/17/13 14:53	
Phenanthrene	ug/L	ND	5.0	07/17/13 14:53	
Phenol	ug/L	ND	5.0	07/17/13 14:53	
Pyrene	ug/L	ND	5.0	07/17/13 14:53	
2,4,6-Tribromophenol (S)	%	84	39-119	07/17/13 14:53	
2-Fluorobiphenyl (S)	%	88	36-120	07/17/13 14:53	
2-Fluorophenol (S)	%	41	18-120	07/17/13 14:53	
Nitrobenzene-d5 (S)	%	86	32-120	07/17/13 14:53	
Phenol-d6 (S)	%	26	12-120	07/17/13 14:53	
Terphenyl-d14 (S)	%	89	44-120	07/17/13 14:53	

LABORATORY CONTROL SAMPLE: 1220407

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	41.1	82	44-120	
2,4,6-Trichlorophenol	ug/L	50	39.8	80	48-120	
2,4-Dichlorophenol	ug/L	50	39.4	79	48-120	
2,4-Dimethylphenol	ug/L	50	34.9	70	37-119	
2,4-Dinitrophenol	ug/L	50	27.8J	56	15-153	
2,4-Dinitrotoluene	ug/L	50	44.3	89	54-120	
2,6-Dinitrotoluene	ug/L	50	44.3	89	52-120	
2-Chloronaphthalene	ug/L	50	43.7	87	60-118	
2-Chlorophenol	ug/L	50	34.4	69	44-120	
2-Nitrophenol	ug/L	50	41.4	83	43-120	
3,3'-Dichlorobenzidine	ug/L	50	53.9	108	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	42.9	86	31-147	
4-Bromophenylphenyl ether	ug/L	50	45.7	91	53-120	
4-Chloro-3-methylphenol	ug/L	50	38.7	77	50-120	
4-Chlorophenylphenyl ether	ug/L	50	42.6	85	54-120	
4-Nitrophenol	ug/L	50	16.8	34	10-120	
Acenaphthene	ug/L	50	42.3	85	51-120	
Acenaphthylene	ug/L	50	42.5	85	51-120	
Anthracene	ug/L	50	46.8	94	54-120	
Benzidine	ug/L	50	1.8J	4	1-124	
Benzo(a)anthracene	ug/L	50	45.9	92	54-120	
Benzo(a)pyrene	ug/L	50	46.7	93	54-120	
Benzo(b)fluoranthene	ug/L	50	44.5	89	57-120	
Benzo(g,h,i)perylene	ug/L	50	47.2	94	54-120	
Benzo(k)fluoranthene	ug/L	50	48.7	97	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

LABORATORY CONTROL SAMPLE: 1220407

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	40.9	82	51-120	
bis(2-Chloroethyl) ether	ug/L	50	40.1	80	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	41.8	84	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	45.1	90	51-126	
Butylbenzylphthalate	ug/L	50	44.2	88	45-129	
Chrysene	ug/L	50	47.8	96	54-120	
Di-n-butylphthalate	ug/L	50	48.7	97	57-118	
Di-n-octylphthalate	ug/L	50	43.8	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	46.9	94	56-119	
Diethylphthalate	ug/L	50	43.9	88	55-114	
Dimethylphthalate	ug/L	50	43.2	86	54-112	
Fluoranthene	ug/L	50	49.5	99	56-120	
Fluorene	ug/L	50	43.4	87	59-120	
Hexachloro-1,3-butadiene	ug/L	50	41.2	82	41-116	
Hexachlorobenzene	ug/L	50	45.4	91	53-120	
Hexachlorocyclopentadiene	ug/L	100	51.6	52	31-120	
Hexachloroethane	ug/L	50	37.7	75	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	46.5	93	55-120	
Isophorone	ug/L	50	41.5	83	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	40.4	81	47-120	
N-Nitrosodimethylamine	ug/L	50	23.3	47	28-120	
N-Nitrosodiphenylamine	ug/L	50	42.5	85	53-120	
Naphthalene	ug/L	50	40.4	81	48-120	
Nitrobenzene	ug/L	50	42.4	85	47-120	
Pentachlorophenol	ug/L	50	38.4	77	43-127	
Phenanthrene	ug/L	50	46.2	92	55-120	
Phenol	ug/L	50	13.7	27	15-112	
Pyrene	ug/L	50	44.6	89	55-115	
2,4,6-Tribromophenol (S)	%			86	39-119	
2-Fluorobiphenyl (S)	%			88	36-120	
2-Fluorophenol (S)	%			40	18-120	
Nitrobenzene-d5 (S)	%			84	32-120	
Phenol-d6 (S)	%			26	12-120	
Terphenyl-d14 (S)	%			91	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

QC Batch:	WET/42377	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148849001		

METHOD BLANK: 1220647 Matrix: Water

Associated Lab Samples: 60148849001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/16/13 09:49	

LABORATORY CONTROL SAMPLE: 1220648

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	39.9	100	78-114	

MATRIX SPIKE SAMPLE: 1220649

Parameter	Units	60148846001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	806	43.5	868	142	78-114	M1

SAMPLE DUPLICATE: 1220650

Parameter	Units	60148846002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	809	798	1	18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

QC Batch:	WET/42459	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60148849001		

METHOD BLANK: 1223043 Matrix: Water

Associated Lab Samples: 60148849001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/19/13 14:39	

LABORATORY CONTROL SAMPLE: 1223044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.2	106	64-132	

MATRIX SPIKE SAMPLE: 1223049

Parameter	Units	60148726001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20.4	25.0	112	64-132	

SAMPLE DUPLICATE: 1223051

Parameter	Units	60148709002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20.8	35.0	51	34	D6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

QC Batch:	WET/42393	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60148849001		

METHOD BLANK: 1221160 Matrix: Water  
Associated Lab Samples: 60148849001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/17/13 08:46	

SAMPLE DUPLICATE: 1221161

Parameter	Units	5083634001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6.0	ND		25	

SAMPLE DUPLICATE: 1221162

Parameter	Units	60148850001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	2110	2100	0	25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

QC Batch: WET/42374 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148849001

SAMPLE DUPLICATE: 1220635

Parameter	Units	60148784001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278  
Pace Project No.: 60148849

QC Batch: WETA/25456 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60148849001

METHOD BLANK: 1220457 Matrix: Water  
Associated Lab Samples: 60148849001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/16/13 11:25	

LABORATORY CONTROL SAMPLE: 1220458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	106	90-110	

MATRIX SPIKE SAMPLE: 1220459

Parameter	Units	60148534002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.2	110	90-110	

MATRIX SPIKE SAMPLE: 1220460

Parameter	Units	60148536002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	8.0	4	10.4	58	90-110	M1

SAMPLE DUPLICATE: 1220461

Parameter	Units	60148538002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF OB-278  
Pace Project No.: 60148849

QC Batch: WETA/25460      Analysis Method: EPA 410.4  
QC Batch Method: EPA 410.4      Analysis Description: 410.4 COD  
Associated Lab Samples: 60148849001

METHOD BLANK: 1220486      Matrix: Water  
Associated Lab Samples: 60148849001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/17/13 07:13	

LABORATORY CONTROL SAMPLE: 1220487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	48.4	97	90-110	

MATRIX SPIKE SAMPLE: 1220488

Parameter	Units	60148544002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	22.2	50	66.6	89	90-110	M1

MATRIX SPIKE SAMPLE: 1220490

Parameter	Units	60148850001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	49200	25000	69700	82	90-110	M1

SAMPLE DUPLICATE: 1220489

Parameter	Units	60148849001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	56500	56100	1	25	

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## QUALIFIERS

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39313

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF OB-278

Pace Project No.: 60148849

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148849001	OB-278	EPA 200.7	MPRP/23509	EPA 200.7	ICP/18478
60148849001	OB-278	EPA 200.7	MPRP/23525	EPA 200.7	ICP/18485
60148849001	OB-278	EPA 245.1	MERP/7512	EPA 245.1	MERC/7469
60148849001	OB-278	EPA 245.1	MERP/7524	EPA 245.1	MERC/7481
60148849001	OB-278	EPA 625	OEXT/39313	EPA 625	MSSV/12471
60148849001	OB-278	EPA 624 Low	MSV/55026		
60148849002	TRIP BLANK	EPA 624 Low	MSV/55026		
60148849001	OB-278	EPA 1664A	WET/42377		
60148849001	OB-278	EPA 1664A	WET/42459		
60148849001	OB-278	SM 2540D	WET/42393		
60148849001	OB-278	SM 4500-H+B	WET/42374		
60148849001	OB-278	EPA 350.1	WETA/25456		
60148849001	OB-278	EPA 410.4	WETA/25460		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148849
Barcode
60148849

Client Name: Barr Eng

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other [X] Cross Roads

Tracking #: Pace Shipping Label Used? Yes [X] No [ ]

Custody Seal on Cooler/Box Present: Yes [X] No [ ] Seals intact: Yes [X] No [ ]

Packing Material: Bubble Wrap [ ] Bubble Bags [X] Foam [X] None [ ] Other [ ]

Thermometer Used: T-112 / T-194 Type of Ice: Wet [X] Blue [ ] None [ ] Samples received on ice, cooling process has begun.

Cooler Temperature: 116.0

Date and initials of person examining contents: KE 7/15/13

Temperature should be above freezing to 6°C

Table with 17 rows of checklist items regarding chain of custody, sample handling, and analysis conditions. Includes checkboxes for Yes/No/N/A and handwritten notes like 'pH' and 'Initial pH of 5.0...'

Client Notification/ Resolution: Copy COC to Client? Y [ ] N [X] Field Data Required? Y [ ] N [X]

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 7/15/13



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:	
Company: BARR ENGINEERING	Report To: ED GALBRAITH/BARR	Attention: TABITHA PROVINCE	
Address:	Copy To: SCOTT FEDAK/FEEZOR	Company Name: REPUBLIC SERVICES	
	DANA BAKER/MARGARET TREANOR -BARR	Address: BRIDGETON, MO 63044	<b>Regulatory Agency</b>
Email To:	Purchase Order No. PO 3727110	Pace Quote Reference: 130426_7588	
Phone: (816) 285-8410 Fax:	Client Project ID: BRIDGETON LF	Pace Project Manager: Brown, Angie	<b>State / Location</b>
Requested Due Date/TAT: 10 Day (Default)	Container Order Number:	Pace Profile #: 6787 LINE 2	<b>Missouri</b>

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	CODE	MATRIX CODE: (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Y/N	Requested Analysis Filtered (Y/N)												Residual Chlorine (Y/N)		
					START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	COD EPA 410		pH SM 4500+H	LF DIS. METALS 200.71245	TOTAL METALS 200.71245	AMMONIA EPA 350	O/G EPA 1664	625 SVOCs	VOCs EPA 624	TSS SM2540D	TPH/HEM-SGT 1664						
					DATE	TIME	DATE	TIME																												
1	OB-278			OT G	7/15/13	06:30			15/10	1	1	23	3(A61H)	3(MGU)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	5(D690)
2	TRIP BLANK								2	2												X													2(D690)	
3																																				
4																																				
5																																				
6																																				
7																																				
8																																				
9																																				
10																																				
11																																				
12																																				

60148849

AM  
LO2

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	<i>William Abernathy</i>	7/15/13	10:05	Bill Steier 412 <i>Kyle E / PASI</i>	7-15-13	10:05				
SITE ADDRESS: BRIDGETON LF 13570 ST. CHARLES ROCK RD BRIDGETON MO 63044					7/15/13	14:00	16.0	Y	Y	Y

SAMPLER NAME AND SIGNATURE			TEMP. in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:						
SIGNATURE of SAMPLER: <i>William Abernathy</i>		DATE Signed: 7/15/13				

July 22, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-015R  
Pace Project No.: 60148850

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 15, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148850001	316-015R	Water	07/15/13 08:07	07/15/13 14:00
60148850002	TRIP BLANK	Water	07/15/13 08:07	07/15/13 14:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148850001	316-015R	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148850002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

Sample: 316-015R		Lab ID: 60148850001	Collected: 07/15/13 08:07	Received: 07/15/13 14:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	13000 ug/L		150	2	07/18/13 09:20	07/19/13 11:22	7429-90-5	
Antimony	ND ug/L		50.0	5	07/18/13 09:20	07/19/13 11:33	7440-36-0	D3
Arsenic	726 ug/L		50.0	5	07/18/13 09:20	07/19/13 11:33	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/18/13 09:20	07/19/13 11:33	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/18/13 09:20	07/19/13 11:33	7440-43-9	D3
Chromium	286 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:33	7440-47-3	
Cobalt	67.7 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:33	7440-48-4	
Copper	ND ug/L		50.0	5	07/18/13 09:20	07/19/13 11:33	7440-50-8	D3
Iron	896000 ug/L		100	2	07/18/13 09:20	07/19/13 11:22	7439-89-6	
Lead	246 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:33	7439-92-1	
Nickel	162 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:33	7440-02-0	
Selenium	ND ug/L		75.0	5	07/18/13 09:20	07/19/13 11:33	7782-49-2	D3
Silver	ND ug/L		35.0	5	07/18/13 09:20	07/19/13 11:33	7440-22-4	D3
Thallium	ND ug/L		100	5	07/18/13 09:20	07/19/13 11:33	7440-28-0	D3
Zinc	13100 ug/L		1000	20	07/18/13 09:20	07/19/13 11:43	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	3870 ug/L		150	2	07/18/13 16:00	07/19/13 12:44	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/18/13 16:00	07/19/13 13:11	7440-36-0	D3
Arsenic, Dissolved	602 ug/L		50.0	5	07/18/13 16:00	07/19/13 13:11	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/18/13 16:00	07/19/13 13:11	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/18/13 16:00	07/19/13 13:11	7440-43-9	
Chromium, Dissolved	218 ug/L		25.0	5	07/18/13 16:00	07/19/13 13:11	7440-47-3	
Cobalt, Dissolved	52.0 ug/L		25.0	5	07/18/13 16:00	07/19/13 13:11	7440-48-4	
Copper, Dissolved	ND ug/L		50.0	5	07/18/13 16:00	07/19/13 13:11	7440-50-8	D3
Iron, Dissolved	435000 ug/L		100	2	07/18/13 16:00	07/19/13 12:44	7439-89-6	
Lead, Dissolved	88.9 ug/L		25.0	5	07/18/13 16:00	07/19/13 13:11	7439-92-1	
Nickel, Dissolved	138 ug/L		25.0	5	07/18/13 16:00	07/19/13 13:11	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/18/13 16:00	07/19/13 13:11	7782-49-2	D3
Silver, Dissolved	ND ug/L		35.0	5	07/18/13 16:00	07/19/13 13:11	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/18/13 16:00	07/19/13 13:11	7440-28-0	D3
Zinc, Dissolved	11900 ug/L		1000	20	07/18/13 16:00	07/19/13 13:32	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	0.84 ug/L		0.20	1	07/16/13 08:30	07/16/13 14:40	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	07/19/13 08:30	07/19/13 11:46	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	83-32-9	
Acenaphthylene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	208-96-8	
Anthracene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	120-12-7	
Benzidine	ND ug/L		10000	20	07/16/13 00:00	07/17/13 16:17	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

Sample: 316-015R	Lab ID: 60148850001	Collected: 07/15/13 08:07	Received: 07/15/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	191-24-2	
Benzo(k)fluoranthene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	101-55-3	
Butylbenzylphthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		1200	20	07/16/13 00:00	07/17/13 16:17	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		1200	20	07/16/13 00:00	07/17/13 16:17	39638-32-9	
2-Chloronaphthalene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	91-58-7	
2-Chlorophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	7005-72-3	
Chrysene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		4000	20	07/16/13 00:00	07/17/13 16:17	91-94-1	
2,4-Dichlorophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	120-83-2	
Diethylphthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	84-66-2	
2,4-Dimethylphenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	105-67-9	
Dimethylphthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	131-11-3	
Di-n-butylphthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		5000	20	07/16/13 00:00	07/17/13 16:17	534-52-1	
2,4-Dinitrophenol	ND ug/L		10000	20	07/16/13 00:00	07/17/13 16:17	51-28-5	
2,4-Dinitrotoluene	ND ug/L		1200	20	07/16/13 00:00	07/17/13 16:17	121-14-2	
2,6-Dinitrotoluene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	606-20-2	
Di-n-octylphthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	117-81-7	
Fluoranthene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	206-44-0	
Fluorene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	87-68-3	
Hexachlorobenzene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	77-47-4	
Hexachloroethane	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	193-39-5	
Isophorone	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	78-59-1	
Naphthalene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	91-20-3	
Nitrobenzene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	98-95-3	
2-Nitrophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	88-75-5	
4-Nitrophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	100-02-7	
N-Nitrosodimethylamine	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	86-30-6	
Pentachlorophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	87-86-5	
Phenanthrene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	85-01-8	
Phenol	<b>4450</b> ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	108-95-2	
Pyrene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/16/13 00:00	07/17/13 16:17	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

Sample: 316-015R	Lab ID: 60148850001	Collected: 07/15/13 08:07	Received: 07/15/13 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/16/13 00:00	07/17/13 16:17	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/16/13 00:00	07/17/13 16:17	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/16/13 00:00	07/17/13 16:17	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/16/13 00:00	07/17/13 16:17	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/16/13 00:00	07/17/13 16:17	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/16/13 00:00	07/17/13 16:17	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/19/13 11:33	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/19/13 11:33	75-27-4	
Bromoform	ND ug/L		200	200		07/19/13 11:33	75-25-2	
Bromomethane	ND ug/L		1000	200		07/19/13 11:33	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/19/13 11:33	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/19/13 11:33	108-90-7	
Chloroethane	ND ug/L		200	200		07/19/13 11:33	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/19/13 11:33	110-75-8	
Chloroform	ND ug/L		200	200		07/19/13 11:33	67-66-3	
Chloromethane	ND ug/L		200	200		07/19/13 11:33	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/19/13 11:33	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/19/13 11:33	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/19/13 11:33	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/19/13 11:33	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/19/13 11:33	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/19/13 11:33	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/19/13 11:33	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/19/13 11:33	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/19/13 11:33	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/19/13 11:33	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/19/13 11:33	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/19/13 11:33	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/19/13 11:33	100-41-4	
Methylene chloride	ND ug/L		200	200		07/19/13 11:33	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/19/13 11:33	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/19/13 11:33	127-18-4	
Toluene	ND ug/L		200	200		07/19/13 11:33	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/19/13 11:33	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/19/13 11:33	79-00-5	
Trichloroethene	ND ug/L		200	200		07/19/13 11:33	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/19/13 11:33	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/19/13 11:33	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/19/13 11:33	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	111 %		80-120	200		07/19/13 11:33	1868-53-7	D3
4-Bromofluorobenzene (S)	97 %		80-120	200		07/19/13 11:33	460-00-4	
Toluene-d8 (S)	100 %		80-120	200		07/19/13 11:33	2037-26-5	
1,2-Dichloroethane-d4 (S)	107 %		80-120	200		07/19/13 11:33	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

<b>Sample: 316-015R</b>		<b>Lab ID: 60148850001</b>	Collected: 07/15/13 08:07	Received: 07/15/13 14:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Preservation pH	<b>5.0</b>		1.0	200		07/19/13 11:33		
<b>HEM, Oil and Grease</b>		Analytical Method: EPA 1664A						
Oil and Grease	<b>461</b>	mg/L	5.0	1		07/16/13 09:51		
<b>1664 SGT-HEM, TPH</b>		Analytical Method: EPA 1664A						
Total Petroleum Hydrocarbons	<b>16.4</b>	mg/L	5.0	1		07/19/13 14:40		
<b>2540D Total Suspended Solids</b>		Analytical Method: SM 2540D						
Total Suspended Solids	<b>2110</b>	mg/L	5.0	1		07/17/13 08:49		
<b>4500H+ pH, Electrometric</b>		Analytical Method: SM 4500-H+B						
pH at 25 Degrees C	<b>5.4</b>	Std. Units	0.10	1		07/16/13 15:00		H6
<b>350.1 Ammonia</b>		Analytical Method: EPA 350.1						
Nitrogen, Ammonia	<b>741</b>	mg/L	20.0	200		07/16/13 11:59	7664-41-7	
<b>410.4 COD</b>		Analytical Method: EPA 410.4						
Chemical Oxygen Demand	<b>49200</b>	mg/L	5000	500		07/17/13 07:21		M1

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

Sample: TRIP BLANK		Lab ID: 60148850002	Collected: 07/15/13 08:07	Received: 07/15/13 14:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/19/13 11:55	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/19/13 11:55	75-27-4	
Bromoform	ND ug/L		1.0	1		07/19/13 11:55	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/19/13 11:55	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/19/13 11:55	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/19/13 11:55	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/19/13 11:55	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/19/13 11:55	110-75-8	
Chloroform	ND ug/L		1.0	1		07/19/13 11:55	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/19/13 11:55	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/19/13 11:55	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/19/13 11:55	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/19/13 11:55	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/19/13 11:55	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/19/13 11:55	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/19/13 11:55	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/19/13 11:55	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/19/13 11:55	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/19/13 11:55	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/19/13 11:55	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/19/13 11:55	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/19/13 11:55	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/19/13 11:55	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/19/13 11:55	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/19/13 11:55	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/19/13 11:55	127-18-4	
Toluene	ND ug/L		1.0	1		07/19/13 11:55	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/19/13 11:55	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/19/13 11:55	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/19/13 11:55	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/19/13 11:55	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/19/13 11:55	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/19/13 11:55	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	105 %		80-120	1		07/19/13 11:55	1868-53-7	
4-Bromofluorobenzene (S)	100 %		80-120	1		07/19/13 11:55	460-00-4	
Toluene-d8 (S)	101 %		80-120	1		07/19/13 11:55	2037-26-5	
1,2-Dichloroethane-d4 (S)	95 %		80-120	1		07/19/13 11:55	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/19/13 11:55		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

QC Batch:	MERP/7512	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60148850001		

METHOD BLANK: 1220507 Matrix: Water

Associated Lab Samples: 60148850001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/16/13 14:15	

LABORATORY CONTROL SAMPLE: 1220508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.3	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1220509 1220510

Parameter	Units	60148807001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury	ug/L	ND	5	5	4.2	4.0	84	78	70-130	7	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

QC Batch:	MERP/7524	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60148850001		

METHOD BLANK: 1222629 Matrix: Water

Associated Lab Samples: 60148850001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/19/13 11:38	

LABORATORY CONTROL SAMPLE: 1222630

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.2	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222631 1222632

Parameter	Units	60148928001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	0.46	0.39	9	8	70-130	16	20	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R  
Pace Project No.: 60148850

QC Batch: MPRP/23509      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60148850001

METHOD BLANK: 1221470      Matrix: Water  
Associated Lab Samples: 60148850001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/19/13 10:53	
Antimony	ug/L	ND	10.0	07/19/13 10:53	
Arsenic	ug/L	ND	10.0	07/19/13 10:53	
Beryllium	ug/L	ND	1.0	07/19/13 10:53	
Cadmium	ug/L	ND	5.0	07/19/13 10:53	
Chromium	ug/L	ND	5.0	07/19/13 10:53	
Cobalt	ug/L	ND	5.0	07/19/13 10:53	
Copper	ug/L	ND	10.0	07/19/13 10:53	
Iron	ug/L	ND	50.0	07/19/13 10:53	
Lead	ug/L	ND	5.0	07/19/13 10:53	
Nickel	ug/L	ND	5.0	07/19/13 10:53	
Selenium	ug/L	ND	15.0	07/19/13 10:53	
Silver	ug/L	ND	7.0	07/19/13 10:53	
Thallium	ug/L	ND	20.0	07/19/13 10:53	
Zinc	ug/L	ND	50.0	07/19/13 10:53	

LABORATORY CONTROL SAMPLE: 1221471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10900	109	85-115	
Antimony	ug/L	1000	1080	108	85-115	
Arsenic	ug/L	1000	986	99	85-115	
Beryllium	ug/L	1000	1040	104	85-115	
Cadmium	ug/L	1000	1020	102	85-115	
Chromium	ug/L	1000	999	100	85-115	
Cobalt	ug/L	1000	1050	105	85-115	
Copper	ug/L	1000	1020	102	85-115	
Iron	ug/L	10000	10700	107	85-115	
Lead	ug/L	1000	1050	105	85-115	
Nickel	ug/L	1000	1040	104	85-115	
Selenium	ug/L	1000	997	100	85-115	
Silver	ug/L	500	513	103	85-115	
Thallium	ug/L	1000	1070	107	85-115	
Zinc	ug/L	1000	964	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1221472      1221473

Parameter	Units	60148911001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Aluminum	ug/L	247	10000	10000	10500	10800	103	105	70-130	2	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

Parameter	Units	60148911001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec							
Antimony	ug/L	ND	1000	1000	1000	1090	1100	108	110	70-130	1	7				
Arsenic	ug/L	28.3	1000	1000	1000	1080	1100	106	107	70-130	1	10				
Beryllium	ug/L	ND	1000	1000	1000	970	991	97	99	70-130	2	7				
Cadmium	ug/L	ND	1000	1000	1000	1050	1070	105	107	70-130	2	10				
Chromium	ug/L	25.5	1000	1000	1000	987	1010	96	99	70-130	3	10				
Cobalt	ug/L	ND	1000	1000	1000	943	962	94	96	70-130	2	6				
Copper	ug/L	121	1000	1000	1000	1150	1160	103	104	70-130	1	11				
Iron	ug/L	2330	10000	10000	10000	11900	12200	96	99	70-130	2	10				
Lead	ug/L	9.4	1000	1000	1000	917	937	91	93	70-130	2	10				
Nickel	ug/L	9.8	1000	1000	1000	941	960	93	95	70-130	2	10				
Selenium	ug/L	ND	1000	1000	1000	1040	1050	104	105	70-130	1	10				
Silver	ug/L	ND	500	500	500	561	572	112	114	70-130	2	10				
Thallium	ug/L	ND	1000	1000	1000	813	831	81	83	70-130	2	6				
Zinc	ug/L	213	1000	1000	1000	1140	1170	93	96	70-130	3	11				

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R  
Pace Project No.: 60148850

QC Batch: MPRP/23525 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60148850001

METHOD BLANK: 1222176 Matrix: Water  
Associated Lab Samples: 60148850001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/19/13 12:27	
Antimony, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Arsenic, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Beryllium, Dissolved	ug/L	ND	1.0	07/19/13 12:27	
Cadmium, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Chromium, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Cobalt, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Copper, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Iron, Dissolved	ug/L	ND	50.0	07/19/13 12:27	
Lead, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Nickel, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Selenium, Dissolved	ug/L	ND	15.0	07/19/13 12:27	
Silver, Dissolved	ug/L	ND	7.0	07/19/13 12:27	
Thallium, Dissolved	ug/L	ND	20.0	07/19/13 12:27	
Zinc, Dissolved	ug/L	ND	50.0	07/19/13 12:27	

LABORATORY CONTROL SAMPLE: 1222177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10700	107	85-115	
Antimony, Dissolved	ug/L	1000	1050	105	85-115	
Arsenic, Dissolved	ug/L	1000	969	97	85-115	
Beryllium, Dissolved	ug/L	1000	1010	101	85-115	
Cadmium, Dissolved	ug/L	1000	1000	100	85-115	
Chromium, Dissolved	ug/L	1000	996	100	85-115	
Cobalt, Dissolved	ug/L	1000	1030	103	85-115	
Copper, Dissolved	ug/L	1000	991	99	85-115	
Iron, Dissolved	ug/L	10000	10400	104	85-115	
Lead, Dissolved	ug/L	1000	1030	103	85-115	
Nickel, Dissolved	ug/L	1000	1030	103	85-115	
Selenium, Dissolved	ug/L	1000	986	99	85-115	
Silver, Dissolved	ug/L	500	502	100	85-115	
Thallium, Dissolved	ug/L	1000	1050	105	85-115	
Zinc, Dissolved	ug/L	1000	963	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222178 1222179

Parameter	Units	60148849001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	5040	10000	10000	10000	15800	15400	108	104	70-130	3	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

Parameter	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222178			1222179			MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
	60148849001 Units	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Antimony, Dissolved	ug/L	ND	1000	1000	1140	1120	110	108	70-130	2	7	
Arsenic, Dissolved	ug/L	640	1000	1000	1760	1700	112	106	70-130	3	10	
Beryllium, Dissolved	ug/L	ND	1000	1000	974	952	97	95	70-130	2	7	
Cadmium, Dissolved	ug/L	ND	1000	1000	1130	1100	112	109	70-130	3	10	
Chromium, Dissolved	ug/L	266	1000	1000	1260	1220	99	96	70-130	3	10	
Cobalt, Dissolved	ug/L	58.6	1000	1000	1070	1040	101	98	70-130	2	6	
Copper, Dissolved	ug/L	ND	1000	1000	1120	1080	110	106	70-130	4	11	
Iron, Dissolved	ug/L	707000	10000	10000	682000	657000	-248	-494	70-130	4	10	M1
Lead, Dissolved	ug/L	138	1000	1000	1070	1040	93	90	70-130	3	10	
Nickel, Dissolved	ug/L	152	1000	1000	1140	1110	99	96	70-130	3	10	
Selenium, Dissolved	ug/L	ND	1000	1000	1230	1190	123	119	70-130	3	10	
Silver, Dissolved	ug/L	ND	500	500	41.6	34.4J	8	7	70-130		10	M1
Thallium, Dissolved	ug/L	ND	1000	1000	852	835	85	84	70-130	2	6	
Zinc, Dissolved	ug/L	17300	1000	1000	17700	16700	44	-59	70-130	6	11	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

QC Batch: MSV/55026 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148850001, 60148850002

METHOD BLANK: 1222577 Matrix: Water

Associated Lab Samples: 60148850001, 60148850002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1-Dichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichloropropane	ug/L	ND	1.0	07/19/13 09:47	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/19/13 09:47	
Benzene	ug/L	ND	1.0	07/19/13 09:47	
Bromodichloromethane	ug/L	ND	1.0	07/19/13 09:47	
Bromoform	ug/L	ND	1.0	07/19/13 09:47	
Bromomethane	ug/L	ND	5.0	07/19/13 09:47	
Carbon tetrachloride	ug/L	ND	1.0	07/19/13 09:47	
Chlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
Chloroethane	ug/L	ND	1.0	07/19/13 09:47	
Chloroform	ug/L	ND	1.0	07/19/13 09:47	
Chloromethane	ug/L	ND	1.0	07/19/13 09:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/19/13 09:47	
Dibromochloromethane	ug/L	ND	1.0	07/19/13 09:47	
Ethylbenzene	ug/L	ND	1.0	07/19/13 09:47	
Methylene chloride	ug/L	ND	1.0	07/19/13 09:47	
Tetrachloroethene	ug/L	ND	1.0	07/19/13 09:47	
Toluene	ug/L	ND	1.0	07/19/13 09:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/19/13 09:47	
Trichloroethene	ug/L	ND	1.0	07/19/13 09:47	
Trichlorofluoromethane	ug/L	ND	1.0	07/19/13 09:47	
Vinyl chloride	ug/L	ND	1.0	07/19/13 09:47	
Xylene (Total)	ug/L	ND	3.0	07/19/13 09:47	
1,2-Dichloroethane-d4 (S)	%	105	80-120	07/19/13 09:47	
4-Bromofluorobenzene (S)	%	94	80-120	07/19/13 09:47	
Dibromofluoromethane (S)	%	104	80-120	07/19/13 09:47	
Toluene-d8 (S)	%	99	80-120	07/19/13 09:47	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

LABORATORY CONTROL SAMPLE: 1222578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	24.9	125	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.1	95	59-138	
1,1,2-Trichloroethane	ug/L	20	19.3	97	69-127	
1,1-Dichloroethane	ug/L	20	20.2	101	69-126	
1,1-Dichloroethene	ug/L	20	21.2	106	65-153	
1,2-Dichlorobenzene	ug/L	20	20.3	101	66-126	
1,2-Dichloroethane	ug/L	20	21.6	108	71-129	
1,2-Dichloropropane	ug/L	20	20.1	100	66-140	
1,3-Dichlorobenzene	ug/L	20	20.6	103	63-127	
1,4-Dichlorobenzene	ug/L	20	20.6	103	68-124	
2-Chloroethylvinyl ether	ug/L	20	22.9	115	33-159	
Benzene	ug/L	20	20.2	101	73-129	
Bromodichloromethane	ug/L	20	21.4	107	63-129	
Bromoform	ug/L	20	22.4	112	52-123	
Bromomethane	ug/L	20	20.8	104	10-160	
Carbon tetrachloride	ug/L	20	25.6	128	70-140	
Chlorobenzene	ug/L	20	20.8	104	68-127	
Chloroethane	ug/L	20	23.1	115	42-160	
Chloroform	ug/L	20	21.8	109	60-120	
Chloromethane	ug/L	20	16.2	81	10-160	
cis-1,2-Dichloroethene	ug/L	20	22.2	111	70-125	
cis-1,3-Dichloropropene	ug/L	20	20.8	104	66-132	
Dibromochloromethane	ug/L	20	23.0	115	63-134	
Ethylbenzene	ug/L	20	20.8	104	66-133	
Methylene chloride	ug/L	20	17.8	89	56-135	
Tetrachloroethene	ug/L	20	22.7	114	64-143	
Toluene	ug/L	20	20.0	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.5	103	67-149	
trans-1,3-Dichloropropene	ug/L	20	23.7	119	66-138	
Trichloroethene	ug/L	20	19.9	99	71-130	
Trichlorofluoromethane	ug/L	20	21.8	109	58-158	
Vinyl chloride	ug/L	20	17.8	89	41-160	
Xylene (Total)	ug/L	60	60.3	101	67-130	
1,2-Dichloroethane-d4 (S)	%			116	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			111	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1222579

Parameter	Units	60148849001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	5140	128	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4130	103	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4290	107	52-150	
1,1-Dichloroethane	ug/L	ND	4000	4420	111	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4490	112	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	4170	104	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

MATRIX SPIKE SAMPLE:		1222579						
Parameter	Units	60148849001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
1,2-Dichloroethane	ug/L	ND	4000	4770	119	49-155		
1,2-Dichloropropane	ug/L	ND	4000	4420	111	12-160		
1,3-Dichlorobenzene	ug/L	ND	4000	4170	104	59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	4250	106	18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	4400	110	10-160		
Benzene	ug/L	ND	4000	4220	105	37-151		
Bromodichloromethane	ug/L	ND	4000	4670	117	35-155		
Bromoform	ug/L	ND	4000	4790	120	45-133		
Bromomethane	ug/L	ND	4000	3360	84	10-160		
Carbon tetrachloride	ug/L	ND	4000	5360	134	70-140		
Chlorobenzene	ug/L	ND	4000	4320	108	37-153		
Chloroethane	ug/L	ND	4000	4240	106	14-160		
Chloroform	ug/L	ND	4000	4680	117	51-138		
Chloromethane	ug/L	ND	4000	2360	59	10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	4900	123	19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	4560	114	10-160		
Dibromochloromethane	ug/L	ND	4000	4810	120	53-149		
Ethylbenzene	ug/L	ND	4000	4340	109	37-154		
Methylene chloride	ug/L	ND	4000	3830	95	15-156		
Tetrachloroethene	ug/L	ND	4000	4560	114	64-148		
Toluene	ug/L	ND	4000	4330	108	47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	4310	108	54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	4900	123	17-160		
Trichloroethene	ug/L	ND	4000	4160	104	71-157		
Trichlorofluoromethane	ug/L	ND	4000	4000	100	17-160		
Vinyl chloride	ug/L	ND	4000	2820	70	10-160		
Xylene (Total)	ug/L	ND	12000	12500	105	12-153		
1,2-Dichloroethane-d4 (S)	%				116	80-120		
4-Bromofluorobenzene (S)	%				100	80-120		
Dibromofluoromethane (S)	%				109	80-120		
Toluene-d8 (S)	%				100	80-120		
Preservation pH			5.0		5.0			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

QC Batch: OEXT/39313

Analysis Method: EPA 625

QC Batch Method: EPA 625

Analysis Description: 625 MSS

Associated Lab Samples: 60148850001

METHOD BLANK: 1220406

Matrix: Water

Associated Lab Samples: 60148850001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/17/13 14:53	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/17/13 14:53	
2,4-Dichlorophenol	ug/L	ND	5.0	07/17/13 14:53	
2,4-Dimethylphenol	ug/L	ND	5.0	07/17/13 14:53	
2,4-Dinitrophenol	ug/L	ND	50.0	07/17/13 14:53	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/17/13 14:53	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/17/13 14:53	
2-Chloronaphthalene	ug/L	ND	5.0	07/17/13 14:53	
2-Chlorophenol	ug/L	ND	5.0	07/17/13 14:53	
2-Nitrophenol	ug/L	ND	5.0	07/17/13 14:53	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/17/13 14:53	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/17/13 14:53	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/17/13 14:53	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/17/13 14:53	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/17/13 14:53	
4-Nitrophenol	ug/L	ND	5.0	07/17/13 14:53	
Acenaphthene	ug/L	ND	5.0	07/17/13 14:53	
Acenaphthylene	ug/L	ND	5.0	07/17/13 14:53	
Anthracene	ug/L	ND	5.0	07/17/13 14:53	
Benzidine	ug/L	ND	50.0	07/17/13 14:53	
Benzo(a)anthracene	ug/L	ND	5.0	07/17/13 14:53	
Benzo(a)pyrene	ug/L	ND	5.0	07/17/13 14:53	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/17/13 14:53	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/17/13 14:53	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/17/13 14:53	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/17/13 14:53	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/17/13 14:53	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/17/13 14:53	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/17/13 14:53	
Butylbenzylphthalate	ug/L	ND	5.0	07/17/13 14:53	
Chrysene	ug/L	ND	5.0	07/17/13 14:53	
Di-n-butylphthalate	ug/L	ND	5.0	07/17/13 14:53	
Di-n-octylphthalate	ug/L	ND	5.0	07/17/13 14:53	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/17/13 14:53	
Diethylphthalate	ug/L	ND	5.0	07/17/13 14:53	
Dimethylphthalate	ug/L	ND	5.0	07/17/13 14:53	
Fluoranthene	ug/L	ND	5.0	07/17/13 14:53	
Fluorene	ug/L	ND	5.0	07/17/13 14:53	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/17/13 14:53	
Hexachlorobenzene	ug/L	ND	5.0	07/17/13 14:53	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/17/13 14:53	
Hexachloroethane	ug/L	ND	5.0	07/17/13 14:53	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/17/13 14:53	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Project No.: 60148850

METHOD BLANK: 1220406

Matrix: Water

Associated Lab Samples: 60148850001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/17/13 14:53	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/17/13 14:53	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/17/13 14:53	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/17/13 14:53	
Naphthalene	ug/L	ND	5.0	07/17/13 14:53	
Nitrobenzene	ug/L	ND	5.0	07/17/13 14:53	
Pentachlorophenol	ug/L	ND	5.0	07/17/13 14:53	
Phenanthrene	ug/L	ND	5.0	07/17/13 14:53	
Phenol	ug/L	ND	5.0	07/17/13 14:53	
Pyrene	ug/L	ND	5.0	07/17/13 14:53	
2,4,6-Tribromophenol (S)	%	84	39-119	07/17/13 14:53	
2-Fluorobiphenyl (S)	%	88	36-120	07/17/13 14:53	
2-Fluorophenol (S)	%	41	18-120	07/17/13 14:53	
Nitrobenzene-d5 (S)	%	86	32-120	07/17/13 14:53	
Phenol-d6 (S)	%	26	12-120	07/17/13 14:53	
Terphenyl-d14 (S)	%	89	44-120	07/17/13 14:53	

LABORATORY CONTROL SAMPLE: 1220407

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	41.1	82	44-120	
2,4,6-Trichlorophenol	ug/L	50	39.8	80	48-120	
2,4-Dichlorophenol	ug/L	50	39.4	79	48-120	
2,4-Dimethylphenol	ug/L	50	34.9	70	37-119	
2,4-Dinitrophenol	ug/L	50	27.8J	56	15-153	
2,4-Dinitrotoluene	ug/L	50	44.3	89	54-120	
2,6-Dinitrotoluene	ug/L	50	44.3	89	52-120	
2-Chloronaphthalene	ug/L	50	43.7	87	60-118	
2-Chlorophenol	ug/L	50	34.4	69	44-120	
2-Nitrophenol	ug/L	50	41.4	83	43-120	
3,3'-Dichlorobenzidine	ug/L	50	53.9	108	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	42.9	86	31-147	
4-Bromophenylphenyl ether	ug/L	50	45.7	91	53-120	
4-Chloro-3-methylphenol	ug/L	50	38.7	77	50-120	
4-Chlorophenylphenyl ether	ug/L	50	42.6	85	54-120	
4-Nitrophenol	ug/L	50	16.8	34	10-120	
Acenaphthene	ug/L	50	42.3	85	51-120	
Acenaphthylene	ug/L	50	42.5	85	51-120	
Anthracene	ug/L	50	46.8	94	54-120	
Benzidine	ug/L	50	1.8J	4	1-124	
Benzo(a)anthracene	ug/L	50	45.9	92	54-120	
Benzo(a)pyrene	ug/L	50	46.7	93	54-120	
Benzo(b)fluoranthene	ug/L	50	44.5	89	57-120	
Benzo(g,h,i)perylene	ug/L	50	47.2	94	54-120	
Benzo(k)fluoranthene	ug/L	50	48.7	97	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

LABORATORY CONTROL SAMPLE: 1220407

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	40.9	82	51-120	
bis(2-Chloroethyl) ether	ug/L	50	40.1	80	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	41.8	84	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	45.1	90	51-126	
Butylbenzylphthalate	ug/L	50	44.2	88	45-129	
Chrysene	ug/L	50	47.8	96	54-120	
Di-n-butylphthalate	ug/L	50	48.7	97	57-118	
Di-n-octylphthalate	ug/L	50	43.8	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	46.9	94	56-119	
Diethylphthalate	ug/L	50	43.9	88	55-114	
Dimethylphthalate	ug/L	50	43.2	86	54-112	
Fluoranthene	ug/L	50	49.5	99	56-120	
Fluorene	ug/L	50	43.4	87	59-120	
Hexachloro-1,3-butadiene	ug/L	50	41.2	82	41-116	
Hexachlorobenzene	ug/L	50	45.4	91	53-120	
Hexachlorocyclopentadiene	ug/L	100	51.6	52	31-120	
Hexachloroethane	ug/L	50	37.7	75	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	46.5	93	55-120	
Isophorone	ug/L	50	41.5	83	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	40.4	81	47-120	
N-Nitrosodimethylamine	ug/L	50	23.3	47	28-120	
N-Nitrosodiphenylamine	ug/L	50	42.5	85	53-120	
Naphthalene	ug/L	50	40.4	81	48-120	
Nitrobenzene	ug/L	50	42.4	85	47-120	
Pentachlorophenol	ug/L	50	38.4	77	43-127	
Phenanthrene	ug/L	50	46.2	92	55-120	
Phenol	ug/L	50	13.7	27	15-112	
Pyrene	ug/L	50	44.6	89	55-115	
2,4,6-Tribromophenol (S)	%			86	39-119	
2-Fluorobiphenyl (S)	%			88	36-120	
2-Fluorophenol (S)	%			40	18-120	
Nitrobenzene-d5 (S)	%			84	32-120	
Phenol-d6 (S)	%			26	12-120	
Terphenyl-d14 (S)	%			91	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

QC Batch:	WET/42377	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60148850001		

METHOD BLANK: 1220647 Matrix: Water

Associated Lab Samples: 60148850001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/16/13 09:49	

LABORATORY CONTROL SAMPLE: 1220648

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	39.9	100	78-114	

MATRIX SPIKE SAMPLE: 1220649

Parameter	Units	60148846001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	806	43.5	868	142	78-114	M1

SAMPLE DUPLICATE: 1220650

Parameter	Units	60148846002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	809	798	1	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

QC Batch:	WET/42459	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60148850001		

METHOD BLANK: 1223043 Matrix: Water

Associated Lab Samples: 60148850001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/19/13 14:39	

LABORATORY CONTROL SAMPLE: 1223044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.2	106	64-132	

MATRIX SPIKE SAMPLE: 1223049

Parameter	Units	60148726001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20.4	25.0	112	64-132	

SAMPLE DUPLICATE: 1223051

Parameter	Units	60148709002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20.8	35.0	51	34	D6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

QC Batch: WET/42393

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60148850001

METHOD BLANK: 1221160

Matrix: Water

Associated Lab Samples: 60148850001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/17/13 08:46	

SAMPLE DUPLICATE: 1221161

Parameter	Units	5083634001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6.0	ND		25	

SAMPLE DUPLICATE: 1221162

Parameter	Units	60148850001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	2110	2100	0	25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

QC Batch: WET/42374 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148850001

SAMPLE DUPLICATE: 1220635

Parameter	Units	60148784001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-015R  
Pace Project No.: 60148850

QC Batch: WETA/25456 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60148850001

METHOD BLANK: 1220457 Matrix: Water  
Associated Lab Samples: 60148850001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/16/13 11:25	

LABORATORY CONTROL SAMPLE: 1220458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	106	90-110	

MATRIX SPIKE SAMPLE: 1220459

Parameter	Units	60148534002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.2	110	90-110	

MATRIX SPIKE SAMPLE: 1220460

Parameter	Units	60148536002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	8.0	4	10.4	58	90-110	M1

SAMPLE DUPLICATE: 1220461

Parameter	Units	60148538002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

QC Batch:	WETA/25460	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60148850001		

METHOD BLANK: 1220486 Matrix: Water  
Associated Lab Samples: 60148850001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/17/13 07:13	

LABORATORY CONTROL SAMPLE: 1220487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	48.4	97	90-110	

MATRIX SPIKE SAMPLE: 1220488

Parameter	Units	60148544002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	22.2	50	66.6	89	90-110	M1

MATRIX SPIKE SAMPLE: 1220490

Parameter	Units	60148850001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	49200	25000	69700	82	90-110	M1

SAMPLE DUPLICATE: 1220489

Parameter	Units	60148849001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	56500	56100	1	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39313

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-015R

Pace Project No.: 60148850

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148850001	316-015R	EPA 200.7	MPRP/23509	EPA 200.7	ICP/18478
60148850001	316-015R	EPA 200.7	MPRP/23525	EPA 200.7	ICP/18485
60148850001	316-015R	EPA 245.1	MERP/7512	EPA 245.1	MERC/7469
60148850001	316-015R	EPA 245.1	MERP/7524	EPA 245.1	MERC/7481
60148850001	316-015R	EPA 625	OEXT/39313	EPA 625	MSSV/12471
60148850001	316-015R	EPA 624 Low	MSV/55026		
60148850002	TRIP BLANK	EPA 624 Low	MSV/55026		
60148850001	316-015R	EPA 1664A	WET/42377		
60148850001	316-015R	EPA 1664A	WET/42459		
60148850001	316-015R	SM 2540D	WET/42393		
60148850001	316-015R	SM 4500-H+B	WET/42374		
60148850001	316-015R	EPA 350.1	WETA/25456		
60148850001	316-015R	EPA 410.4	WETA/25460		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO#: 60148850**  
60148850

Client Name: Barr Eng

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Web Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 22.0

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:
Date and initials of person examining contents: <u>KE 7/15/13</u>

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>pH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> <u>KE 7/15/13</u> <del>No</del> <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial pH $\approx$ 5.0. Added 2.5 mL to each sample respectively. Final pH $\approx$ 2.0
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: VOA, coliform, TOC, <u>U&amp;C</u> WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>KE</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative <u>12510</u>
Pace Trip Blank lot # (if purchased): <u>Jul 5</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/15/13

# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b> Required Client Information:	<b>Section B</b> Required Project Information:	<b>Section C</b> Invoice Information:	Page : <b>1</b> Of <b>1</b>
Company: <b>BARR ENGINEERING</b> Address: Email To: Phone: <b>(816) 285-8410</b>   Fax Requested Due Date/TAT: <b>10 Day (Default)</b>	Report To: <b>ED GALBRAITH/BARR</b> Copy To: <b>SCOTT FEDAK/FEEZOR</b> Address: <b>DANA BAKER/MARGARET TREANOR -BARR</b> Purchase Order No. <b>PO 3727110</b> Client Project ID: <b>BRIDGETON LF</b> Container Order Number:	Attention: <b>TABITHA PROVINCE</b> Company Name: <b>REPUBLIC SERVICES</b> Address: <b>BRIDGETON, MO 63044</b> Pace Quote Reference: <b>130426_7588</b> Pace Project Manager: <b>Brown, Angie</b> Pace Profile #: <b>6787 LINE 2</b>	Regulatory Agency State / Location <b>Missouri</b>

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Y/N	Requested Analysis Filtered (Y/N)										Residual Chlorine (Y/N)				
						START DATE	START TIME	END DATE	END TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	COD EPA 410		pH SM 4500H+B	LF DIS METALS 200.7/245	TOTAL METALS 200.7/245	AMMONIA EPA 350	O/G EPA 1664	625 SVOCs	VOCs EPA 624	TSS SM2540D	TPH/HEM-SGT 1664						
1	316-015R				OT G	7/15/13	0807			15	1								X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	3 (AG10) 1 (BP20)	
2	TRIP BLANK									2	2														X										Al, Sb, As, Be, Cd, Cr, Co, Cu, Fe, Pb, Ni, Se, Ag, Ti, Zn and Mercury		
3																																					
4																																					
5																																					
6																																					
7																																					
8																																					
9																																					
10																																					
11																																					
12																																					

601488850

(W) (BP3U) (W2)

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	<i>[Signature]</i>	7/15/13	1005	Bill Abernathy 412	7-15-13	10:05	22.0	Y	Y	Y
SITE ADDRESS: BRIDGETON LF				Kyle S / PAI	7/15/13	14:00	22.0	Y	Y	Y
13570 ST. CHARLES ROCK RD										
BRIDGETON MO 63044										

<b>SAMPLER NAME AND SIGNATURE</b>		TEMP in C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:					
SIGNATURE of SAMPLER: <i>[Signature]</i> <b>WILLIAM ABERNATHY</b> DATE Signed: 7/15/13					

July 22, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF CONTROL  
Pace Project No.: 60148924

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 17, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148924001	CONTROL	Water	07/16/13 15:00	07/17/13 02:00

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### SAMPLE ANALYTE COUNT

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148924001	CONTROL	EPA 5030B/8260	PRG	70
		SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

**Sample: CONTROL**      **Lab ID: 60148924001**      Collected: 07/16/13 15:00      Received: 07/17/13 02:00      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Acetone	74200	ug/L	2000	376	200		07/17/13 18:40	67-64-1	
Benzene	<12.0	ug/L	200	12.0	200		07/17/13 18:40	71-43-2	
Bromobenzene	<20.0	ug/L	200	20.0	200		07/17/13 18:40	108-86-1	
Bromochloromethane	<30.0	ug/L	200	30.0	200		07/17/13 18:40	74-97-5	
Bromodichloromethane	<38.0	ug/L	200	38.0	200		07/17/13 18:40	75-27-4	
Bromoform	64.5J	ug/L	200	14.0	200		07/17/13 18:40	75-25-2	B
Bromomethane	<32.0	ug/L	1000	32.0	200		07/17/13 18:40	74-83-9	
2-Butanone (MEK)	29100	ug/L	2000	118	200		07/17/13 18:40	78-93-3	
n-Butylbenzene	74.6J	ug/L	200	20.0	200		07/17/13 18:40	104-51-8	
sec-Butylbenzene	<10.0	ug/L	200	10.0	200		07/17/13 18:40	135-98-8	
tert-Butylbenzene	<68.0	ug/L	200	68.0	200		07/17/13 18:40	98-06-6	
Carbon disulfide	<24.0	ug/L	1000	24.0	200		07/17/13 18:40	75-15-0	
Carbon tetrachloride	<36.0	ug/L	200	36.0	200		07/17/13 18:40	56-23-5	
Chlorobenzene	<42.0	ug/L	200	42.0	200		07/17/13 18:40	108-90-7	
Chloroethane	<30.0	ug/L	200	30.0	200		07/17/13 18:40	75-00-3	
Chloroform	<28.0	ug/L	200	28.0	200		07/17/13 18:40	67-66-3	
Chloromethane	<16.0	ug/L	200	16.0	200		07/17/13 18:40	74-87-3	
2-Chlorotoluene	<24.0	ug/L	200	24.0	200		07/17/13 18:40	95-49-8	
4-Chlorotoluene	<28.0	ug/L	200	28.0	200		07/17/13 18:40	106-43-4	
1,2-Dibromo-3-chloropropane	<118	ug/L	500	118	200		07/17/13 18:40	96-12-8	
Dibromochloromethane	<42.0	ug/L	200	42.0	200		07/17/13 18:40	124-48-1	
1,2-Dibromoethane (EDB)	<34.0	ug/L	200	34.0	200		07/17/13 18:40	106-93-4	
Dibromomethane	<36.0	ug/L	200	36.0	200		07/17/13 18:40	74-95-3	
1,2-Dichlorobenzene	<10.0	ug/L	200	10.0	200		07/17/13 18:40	95-50-1	
1,3-Dichlorobenzene	<14.0	ug/L	200	14.0	200		07/17/13 18:40	541-73-1	
1,4-Dichlorobenzene	161J	ug/L	200	12.0	200		07/17/13 18:40	106-46-7	
Dichlorodifluoromethane	<42.0	ug/L	200	42.0	200		07/17/13 18:40	75-71-8	
1,1-Dichloroethane	<10.0	ug/L	200	10.0	200		07/17/13 18:40	75-34-3	
1,2-Dichloroethane	<24.0	ug/L	200	24.0	200		07/17/13 18:40	107-06-2	
1,2-Dichloroethene (Total)	<56.0	ug/L	200	56.0	200		07/17/13 18:40	540-59-0	
1,1-Dichloroethene	<40.0	ug/L	200	40.0	200		07/17/13 18:40	75-35-4	
cis-1,2-Dichloroethene	<16.0	ug/L	200	16.0	200		07/17/13 18:40	156-59-2	
trans-1,2-Dichloroethene	<40.0	ug/L	200	40.0	200		07/17/13 18:40	156-60-5	
1,2-Dichloropropane	<32.0	ug/L	200	32.0	200		07/17/13 18:40	78-87-5	
1,3-Dichloropropane	<34.0	ug/L	200	34.0	200		07/17/13 18:40	142-28-9	
2,2-Dichloropropane	<38.0	ug/L	200	38.0	200		07/17/13 18:40	594-20-7	
1,1-Dichloropropene	<18.0	ug/L	200	18.0	200		07/17/13 18:40	563-58-6	
cis-1,3-Dichloropropene	<28.0	ug/L	200	28.0	200		07/17/13 18:40	10061-01-5	
trans-1,3-Dichloropropene	<24.0	ug/L	200	24.0	200		07/17/13 18:40	10061-02-6	
Ethylbenzene	<36.0	ug/L	200	36.0	200		07/17/13 18:40	100-41-4	
Hexachloro-1,3-butadiene	<36.0	ug/L	200	36.0	200		07/17/13 18:40	87-68-3	
2-Hexanone	<238	ug/L	2000	238	200		07/17/13 18:40	591-78-6	
Isopropylbenzene (Cumene)	<14.0	ug/L	200	14.0	200		07/17/13 18:40	98-82-8	
p-Isopropyltoluene	1140	ug/L	200	20.0	200		07/17/13 18:40	99-87-6	
Methylene chloride	50.5J	ug/L	200	30.0	200		07/17/13 18:40	75-09-2	B
4-Methyl-2-pentanone (MIBK)	210J	ug/L	2000	84.0	200		07/17/13 18:40	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

**Sample: CONTROL**      **Lab ID: 60148924001**      Collected: 07/16/13 15:00      Received: 07/17/13 02:00      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 5030B/8260									
Methyl-tert-butyl ether	<12.0	ug/L	200	12.0	200		07/17/13 18:40	1634-04-4	
Naphthalene	885J	ug/L	2000	32.0	200		07/17/13 18:40	91-20-3	B
n-Propylbenzene	<20.0	ug/L	200	20.0	200		07/17/13 18:40	103-65-1	
Styrene	<24.0	ug/L	200	24.0	200		07/17/13 18:40	100-42-5	
1,1,1,2-Tetrachloroethane	<30.0	ug/L	200	30.0	200		07/17/13 18:40	630-20-6	
1,1,2,2-Tetrachloroethane	<30.0	ug/L	200	30.0	200		07/17/13 18:40	79-34-5	
Tetrachloroethene	<20.0	ug/L	200	20.0	200		07/17/13 18:40	127-18-4	
Toluene	<34.0	ug/L	200	34.0	200		07/17/13 18:40	108-88-3	
1,2,3-Trichlorobenzene	44.1J	ug/L	200	24.0	200		07/17/13 18:40	87-61-6	B
1,2,4-Trichlorobenzene	61.6J	ug/L	200	20.0	200		07/17/13 18:40	120-82-1	B
1,1,1-Trichloroethane	<22.0	ug/L	200	22.0	200		07/17/13 18:40	71-55-6	
1,1,2-Trichloroethane	<40.0	ug/L	200	40.0	200		07/17/13 18:40	79-00-5	
Trichloroethene	<34.0	ug/L	200	34.0	200		07/17/13 18:40	79-01-6	
Trichlorofluoromethane	<68.0	ug/L	200	68.0	200		07/17/13 18:40	75-69-4	
1,2,3-Trichloropropane	<38.0	ug/L	500	38.0	200		07/17/13 18:40	96-18-4	
1,2,4-Trimethylbenzene	125J	ug/L	200	18.0	200		07/17/13 18:40	95-63-6	
1,3,5-Trimethylbenzene	32.0J	ug/L	200	20.0	200		07/17/13 18:40	108-67-8	
Vinyl chloride	<26.0	ug/L	200	26.0	200		07/17/13 18:40	75-01-4	
Xylene (Total)	<84.0	ug/L	600	84.0	200		07/17/13 18:40	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	80-120		200		07/17/13 18:40	460-00-4	
Dibromofluoromethane (S)	101	%	80-120		200		07/17/13 18:40	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	80-120		200		07/17/13 18:40	17060-07-0	
Toluene-d8 (S)	103	%	80-120		200		07/17/13 18:40	2037-26-5	
Preservation pH	7.0		0.10	0.10	200		07/17/13 18:40		

**5210B BOD, 5 day**

Analytical Method: SM 5210B      Preparation Method: SM 5210B

BOD, 5 day	29400	mg/L	2.0	2.0	1	07/17/13 16:50	07/22/13 13:46		
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## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

QC Batch: MSV/54989

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 7 day

Associated Lab Samples: 60148924001

METHOD BLANK: 1221368

Matrix: Water

Associated Lab Samples: 60148924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.15	1.0	07/17/13 18:25	
1,1,1-Trichloroethane	ug/L	<0.11	1.0	07/17/13 18:25	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	07/17/13 18:25	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	07/17/13 18:25	
1,1-Dichloroethane	ug/L	<0.050	1.0	07/17/13 18:25	
1,1-Dichloroethene	ug/L	<0.20	1.0	07/17/13 18:25	
1,1-Dichloropropene	ug/L	<0.090	1.0	07/17/13 18:25	
1,2,3-Trichlorobenzene	ug/L	0.27J	1.0	07/17/13 18:25	
1,2,3-Trichloropropane	ug/L	<0.19	2.5	07/17/13 18:25	
1,2,4-Trichlorobenzene	ug/L	0.18J	1.0	07/17/13 18:25	
1,2,4-Trimethylbenzene	ug/L	<0.090	1.0	07/17/13 18:25	
1,2-Dibromo-3-chloropropane	ug/L	<0.59	2.5	07/17/13 18:25	
1,2-Dibromoethane (EDB)	ug/L	<0.17	1.0	07/17/13 18:25	
1,2-Dichlorobenzene	ug/L	<0.050	1.0	07/17/13 18:25	
1,2-Dichloroethane	ug/L	<0.12	1.0	07/17/13 18:25	
1,2-Dichloroethene (Total)	ug/L	<0.28	1.0	07/17/13 18:25	
1,2-Dichloropropane	ug/L	<0.16	1.0	07/17/13 18:25	
1,3,5-Trimethylbenzene	ug/L	<0.10	1.0	07/17/13 18:25	
1,3-Dichlorobenzene	ug/L	<0.070	1.0	07/17/13 18:25	
1,3-Dichloropropane	ug/L	<0.17	1.0	07/17/13 18:25	
1,4-Dichlorobenzene	ug/L	<0.060	1.0	07/17/13 18:25	
2,2-Dichloropropane	ug/L	<0.19	1.0	07/17/13 18:25	
2-Butanone (MEK)	ug/L	<0.59	10.0	07/17/13 18:25	
2-Chlorotoluene	ug/L	<0.12	1.0	07/17/13 18:25	
2-Hexanone	ug/L	<1.2	10.0	07/17/13 18:25	
4-Chlorotoluene	ug/L	<0.14	1.0	07/17/13 18:25	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	10.0	07/17/13 18:25	
Acetone	ug/L	<1.9	10.0	07/17/13 18:25	
Benzene	ug/L	<0.060	1.0	07/17/13 18:25	
Bromobenzene	ug/L	<0.10	1.0	07/17/13 18:25	
Bromochloromethane	ug/L	<0.15	1.0	07/17/13 18:25	
Bromodichloromethane	ug/L	<0.19	1.0	07/17/13 18:25	
Bromoform	ug/L	0.39J	1.0	07/17/13 18:25	
Bromomethane	ug/L	<0.16	5.0	07/17/13 18:25	
Carbon disulfide	ug/L	<0.12	5.0	07/17/13 18:25	
Carbon tetrachloride	ug/L	<0.18	1.0	07/17/13 18:25	
Chlorobenzene	ug/L	<0.21	1.0	07/17/13 18:25	
Chloroethane	ug/L	<0.15	1.0	07/17/13 18:25	
Chloroform	ug/L	<0.14	1.0	07/17/13 18:25	
Chloromethane	ug/L	<0.080	1.0	07/17/13 18:25	
cis-1,2-Dichloroethene	ug/L	<0.080	1.0	07/17/13 18:25	
cis-1,3-Dichloropropene	ug/L	<0.14	1.0	07/17/13 18:25	
Dibromochloromethane	ug/L	<0.21	1.0	07/17/13 18:25	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

METHOD BLANK: 1221368

Matrix: Water

Associated Lab Samples: 60148924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	<0.18	1.0	07/17/13 18:25	
Dichlorodifluoromethane	ug/L	<0.21	1.0	07/17/13 18:25	
Ethylbenzene	ug/L	<0.18	1.0	07/17/13 18:25	
Hexachloro-1,3-butadiene	ug/L	<0.18	1.0	07/17/13 18:25	
Isopropylbenzene (Cumene)	ug/L	<0.070	1.0	07/17/13 18:25	
Methyl-tert-butyl ether	ug/L	<0.060	1.0	07/17/13 18:25	
Methylene chloride	ug/L	0.25J	1.0	07/17/13 18:25	
n-Butylbenzene	ug/L	<0.10	1.0	07/17/13 18:25	
n-Propylbenzene	ug/L	<0.10	1.0	07/17/13 18:25	
Naphthalene	ug/L	0.28J	10.0	07/17/13 18:25	
p-Isopropyltoluene	ug/L	<0.10	1.0	07/17/13 18:25	
sec-Butylbenzene	ug/L	<0.050	1.0	07/17/13 18:25	
Styrene	ug/L	<0.12	1.0	07/17/13 18:25	
tert-Butylbenzene	ug/L	<0.34	1.0	07/17/13 18:25	
Tetrachloroethene	ug/L	<0.10	1.0	07/17/13 18:25	
Toluene	ug/L	<0.17	1.0	07/17/13 18:25	
trans-1,2-Dichloroethene	ug/L	<0.20	1.0	07/17/13 18:25	
trans-1,3-Dichloropropene	ug/L	<0.12	1.0	07/17/13 18:25	
Trichloroethene	ug/L	<0.17	1.0	07/17/13 18:25	
Trichlorofluoromethane	ug/L	<0.34	1.0	07/17/13 18:25	
Vinyl chloride	ug/L	<0.13	1.0	07/17/13 18:25	
Xylene (Total)	ug/L	<0.42	3.0	07/17/13 18:25	
1,2-Dichloroethane-d4 (S)	%	101	80-120	07/17/13 18:25	
4-Bromofluorobenzene (S)	%	101	80-120	07/17/13 18:25	
Dibromofluoromethane (S)	%	98	80-120	07/17/13 18:25	
Toluene-d8 (S)	%	103	80-120	07/17/13 18:25	

LABORATORY CONTROL SAMPLE: 1221369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.3	107	79-121	
1,1,1-Trichloroethane	ug/L	20	20.3	101	75-124	
1,1,2,2-Tetrachloroethane	ug/L	20	21.8	109	73-120	
1,1,2-Trichloroethane	ug/L	20	20.4	102	76-120	
1,1-Dichloroethane	ug/L	20	19.6	98	73-120	
1,1-Dichloroethene	ug/L	20	18.7	94	70-127	
1,1-Dichloropropene	ug/L	20	21.0	105	79-124	
1,2,3-Trichlorobenzene	ug/L	20	20.4	102	68-130	
1,2,3-Trichloropropane	ug/L	20	20.5	103	72-124	
1,2,4-Trichlorobenzene	ug/L	20	20.1	101	73-125	
1,2,4-Trimethylbenzene	ug/L	20	20.8	104	76-120	
1,2-Dibromo-3-chloropropane	ug/L	20	20.4	102	68-126	
1,2-Dibromoethane (EDB)	ug/L	20	21.3	106	79-121	
1,2-Dichlorobenzene	ug/L	20	21.8	109	79-120	
1,2-Dichloroethane	ug/L	20	19.6	98	72-122	

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## QUALITY CONTROL DATA

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

LABORATORY CONTROL SAMPLE: 1221369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethene (Total)	ug/L	40	39.0	98	77-120	
1,2-Dichloropropane	ug/L	20	20.7	103	77-120	
1,3,5-Trimethylbenzene	ug/L	20	20.9	104	75-120	
1,3-Dichlorobenzene	ug/L	20	20.8	104	80-120	
1,3-Dichloropropane	ug/L	20	20.2	101	76-120	
1,4-Dichlorobenzene	ug/L	20	21.0	105	80-120	
2,2-Dichloropropane	ug/L	20	20.3	101	52-135	
2-Butanone (MEK)	ug/L	100	107	107	69-124	
2-Chlorotoluene	ug/L	20	20.8	104	78-120	
2-Hexanone	ug/L	100	102	102	70-125	
4-Chlorotoluene	ug/L	20	21.3	107	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	103	103	72-123	
Acetone	ug/L	100	78.8	79	60-126	
Benzene	ug/L	20	20.9	104	73-122	
Bromobenzene	ug/L	20	21.9	109	79-120	
Bromochloromethane	ug/L	20	18.5	93	76-125	
Bromodichloromethane	ug/L	20	19.9	100	73-120	
Bromoform	ug/L	20	18.5	93	74-120	
Bromomethane	ug/L	20	17.4	87	40-146	
Carbon disulfide	ug/L	20	15.9	79	62-125	
Carbon tetrachloride	ug/L	20	19.8	99	73-125	
Chlorobenzene	ug/L	20	20.8	104	80-120	
Chloroethane	ug/L	20	17.7	88	56-159	
Chloroform	ug/L	20	19.5	97	76-120	
Chloromethane	ug/L	20	22.2	111	40-148	
cis-1,2-Dichloroethene	ug/L	20	21.4	107	69-120	
cis-1,3-Dichloropropene	ug/L	20	19.8	99	76-120	
Dibromochloromethane	ug/L	20	20.2	101	79-121	
Dibromomethane	ug/L	20	19.9	99	77-120	
Dichlorodifluoromethane	ug/L	20	11.4	57	40-141	
Ethylbenzene	ug/L	20	21.4	107	76-123	
Hexachloro-1,3-butadiene	ug/L	20	21.4	107	69-125	
Isopropylbenzene (Cumene)	ug/L	20	22.5	113	80-130	
Methyl-tert-butyl ether	ug/L	20	19.4	97	67-128	
Methylene chloride	ug/L	20	17.1	85	71-123	
n-Butylbenzene	ug/L	20	21.2	106	77-124	
n-Propylbenzene	ug/L	20	21.5	108	78-120	
Naphthalene	ug/L	20	19.7	98	64-127	
p-Isopropyltoluene	ug/L	20	21.7	109	78-120	
sec-Butylbenzene	ug/L	20	21.6	108	77-122	
Styrene	ug/L	20	20.5	102	79-120	
tert-Butylbenzene	ug/L	20	21.8	109	76-123	
Tetrachloroethene	ug/L	20	20.5	102	79-122	
Toluene	ug/L	20	20.8	104	76-122	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	78-126	
trans-1,3-Dichloropropene	ug/L	20	21.0	105	79-124	
Trichloroethene	ug/L	20	19.3	97	76-120	
Trichlorofluoromethane	ug/L	20	16.8	84	69-133	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

LABORATORY CONTROL SAMPLE: 1221369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	20	17.0	85	57-140	
Xylene (Total)	ug/L	60	62.3	104	76-122	
1,2-Dichloroethane-d4 (S)	%			96	80-120	
4-Bromofluorobenzene (S)	%			103	80-120	
Dibromofluoromethane (S)	%			96	80-120	
Toluene-d8 (S)	%			101	80-120	

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### QUALITY CONTROL DATA

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

QC Batch: WET/42414

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148924001

METHOD BLANK: 1221567

Matrix: Water

Associated Lab Samples: 60148924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	07/22/13 13:38	

LABORATORY CONTROL SAMPLE: 1221568

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	173	87	85-115	

SAMPLE DUPLICATE: 1221569

Parameter	Units	60148924001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	29400	32900	11	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: MSV/54989

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDEGETON LF CONTROL

Pace Project No.: 60148924

---

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148924001	CONTROL	EPA 5030B/8260	MSV/54989		
60148924001	CONTROL	SM 5210B	WET/42414	SM 5210B	WET/42486

### REPORT OF LABORATORY ANALYSIS

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WO#: 60148924



60148924



Sample Condition Upon Receipt

Client Name: Barr

Optional

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  xpoud

Proj Due Date:

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Proj Name:

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.8

(circle one)

Date and initials of person examining contents: PV 7/17/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>880B</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	9. <u>PV 7/17/13</u>
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Includes date/time/ID/analyses Matrix:	<u>WT</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: <u>VOA</u> , coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N Field Data Required? Y  N

Person Contacted: Bryan Selie Date/Time:

Comments/ Resolution: OK to run VOCs by 8260 due to Acetone is NOT AN OPTION by method 624.

Project Manager Review: [Signature]

Date: 7/17/13



July 22, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 282/283-MSD  
Pace Project No.: 60148927

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 17, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148927

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148927

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148927001	282/283-MSD	Water	07/16/13 13:06	07/17/13 02:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148927

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148927001	282/283-MSD	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148927

Sample: 282/283-MSD	Lab ID: 60148927001	Collected: 07/16/13 13:06	Received: 07/17/13 02:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>34000</b>	mg/L	2.0	1	07/17/13 10:35	07/22/13 12:10		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148927

QC Batch: WET/42390

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60148927001

METHOD BLANK: 1221116

Matrix: Water

Associated Lab Samples: 60148927001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/22/13 11:31	

LABORATORY CONTROL SAMPLE: 1221117

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	199	101	85-115	

SAMPLE DUPLICATE: 1221118

Parameter	Units	60148846003 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	5200	4350	18	17	D6

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148927

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148927

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60148927001	282/283-MSD	SM 5210B	WET/42390	SM 5210B	WET/42482

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO# : 60148927**  
  
**60148927**

Client Name: Barr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  xxoud

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2AL

Thermometer Used: T-112 / T-194 Type of Ice: (Wet) Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 2.2

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: pv 7/17/13

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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Includes date/time/ID/analyses Matrix: <u>WT</u>		
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/17/13



July 24, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 282/283-MSD  
Pace Project No.: 60148928

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 17, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

---

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60148928001	282/283-MSD	Water	07/16/13 13:06	07/17/13 02:00
60148928002	TRIP BLANK	Water	07/16/13 13:06	07/17/13 02:00

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60148928001	282/283-MSD	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60148928002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

Sample: 282/283-MSD	Lab ID: 60148928001	Collected: 07/16/13 13:06	Received: 07/17/13 02:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	8370 ug/L		150	2	07/18/13 09:20	07/19/13 11:26	7429-90-5	
Antimony	ND ug/L		50.0	5	07/18/13 09:20	07/19/13 11:36	7440-36-0	D3
Arsenic	686 ug/L		50.0	5	07/18/13 09:20	07/19/13 11:36	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/18/13 09:20	07/19/13 11:36	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/18/13 09:20	07/19/13 11:36	7440-43-9	D3
Chromium	276 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:36	7440-47-3	
Cobalt	57.8 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:36	7440-48-4	
Copper	ND ug/L		50.0	5	07/18/13 09:20	07/19/13 11:36	7440-50-8	D3
Iron	90000 ug/L		100	2	07/18/13 09:20	07/19/13 11:26	7439-89-6	
Lead	219 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:36	7439-92-1	
Nickel	143 ug/L		25.0	5	07/18/13 09:20	07/19/13 11:36	7440-02-0	
Selenium	ND ug/L		75.0	5	07/18/13 09:20	07/19/13 11:36	7782-49-2	D3
Silver	ND ug/L		35.0	5	07/18/13 09:20	07/19/13 11:36	7440-22-4	D3
Thallium	ND ug/L		100	5	07/18/13 09:20	07/19/13 11:36	7440-28-0	D3
Zinc	14700 ug/L		1000	20	07/18/13 09:20	07/19/13 11:46	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	4390 ug/L		150	2	07/18/13 16:00	07/19/13 12:48	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/18/13 16:00	07/19/13 13:15	7440-36-0	D3
Arsenic, Dissolved	630 ug/L		50.0	5	07/18/13 16:00	07/19/13 13:15	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/18/13 16:00	07/19/13 13:15	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/18/13 16:00	07/19/13 13:15	7440-43-9	D3
Chromium, Dissolved	246 ug/L		25.0	5	07/18/13 16:00	07/19/13 13:15	7440-47-3	
Cobalt, Dissolved	49.9 ug/L		25.0	5	07/18/13 16:00	07/19/13 13:15	7440-48-4	
Copper, Dissolved	ND ug/L		50.0	5	07/18/13 16:00	07/19/13 13:15	7440-50-8	D3
Iron, Dissolved	682000 ug/L		100	2	07/18/13 16:00	07/19/13 12:48	7439-89-6	
Lead, Dissolved	129 ug/L		25.0	5	07/18/13 16:00	07/19/13 13:15	7439-92-1	
Nickel, Dissolved	130 ug/L		25.0	5	07/18/13 16:00	07/19/13 13:15	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/18/13 16:00	07/19/13 13:15	7782-49-2	D3
Silver, Dissolved	ND ug/L		35.0	5	07/18/13 16:00	07/19/13 13:15	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/18/13 16:00	07/19/13 13:15	7440-28-0	D3
Zinc, Dissolved	13900 ug/L		1000	20	07/18/13 16:00	07/19/13 13:35	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	0.67 ug/L		0.20	1	07/18/13 09:00	07/18/13 13:31	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	07/19/13 08:30	07/19/13 11:50	7439-97-6	M1
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	83-32-9	
Acenaphthylene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	208-96-8	
Anthracene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	120-12-7	
Benzidine	ND ug/L		10000	20	07/18/13 00:00	07/19/13 11:50	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

Sample: 282/283-MSD	Lab ID: 60148928001	Collected: 07/16/13 13:06	Received: 07/17/13 02:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	191-24-2	
Benzo(k)fluoranthene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	101-55-3	
Butylbenzylphthalate	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		1200	20	07/18/13 00:00	07/19/13 11:50	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		1200	20	07/18/13 00:00	07/19/13 11:50	39638-32-9	
2-Chloronaphthalene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	91-58-7	
2-Chlorophenol	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	7005-72-3	
Chrysene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		4000	20	07/18/13 00:00	07/19/13 11:50	91-94-1	
2,4-Dichlorophenol	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	120-83-2	
Diethylphthalate	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	84-66-2	
2,4-Dimethylphenol	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	105-67-9	
Dimethylphthalate	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	131-11-3	
Di-n-butylphthalate	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		5000	20	07/18/13 00:00	07/19/13 11:50	534-52-1	
2,4-Dinitrophenol	ND ug/L		10000	20	07/18/13 00:00	07/19/13 11:50	51-28-5	
2,4-Dinitrotoluene	ND ug/L		1200	20	07/18/13 00:00	07/19/13 11:50	121-14-2	
2,6-Dinitrotoluene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	606-20-2	
Di-n-octylphthalate	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	117-81-7	
Fluoranthene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	206-44-0	
Fluorene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	87-68-3	
Hexachlorobenzene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	77-47-4	
Hexachloroethane	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	193-39-5	
Isophorone	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	78-59-1	
Naphthalene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	91-20-3	
Nitrobenzene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	98-95-3	
2-Nitrophenol	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	88-75-5	
4-Nitrophenol	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	100-02-7	
N-Nitrosodimethylamine	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	86-30-6	
Pentachlorophenol	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	87-86-5	
Phenanthrene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	85-01-8	
Phenol	<b>4950</b> ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	108-95-2	
Pyrene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/18/13 00:00	07/19/13 11:50	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

Sample: 282/283-MSD		Lab ID: 60148928001	Collected: 07/16/13 13:06	Received: 07/17/13 02:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/18/13 00:00	07/19/13 11:50	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/18/13 00:00	07/19/13 11:50	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/18/13 00:00	07/19/13 11:50	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/18/13 00:00	07/19/13 11:50	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/18/13 00:00	07/19/13 11:50	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/18/13 00:00	07/19/13 11:50	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/19/13 12:58	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/19/13 12:58	75-27-4	
Bromoform	ND ug/L		200	200		07/19/13 12:58	75-25-2	
Bromomethane	ND ug/L		1000	200		07/19/13 12:58	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/19/13 12:58	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/19/13 12:58	108-90-7	
Chloroethane	ND ug/L		200	200		07/19/13 12:58	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/19/13 12:58	110-75-8	
Chloroform	ND ug/L		200	200		07/19/13 12:58	67-66-3	
Chloromethane	ND ug/L		200	200		07/19/13 12:58	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/19/13 12:58	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/19/13 12:58	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/19/13 12:58	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/19/13 12:58	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/19/13 12:58	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/19/13 12:58	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/19/13 12:58	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/19/13 12:58	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/19/13 12:58	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/19/13 12:58	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/19/13 12:58	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/19/13 12:58	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/19/13 12:58	100-41-4	
Methylene chloride	ND ug/L		200	200		07/19/13 12:58	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/19/13 12:58	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/19/13 12:58	127-18-4	
Toluene	ND ug/L		200	200		07/19/13 12:58	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/19/13 12:58	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/19/13 12:58	79-00-5	
Trichloroethene	ND ug/L		200	200		07/19/13 12:58	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/19/13 12:58	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/19/13 12:58	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/19/13 12:58	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	105 %		80-120	200		07/19/13 12:58	1868-53-7	D3
4-Bromofluorobenzene (S)	96 %		80-120	200		07/19/13 12:58	460-00-4	
Toluene-d8 (S)	99 %		80-120	200		07/19/13 12:58	2037-26-5	
1,2-Dichloroethane-d4 (S)	104 %		80-120	200		07/19/13 12:58	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

<b>Sample: 282/283-MSD</b>		<b>Lab ID: 60148928001</b>	Collected: 07/16/13 13:06	Received: 07/17/13 02:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>6.0</b>		1.0	200		07/19/13 12:58		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>449</b>	mg/L	5.0	1		07/17/13 09:51		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>55.4</b>	mg/L	5.0	1		07/19/13 14:40		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>1260</b>	mg/L	5.0	1		07/17/13 14:45		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.4</b>	Std. Units	0.10	1		07/19/13 08:30		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>660</b>	mg/L	20.0	200		07/22/13 14:43	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>53100</b>	mg/L	5000	500		07/17/13 13:09		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

Sample: TRIP BLANK		Lab ID: 60148928002	Collected: 07/16/13 13:06	Received: 07/17/13 02:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/19/13 13:20	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/19/13 13:20	75-27-4	
Bromoform	ND ug/L		1.0	1		07/19/13 13:20	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/19/13 13:20	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/19/13 13:20	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/19/13 13:20	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/19/13 13:20	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/19/13 13:20	110-75-8	
Chloroform	ND ug/L		1.0	1		07/19/13 13:20	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/19/13 13:20	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/19/13 13:20	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/19/13 13:20	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/19/13 13:20	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/19/13 13:20	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/19/13 13:20	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/19/13 13:20	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/19/13 13:20	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/19/13 13:20	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/19/13 13:20	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/19/13 13:20	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/19/13 13:20	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/19/13 13:20	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/19/13 13:20	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/19/13 13:20	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/19/13 13:20	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/19/13 13:20	127-18-4	
Toluene	ND ug/L		1.0	1		07/19/13 13:20	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/19/13 13:20	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/19/13 13:20	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/19/13 13:20	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/19/13 13:20	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/19/13 13:20	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/19/13 13:20	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102 %		80-120	1		07/19/13 13:20	1868-53-7	
4-Bromofluorobenzene (S)	94 %		80-120	1		07/19/13 13:20	460-00-4	
Toluene-d8 (S)	97 %		80-120	1		07/19/13 13:20	2037-26-5	
1,2-Dichloroethane-d4 (S)	106 %		80-120	1		07/19/13 13:20	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/19/13 13:20		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

QC Batch: MERP/7518 Analysis Method: EPA 245.1  
 QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury  
 Associated Lab Samples: 60148928001

METHOD BLANK: 1221726 Matrix: Water

Associated Lab Samples: 60148928001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/18/13 13:26	

LABORATORY CONTROL SAMPLE: 1221727

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.3	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1221728 1221729

Parameter	Units	60148982002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L	ND	5	5	5	3.9	4.1	77	82	70-130	7	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

QC Batch:	MERP/7524	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60148928001		

METHOD BLANK: 1222629 Matrix: Water

Associated Lab Samples: 60148928001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/19/13 11:38	

LABORATORY CONTROL SAMPLE: 1222630

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.2	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222631 1222632

Parameter	Units	60148928001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury, Dissolved	ug/L	ND	5	5	0.46	0.39	9	8	70-130	16	20	M1

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

QC Batch: MPRP/23509 Analysis Method: EPA 200.7  
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
 Associated Lab Samples: 60148928001

METHOD BLANK: 1221470 Matrix: Water

Associated Lab Samples: 60148928001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/19/13 10:53	
Antimony	ug/L	ND	10.0	07/19/13 10:53	
Arsenic	ug/L	ND	10.0	07/19/13 10:53	
Beryllium	ug/L	ND	1.0	07/19/13 10:53	
Cadmium	ug/L	ND	5.0	07/19/13 10:53	
Chromium	ug/L	ND	5.0	07/19/13 10:53	
Cobalt	ug/L	ND	5.0	07/19/13 10:53	
Copper	ug/L	ND	10.0	07/19/13 10:53	
Iron	ug/L	ND	50.0	07/19/13 10:53	
Lead	ug/L	ND	5.0	07/19/13 10:53	
Nickel	ug/L	ND	5.0	07/19/13 10:53	
Selenium	ug/L	ND	15.0	07/19/13 10:53	
Silver	ug/L	ND	7.0	07/19/13 10:53	
Thallium	ug/L	ND	20.0	07/19/13 10:53	
Zinc	ug/L	ND	50.0	07/19/13 10:53	

LABORATORY CONTROL SAMPLE: 1221471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10900	109	85-115	
Antimony	ug/L	1000	1080	108	85-115	
Arsenic	ug/L	1000	986	99	85-115	
Beryllium	ug/L	1000	1040	104	85-115	
Cadmium	ug/L	1000	1020	102	85-115	
Chromium	ug/L	1000	999	100	85-115	
Cobalt	ug/L	1000	1050	105	85-115	
Copper	ug/L	1000	1020	102	85-115	
Iron	ug/L	10000	10700	107	85-115	
Lead	ug/L	1000	1050	105	85-115	
Nickel	ug/L	1000	1040	104	85-115	
Selenium	ug/L	1000	997	100	85-115	
Silver	ug/L	500	513	103	85-115	
Thallium	ug/L	1000	1070	107	85-115	
Zinc	ug/L	1000	964	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1221472 1221473

Parameter	Units	60148911001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum	ug/L	247	10000	10000	10500	10800	103	105	70-130	2	8

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

Parameter	Units	60148911001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Antimony	ug/L	ND	1000	1000	1090	1100	108	110	70-130	1	7				
Arsenic	ug/L	28.3	1000	1000	1080	1100	106	107	70-130	1	10				
Beryllium	ug/L	ND	1000	1000	970	991	97	99	70-130	2	7				
Cadmium	ug/L	ND	1000	1000	1050	1070	105	107	70-130	2	10				
Chromium	ug/L	25.5	1000	1000	987	1010	96	99	70-130	3	10				
Cobalt	ug/L	ND	1000	1000	943	962	94	96	70-130	2	6				
Copper	ug/L	121	1000	1000	1150	1160	103	104	70-130	1	11				
Iron	ug/L	2330	10000	10000	11900	12200	96	99	70-130	2	10				
Lead	ug/L	9.4	1000	1000	917	937	91	93	70-130	2	10				
Nickel	ug/L	9.8	1000	1000	941	960	93	95	70-130	2	10				
Selenium	ug/L	ND	1000	1000	1040	1050	104	105	70-130	1	10				
Silver	ug/L	ND	500	500	561	572	112	114	70-130	2	10				
Thallium	ug/L	ND	1000	1000	813	831	81	83	70-130	2	6				
Zinc	ug/L	213	1000	1000	1140	1170	93	96	70-130	3	11				

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD  
Pace Project No.: 60148928

QC Batch: MPRP/23525 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60148928001

METHOD BLANK: 1222176 Matrix: Water  
Associated Lab Samples: 60148928001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/19/13 12:27	
Antimony, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Arsenic, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Beryllium, Dissolved	ug/L	ND	1.0	07/19/13 12:27	
Cadmium, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Chromium, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Cobalt, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Copper, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Iron, Dissolved	ug/L	ND	50.0	07/19/13 12:27	
Lead, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Nickel, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Selenium, Dissolved	ug/L	ND	15.0	07/19/13 12:27	
Silver, Dissolved	ug/L	ND	7.0	07/19/13 12:27	
Thallium, Dissolved	ug/L	ND	20.0	07/19/13 12:27	
Zinc, Dissolved	ug/L	ND	50.0	07/19/13 12:27	

LABORATORY CONTROL SAMPLE: 1222177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10700	107	85-115	
Antimony, Dissolved	ug/L	1000	1050	105	85-115	
Arsenic, Dissolved	ug/L	1000	969	97	85-115	
Beryllium, Dissolved	ug/L	1000	1010	101	85-115	
Cadmium, Dissolved	ug/L	1000	1000	100	85-115	
Chromium, Dissolved	ug/L	1000	996	100	85-115	
Cobalt, Dissolved	ug/L	1000	1030	103	85-115	
Copper, Dissolved	ug/L	1000	991	99	85-115	
Iron, Dissolved	ug/L	10000	10400	104	85-115	
Lead, Dissolved	ug/L	1000	1030	103	85-115	
Nickel, Dissolved	ug/L	1000	1030	103	85-115	
Selenium, Dissolved	ug/L	1000	986	99	85-115	
Silver, Dissolved	ug/L	500	502	100	85-115	
Thallium, Dissolved	ug/L	1000	1050	105	85-115	
Zinc, Dissolved	ug/L	1000	963	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222178 1222179

Parameter	Units	60148849001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	5040	10000	10000	10000	15800	15400	108	104	70-130	3	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

Parameter	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222178			1222179			MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
	60148849001 Units	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					
Antimony, Dissolved	ug/L	ND	1000	1000	1140	1120	110	108	70-130	2	7
Arsenic, Dissolved	ug/L	640	1000	1000	1760	1700	112	106	70-130	3	10
Beryllium, Dissolved	ug/L	ND	1000	1000	974	952	97	95	70-130	2	7
Cadmium, Dissolved	ug/L	ND	1000	1000	1130	1100	112	109	70-130	3	10
Chromium, Dissolved	ug/L	266	1000	1000	1260	1220	99	96	70-130	3	10
Cobalt, Dissolved	ug/L	58.6	1000	1000	1070	1040	101	98	70-130	2	6
Copper, Dissolved	ug/L	ND	1000	1000	1120	1080	110	106	70-130	4	11
Iron, Dissolved	ug/L	707000	10000	10000	682000	657000	-248	-494	70-130	4	10 M1
Lead, Dissolved	ug/L	138	1000	1000	1070	1040	93	90	70-130	3	10
Nickel, Dissolved	ug/L	152	1000	1000	1140	1110	99	96	70-130	3	10
Selenium, Dissolved	ug/L	ND	1000	1000	1230	1190	123	119	70-130	3	10
Silver, Dissolved	ug/L	ND	500	500	41.6	34.4J	8	7	70-130		10 M1
Thallium, Dissolved	ug/L	ND	1000	1000	852	835	85	84	70-130	2	6
Zinc, Dissolved	ug/L	17300	1000	1000	17700	16700	44	-59	70-130	6	11 M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

QC Batch: MSV/55026 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60148928001, 60148928002

METHOD BLANK: 1222577 Matrix: Water

Associated Lab Samples: 60148928001, 60148928002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1-Dichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichloropropane	ug/L	ND	1.0	07/19/13 09:47	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/19/13 09:47	
Benzene	ug/L	ND	1.0	07/19/13 09:47	
Bromodichloromethane	ug/L	ND	1.0	07/19/13 09:47	
Bromoform	ug/L	ND	1.0	07/19/13 09:47	
Bromomethane	ug/L	ND	5.0	07/19/13 09:47	
Carbon tetrachloride	ug/L	ND	1.0	07/19/13 09:47	
Chlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
Chloroethane	ug/L	ND	1.0	07/19/13 09:47	
Chloroform	ug/L	ND	1.0	07/19/13 09:47	
Chloromethane	ug/L	ND	1.0	07/19/13 09:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/19/13 09:47	
Dibromochloromethane	ug/L	ND	1.0	07/19/13 09:47	
Ethylbenzene	ug/L	ND	1.0	07/19/13 09:47	
Methylene chloride	ug/L	ND	1.0	07/19/13 09:47	
Tetrachloroethene	ug/L	ND	1.0	07/19/13 09:47	
Toluene	ug/L	ND	1.0	07/19/13 09:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/19/13 09:47	
Trichloroethene	ug/L	ND	1.0	07/19/13 09:47	
Trichlorofluoromethane	ug/L	ND	1.0	07/19/13 09:47	
Vinyl chloride	ug/L	ND	1.0	07/19/13 09:47	
Xylene (Total)	ug/L	ND	3.0	07/19/13 09:47	
1,2-Dichloroethane-d4 (S)	%	105	80-120	07/19/13 09:47	
4-Bromofluorobenzene (S)	%	94	80-120	07/19/13 09:47	
Dibromofluoromethane (S)	%	104	80-120	07/19/13 09:47	
Toluene-d8 (S)	%	99	80-120	07/19/13 09:47	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

LABORATORY CONTROL SAMPLE: 1222578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	24.9	125	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.1	95	59-138	
1,1,2-Trichloroethane	ug/L	20	19.3	97	69-127	
1,1-Dichloroethane	ug/L	20	20.2	101	69-126	
1,1-Dichloroethene	ug/L	20	21.2	106	65-153	
1,2-Dichlorobenzene	ug/L	20	20.3	101	66-126	
1,2-Dichloroethane	ug/L	20	21.6	108	71-129	
1,2-Dichloropropane	ug/L	20	20.1	100	66-140	
1,3-Dichlorobenzene	ug/L	20	20.6	103	63-127	
1,4-Dichlorobenzene	ug/L	20	20.6	103	68-124	
2-Chloroethylvinyl ether	ug/L	20	22.9	115	33-159	
Benzene	ug/L	20	20.2	101	73-129	
Bromodichloromethane	ug/L	20	21.4	107	63-129	
Bromoform	ug/L	20	22.4	112	52-123	
Bromomethane	ug/L	20	20.8	104	10-160	
Carbon tetrachloride	ug/L	20	25.6	128	70-140	
Chlorobenzene	ug/L	20	20.8	104	68-127	
Chloroethane	ug/L	20	23.1	115	42-160	
Chloroform	ug/L	20	21.8	109	60-120	
Chloromethane	ug/L	20	16.2	81	10-160	
cis-1,2-Dichloroethene	ug/L	20	22.2	111	70-125	
cis-1,3-Dichloropropene	ug/L	20	20.8	104	66-132	
Dibromochloromethane	ug/L	20	23.0	115	63-134	
Ethylbenzene	ug/L	20	20.8	104	66-133	
Methylene chloride	ug/L	20	17.8	89	56-135	
Tetrachloroethene	ug/L	20	22.7	114	64-143	
Toluene	ug/L	20	20.0	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.5	103	67-149	
trans-1,3-Dichloropropene	ug/L	20	23.7	119	66-138	
Trichloroethene	ug/L	20	19.9	99	71-130	
Trichlorofluoromethane	ug/L	20	21.8	109	58-158	
Vinyl chloride	ug/L	20	17.8	89	41-160	
Xylene (Total)	ug/L	60	60.3	101	67-130	
1,2-Dichloroethane-d4 (S)	%			116	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			111	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1222579

Parameter	Units	60148849001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	5140	128	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4130	103	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4290	107	52-150	
1,1-Dichloroethane	ug/L	ND	4000	4420	111	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4490	112	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	4170	104	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

PACE Project No.: 60148928

MATRIX SPIKE SAMPLE:		1222579						
Parameter	Units	60148849001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
1,2-Dichloroethane	ug/L	ND	4000	4770	119	49-155		
1,2-Dichloropropane	ug/L	ND	4000	4420	111	12-160		
1,3-Dichlorobenzene	ug/L	ND	4000	4170	104	59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	4250	106	18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	4400	110	10-160		
Benzene	ug/L	ND	4000	4220	105	37-151		
Bromodichloromethane	ug/L	ND	4000	4670	117	35-155		
Bromoform	ug/L	ND	4000	4790	120	45-133		
Bromomethane	ug/L	ND	4000	3360	84	10-160		
Carbon tetrachloride	ug/L	ND	4000	5360	134	70-140		
Chlorobenzene	ug/L	ND	4000	4320	108	37-153		
Chloroethane	ug/L	ND	4000	4240	106	14-160		
Chloroform	ug/L	ND	4000	4680	117	51-138		
Chloromethane	ug/L	ND	4000	2360	59	10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	4900	123	19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	4560	114	10-160		
Dibromochloromethane	ug/L	ND	4000	4810	120	53-149		
Ethylbenzene	ug/L	ND	4000	4340	109	37-154		
Methylene chloride	ug/L	ND	4000	3830	95	15-156		
Tetrachloroethene	ug/L	ND	4000	4560	114	64-148		
Toluene	ug/L	ND	4000	4330	108	47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	4310	108	54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	4900	123	17-160		
Trichloroethene	ug/L	ND	4000	4160	104	71-157		
Trichlorofluoromethane	ug/L	ND	4000	4000	100	17-160		
Vinyl chloride	ug/L	ND	4000	2820	70	10-160		
Xylene (Total)	ug/L	ND	12000	12500	105	12-153		
1,2-Dichloroethane-d4 (S)	%				116	80-120		
4-Bromofluorobenzene (S)	%				100	80-120		
Dibromofluoromethane (S)	%				109	80-120		
Toluene-d8 (S)	%				100	80-120		
Preservation pH			5.0		5.0			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

QC Batch:	OEXT/39364	Analysis Method:	EPA 625
QC Batch Method:	EPA 625	Analysis Description:	625 MSS
Associated Lab Samples:	60148928001		

METHOD BLANK: 1221667 Matrix: Water

Associated Lab Samples: 60148928001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/19/13 10:24	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/19/13 10:24	
2,4-Dichlorophenol	ug/L	ND	5.0	07/19/13 10:24	
2,4-Dimethylphenol	ug/L	ND	5.0	07/19/13 10:24	
2,4-Dinitrophenol	ug/L	ND	50.0	07/19/13 10:24	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/19/13 10:24	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/19/13 10:24	
2-Chloronaphthalene	ug/L	ND	5.0	07/19/13 10:24	
2-Chlorophenol	ug/L	ND	5.0	07/19/13 10:24	
2-Nitrophenol	ug/L	ND	5.0	07/19/13 10:24	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/19/13 10:24	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/19/13 10:24	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/19/13 10:24	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/19/13 10:24	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/19/13 10:24	
4-Nitrophenol	ug/L	ND	5.0	07/19/13 10:24	
Acenaphthene	ug/L	ND	5.0	07/19/13 10:24	
Acenaphthylene	ug/L	ND	5.0	07/19/13 10:24	
Anthracene	ug/L	ND	5.0	07/19/13 10:24	
Benzidine	ug/L	ND	50.0	07/19/13 10:24	
Benzo(a)anthracene	ug/L	ND	5.0	07/19/13 10:24	
Benzo(a)pyrene	ug/L	ND	5.0	07/19/13 10:24	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/19/13 10:24	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/19/13 10:24	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/19/13 10:24	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/19/13 10:24	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/19/13 10:24	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/19/13 10:24	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/19/13 10:24	
Butylbenzylphthalate	ug/L	ND	5.0	07/19/13 10:24	
Chrysene	ug/L	ND	5.0	07/19/13 10:24	
Di-n-butylphthalate	ug/L	ND	5.0	07/19/13 10:24	
Di-n-octylphthalate	ug/L	ND	5.0	07/19/13 10:24	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/19/13 10:24	
Diethylphthalate	ug/L	ND	5.0	07/19/13 10:24	
Dimethylphthalate	ug/L	ND	5.0	07/19/13 10:24	
Fluoranthene	ug/L	ND	5.0	07/19/13 10:24	
Fluorene	ug/L	ND	5.0	07/19/13 10:24	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/19/13 10:24	
Hexachlorobenzene	ug/L	ND	5.0	07/19/13 10:24	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/19/13 10:24	
Hexachloroethane	ug/L	ND	5.0	07/19/13 10:24	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/19/13 10:24	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Project No.: 60148928

METHOD BLANK: 1221667

Matrix: Water

Associated Lab Samples: 60148928001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/19/13 10:24	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/19/13 10:24	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/19/13 10:24	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/19/13 10:24	
Naphthalene	ug/L	ND	5.0	07/19/13 10:24	
Nitrobenzene	ug/L	ND	5.0	07/19/13 10:24	
Pentachlorophenol	ug/L	ND	5.0	07/19/13 10:24	
Phenanthrene	ug/L	ND	5.0	07/19/13 10:24	
Phenol	ug/L	ND	5.0	07/19/13 10:24	
Pyrene	ug/L	ND	5.0	07/19/13 10:24	
2,4,6-Tribromophenol (S)	%	89	39-119	07/19/13 10:24	
2-Fluorobiphenyl (S)	%	92	36-120	07/19/13 10:24	
2-Fluorophenol (S)	%	43	18-120	07/19/13 10:24	
Nitrobenzene-d5 (S)	%	85	32-120	07/19/13 10:24	
Phenol-d6 (S)	%	27	12-120	07/19/13 10:24	
Terphenyl-d14 (S)	%	95	44-120	07/19/13 10:24	

LABORATORY CONTROL SAMPLE: 1221668

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	42.4	85	44-120	
2,4,6-Trichlorophenol	ug/L	50	44.3	89	48-120	
2,4-Dichlorophenol	ug/L	50	39.3	79	48-120	
2,4-Dimethylphenol	ug/L	50	35.0	70	37-119	
2,4-Dinitrophenol	ug/L	50	40.6J	81	15-153	
2,4-Dinitrotoluene	ug/L	50	47.9	96	54-120	
2,6-Dinitrotoluene	ug/L	50	46.4	93	52-120	
2-Chloronaphthalene	ug/L	50	44.9	90	60-118	
2-Chlorophenol	ug/L	50	35.4	71	44-120	
2-Nitrophenol	ug/L	50	40.6	81	43-120	
3,3'-Dichlorobenzidine	ug/L	50	58.6	117	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	49.6	99	31-147	
4-Bromophenylphenyl ether	ug/L	50	47.7	95	53-120	
4-Chloro-3-methylphenol	ug/L	50	38.2	76	50-120	
4-Chlorophenylphenyl ether	ug/L	50	46.5	93	54-120	
4-Nitrophenol	ug/L	50	19.3	39	10-120	
Acenaphthene	ug/L	50	45.2	90	51-120	
Acenaphthylene	ug/L	50	44.5	89	51-120	
Anthracene	ug/L	50	47.3	95	54-120	
Benzidine	ug/L	50	13.1J	26	1-124	
Benzo(a)anthracene	ug/L	50	48.9	98	54-120	
Benzo(a)pyrene	ug/L	50	49.9	100	54-120	
Benzo(b)fluoranthene	ug/L	50	49.8	100	57-120	
Benzo(g,h,i)perylene	ug/L	50	49.5	99	54-120	
Benzo(k)fluoranthene	ug/L	50	48.4	97	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

LABORATORY CONTROL SAMPLE: 1221668

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	40.9	82	51-120	
bis(2-Chloroethyl) ether	ug/L	50	39.8	80	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	41.4	83	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	49.3	99	51-126	
Butylbenzylphthalate	ug/L	50	48.9	98	45-129	
Chrysene	ug/L	50	49.6	99	54-120	
Di-n-butylphthalate	ug/L	50	48.4	97	57-118	
Di-n-octylphthalate	ug/L	50	48.4	97	48-130	
Dibenz(a,h)anthracene	ug/L	50	49.8	100	56-119	
Diethylphthalate	ug/L	50	46.3	93	55-114	
Dimethylphthalate	ug/L	50	45.8	92	54-112	
Fluoranthene	ug/L	50	47.9	96	56-120	
Fluorene	ug/L	50	45.6	91	59-120	
Hexachloro-1,3-butadiene	ug/L	50	43.2	86	41-116	
Hexachlorobenzene	ug/L	50	47.3	95	53-120	
Hexachlorocyclopentadiene	ug/L	100	62.2	62	31-120	
Hexachloroethane	ug/L	50	40.8	82	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	49.7	99	55-120	
Isophorone	ug/L	50	41.2	82	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	40.3	81	47-120	
N-Nitrosodimethylamine	ug/L	50	25.9	52	28-120	
N-Nitrosodiphenylamine	ug/L	50	46.2	92	53-120	
Naphthalene	ug/L	50	41.3	83	48-120	
Nitrobenzene	ug/L	50	42.0	84	47-120	
Pentachlorophenol	ug/L	50	45.8	92	43-127	
Phenanthrene	ug/L	50	48.0	96	55-120	
Phenol	ug/L	50	14.6	29	15-112	
Pyrene	ug/L	50	49.0	98	55-115	
2,4,6-Tribromophenol (S)	%			92	39-119	
2-Fluorobiphenyl (S)	%			89	36-120	
2-Fluorophenol (S)	%			42	18-120	
Nitrobenzene-d5 (S)	%			80	32-120	
Phenol-d6 (S)	%			27	12-120	
Terphenyl-d14 (S)	%			97	44-120	

MATRIX SPIKE SAMPLE: 1221845

Parameter	Units	60148971002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	47.0	94	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	52.7	105	37-121	
2,4-Dichlorophenol	ug/L	ND	50	49.3	99	39-120	
2,4-Dimethylphenol	ug/L	ND	50	21.4	43	32-119	
2,4-Dinitrophenol	ug/L	ND	50	17.7J	35	20-157	
2,4-Dinitrotoluene	ug/L	ND	50	49.7	99	39-130	
2,6-Dinitrotoluene	ug/L	ND	50	50.7	101	50-128	
2-Chloronaphthalene	ug/L	ND	50	52.3	105	60-118	
2-Chlorophenol	ug/L	ND	50	38.3	77	35-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Project No.: 60148928

MATRIX SPIKE SAMPLE:		1221845						
Parameter	Units	60148971002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
2-Nitrophenol	ug/L	ND	50	47.5	95	29-123		
3,3'-Dichlorobenzidine	ug/L	ND	50	12.9J	26	10-160		
4,6-Dinitro-2-methylphenol	ug/L	ND	50	24.5J	49	27-146		
4-Bromophenylphenyl ether	ug/L	ND	50	58.9	118	53-124		
4-Chloro-3-methylphenol	ug/L	ND	50	45.3	91	33-123		
4-Chlorophenylphenyl ether	ug/L	ND	50	51.7	103	34-125		
4-Nitrophenol	ug/L	ND	50	21.5	43	10-120		
Acenaphthene	ug/L	ND	50	50.6	101	47-120		
Acenaphthylene	ug/L	ND	50	51.0	102	33-120		
Anthracene	ug/L	ND	50	53.8	108	36-121		
Benzidine	ug/L	ND	50	ND	0	1-120 M1		
Benzo(a)anthracene	ug/L	ND	50	52.0	104	37-127		
Benzo(a)pyrene	ug/L	ND	50	52.3	105	34-125		
Benzo(b)fluoranthene	ug/L	ND	50	56.4	113	37-131		
Benzo(g,h,i)perylene	ug/L	ND	50	53.0	106	35-128		
Benzo(k)fluoranthene	ug/L	ND	50	53.7	107	34-130		
bis(2-Chloroethoxy)methane	ug/L	ND	50	45.5	91	33-120		
bis(2-Chloroethyl) ether	ug/L	ND	50	42.6	85	32-120		
bis(2-Chloroisopropyl) ether	ug/L	ND	50	42.2	84	36-120		
bis(2-Ethylhexyl)phthalate	ug/L	24.7	50	85.3	121	38-137		
Butylbenzylphthalate	ug/L	ND	50	56.7	113	43-136		
Chrysene	ug/L	ND	50	52.8	106	36-127		
Di-n-butylphthalate	ug/L	ND	50	55.3	111	38-118		
Di-n-octylphthalate	ug/L	ND	50	58.4	117	40-140		
Dibenz(a,h)anthracene	ug/L	ND	50	52.3	105	35-131		
Diethylphthalate	ug/L	ND	50	50.3	101	33-114		
Dimethylphthalate	ug/L	ND	50	51.4	103	34-112		
Fluoranthene	ug/L	ND	50	52.9	106	38-125		
Fluorene	ug/L	ND	50	51.0	102	59-121		
Hexachloro-1,3-butadiene	ug/L	ND	50	46.5	93	27-116		
Hexachlorobenzene	ug/L	ND	50	54.3	109	34-124		
Hexachlorocyclopentadiene	ug/L	ND	100	54.1	54	11-120		
Hexachloroethane	ug/L	ND	50	38.2	76	40-113		
Indeno(1,2,3-cd)pyrene	ug/L	ND	50	52.4	105	38-127		
Isophorone	ug/L	ND	50	43.2	86	31-120		
N-Nitroso-di-n-propylamine	ug/L	ND	50	41.7	83	30-120		
N-Nitrosodimethylamine	ug/L	ND	50	19.3	39	29-120		
N-Nitrosodiphenylamine	ug/L	ND	50	48.7	97	10-139		
Naphthalene	ug/L	ND	50	45.8	92	32-120		
Nitrobenzene	ug/L	ND	50	45.6	91	35-128		
Pentachlorophenol	ug/L	ND	50	55.1	110	38-133		
Phenanthrene	ug/L	ND	50	55.2	110	54-120		
Phenol	ug/L	ND	50	14.7	29	13-112		
Pyrene	ug/L	ND	50	57.2	114	52-115		
2,4,6-Tribromophenol (S)	%				102	39-119		
2-Fluorobiphenyl (S)	%				105	36-120		
2-Fluorophenol (S)	%				37	18-120		
Nitrobenzene-d5 (S)	%				90	32-120		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

MATRIX SPIKE SAMPLE:		1221845					
Parameter	Units	60148971002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenol-d6 (S)	%				28	12-120	
Terphenyl-d14 (S)	%				115	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

QC Batch: WET/42394

Analysis Method: EPA 1664A

QC Batch Method: EPA 1664A

Analysis Description: 1664 HEM, Oil and Grease

Associated Lab Samples: 60148928001

METHOD BLANK: 1221238

Matrix: Water

Associated Lab Samples: 60148928001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/17/13 09:48	

LABORATORY CONTROL SAMPLE: 1221239

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	41.9	105	78-114	

MATRIX SPIKE SAMPLE: 1221242

Parameter	Units	60148922001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	51.3	52.8	99	78-114	

SAMPLE DUPLICATE: 1221243

Parameter	Units	60148878001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	2.4J		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

QC Batch:	WET/42459	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60148928001		

METHOD BLANK: 1223043 Matrix: Water

Associated Lab Samples: 60148928001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/19/13 14:39	

LABORATORY CONTROL SAMPLE: 1223044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.2	106	64-132	

MATRIX SPIKE SAMPLE: 1223049

Parameter	Units	60148726001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20.4	25.0	112	64-132	

SAMPLE DUPLICATE: 1223051

Parameter	Units	60148709002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20.8	35.0	51	34	D6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

QC Batch: WET/42403

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60148928001

METHOD BLANK: 1221453

Matrix: Water

Associated Lab Samples: 60148928001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/17/13 14:42	

SAMPLE DUPLICATE: 1221454

Parameter	Units	1222631001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	9.0	8.0	12	25	

SAMPLE DUPLICATE: 1221455

Parameter	Units	60148876003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	6.0		25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

QC Batch: WET/42432 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60148928001

SAMPLE DUPLICATE: 1222164

Parameter	Units	60148917001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.0	8.0	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

QC Batch:	WETA/25531	Analysis Method:	EPA 350.1
QC Batch Method:	EPA 350.1	Analysis Description:	350.1 Ammonia
Associated Lab Samples:	60148928001		

METHOD BLANK: 1223695 Matrix: Water  
Associated Lab Samples: 60148928001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/22/13 14:24	

LABORATORY CONTROL SAMPLE: 1223696

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1223697

Parameter	Units	60148888001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	18.9	10	25.8	68	90-110	M1

MATRIX SPIKE SAMPLE: 1223698

Parameter	Units	60148923001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.2	110	90-110	

SAMPLE DUPLICATE: 1223699

Parameter	Units	60148926001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	10.5	10.6	1	18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

QC Batch:	WETA/25482	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60148928001		

METHOD BLANK: 1221088 Matrix: Water  
Associated Lab Samples: 60148928001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/17/13 12:54	

LABORATORY CONTROL SAMPLE: 1221089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	53.1	106	90-110	

MATRIX SPIKE SAMPLE: 1221090

Parameter	Units	60148860001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	59.1	108	90-110	

SAMPLE DUPLICATE: 1221091

Parameter	Units	60148928001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	53100	54800	3	25	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39364

[1]

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 282/283-MSD

Pace Project No.: 60148928

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60148928001	282/283-MSD	EPA 200.7	MPRP/23509	EPA 200.7	ICP/18478
60148928001	282/283-MSD	EPA 200.7	MPRP/23525	EPA 200.7	ICP/18485
60148928001	282/283-MSD	EPA 245.1	MERP/7518	EPA 245.1	MERC/7476
60148928001	282/283-MSD	EPA 245.1	MERP/7524	EPA 245.1	MERC/7481
60148928001	282/283-MSD	EPA 625	OEXT/39364	EPA 625	MSSV/12493
60148928001	282/283-MSD	EPA 624 Low	MSV/55026		
60148928002	TRIP BLANK	EPA 624 Low	MSV/55026		
60148928001	282/283-MSD	EPA 1664A	WET/42394		
60148928001	282/283-MSD	EPA 1664A	WET/42459		
60148928001	282/283-MSD	SM 2540D	WET/42403		
60148928001	282/283-MSD	SM 4500-H+B	WET/42432		
60148928001	282/283-MSD	EPA 350.1	WETA/25531		
60148928001	282/283-MSD	EPA 410.4	WETA/25482		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60148928



Optional  
Proj Due Date:  
Proj Name:

Client Name: Barr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  ground

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PIE

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.2

Date and initials of person examining contents: PV 7/17/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>PH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>Added 2.5 ml of HNO3 to BPSN PH 6.9/4.0 Added 2.0 ml of H2SO4 to BPS PH 6.0/1.5</u>
Exceptions: <u>VOA</u> coliform, TOC, <u>O&amp;G</u> , WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>PV</u> Lot # of added preservative <u>12510</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>COVER</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/17/13



July 26, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF B10  
Pace Project No.: 60149002

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 18, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Amended report revised 07/26/13 to include method detection limit information for the associated Trip Blank.

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

Sincerely,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF B10

Pace Project No.: 60149002

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## SAMPLE SUMMARY

Project: BRIDGETON LF B10

Pace Project No.: 60149002

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149002001	24-HR B10	Water	07/17/13 15:00	07/18/13 01:05
60149002002	24-HR B10	Water	07/17/13 15:00	07/18/13 01:05
60149002003	TRIP BLANK	Water	07/17/13 15:00	07/18/13 01:05

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF BI0

Pace Project No.: 60149002

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149002001	24-HR BI0	SM 5210B	NDL	1
60149002002	24-HR BI0	EPA 5030B/8260	JKL	70
60149002003	TRIP BLANK	EPA 5030B/8260	JKL	70

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## ANALYTICAL RESULTS

Project: BRIDGETON LF B10

Pace Project No.: 60149002

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: 24-HR B10</b>									
<b>Lab ID: 60149002001</b>									
Collected: 07/17/13 15:00 Received: 07/18/13 01:05 Matrix: Water									
Analytical Method: SM 5210B Preparation Method: SM 5210B									
BOD, 5 day	<b>32400</b>	mg/L	2.0	2.0	1	07/19/13 11:21	07/24/13 14:01		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF B10

Pace Project No.: 60149002

**Sample: 24-HR B10**      **Lab ID: 6014900202**      Collected: 07/17/13 15:00      Received: 07/18/13 01:05      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Acetone	<b>57000</b>	ug/L	2000	376	200		07/18/13 19:18	67-64-1	
Benzene	<b>25.7J</b>	ug/L	200	12.0	200		07/18/13 19:18	71-43-2	
Bromobenzene	<b>&lt;20.0</b>	ug/L	200	20.0	200		07/18/13 19:18	108-86-1	
Bromochloromethane	<b>&lt;30.0</b>	ug/L	200	30.0	200		07/18/13 19:18	74-97-5	
Bromodichloromethane	<b>&lt;38.0</b>	ug/L	200	38.0	200		07/18/13 19:18	75-27-4	
Bromoform	<b>&lt;14.0</b>	ug/L	200	14.0	200		07/18/13 19:18	75-25-2	
Bromomethane	<b>&lt;32.0</b>	ug/L	1000	32.0	200		07/18/13 19:18	74-83-9	
2-Butanone (MEK)	<b>23500</b>	ug/L	2000	118	200		07/18/13 19:18	78-93-3	
n-Butylbenzene	<b>109J</b>	ug/L	200	20.0	200		07/18/13 19:18	104-51-8	B
sec-Butylbenzene	<b>&lt;10.0</b>	ug/L	200	10.0	200		07/18/13 19:18	135-98-8	
tert-Butylbenzene	<b>&lt;68.0</b>	ug/L	200	68.0	200		07/18/13 19:18	98-06-6	
Carbon disulfide	<b>96.3J</b>	ug/L	1000	24.0	200		07/18/13 19:18	75-15-0	
Carbon tetrachloride	<b>&lt;36.0</b>	ug/L	200	36.0	200		07/18/13 19:18	56-23-5	
Chlorobenzene	<b>&lt;42.0</b>	ug/L	200	42.0	200		07/18/13 19:18	108-90-7	
Chloroethane	<b>&lt;30.0</b>	ug/L	200	30.0	200		07/18/13 19:18	75-00-3	
Chloroform	<b>&lt;28.0</b>	ug/L	200	28.0	200		07/18/13 19:18	67-66-3	
Chloromethane	<b>&lt;16.0</b>	ug/L	200	16.0	200		07/18/13 19:18	74-87-3	
2-Chlorotoluene	<b>&lt;24.0</b>	ug/L	200	24.0	200		07/18/13 19:18	95-49-8	
4-Chlorotoluene	<b>&lt;28.0</b>	ug/L	200	28.0	200		07/18/13 19:18	106-43-4	
1,2-Dibromo-3-chloropropane	<b>&lt;118</b>	ug/L	500	118	200		07/18/13 19:18	96-12-8	
Dibromochloromethane	<b>&lt;42.0</b>	ug/L	200	42.0	200		07/18/13 19:18	124-48-1	
1,2-Dibromoethane (EDB)	<b>&lt;34.0</b>	ug/L	200	34.0	200		07/18/13 19:18	106-93-4	
Dibromomethane	<b>&lt;36.0</b>	ug/L	200	36.0	200		07/18/13 19:18	74-95-3	
1,2-Dichlorobenzene	<b>&lt;10.0</b>	ug/L	200	10.0	200		07/18/13 19:18	95-50-1	
1,3-Dichlorobenzene	<b>&lt;14.0</b>	ug/L	200	14.0	200		07/18/13 19:18	541-73-1	
1,4-Dichlorobenzene	<b>148J</b>	ug/L	200	12.0	200		07/18/13 19:18	106-46-7	
Dichlorodifluoromethane	<b>&lt;42.0</b>	ug/L	200	42.0	200		07/18/13 19:18	75-71-8	
1,1-Dichloroethane	<b>&lt;10.0</b>	ug/L	200	10.0	200		07/18/13 19:18	75-34-3	
1,2-Dichloroethane	<b>&lt;24.0</b>	ug/L	200	24.0	200		07/18/13 19:18	107-06-2	
1,2-Dichloroethene (Total)	<b>&lt;56.0</b>	ug/L	200	56.0	200		07/18/13 19:18	540-59-0	
1,1-Dichloroethene	<b>&lt;40.0</b>	ug/L	200	40.0	200		07/18/13 19:18	75-35-4	
cis-1,2-Dichloroethene	<b>&lt;16.0</b>	ug/L	200	16.0	200		07/18/13 19:18	156-59-2	
trans-1,2-Dichloroethene	<b>&lt;40.0</b>	ug/L	200	40.0	200		07/18/13 19:18	156-60-5	
1,2-Dichloropropane	<b>&lt;32.0</b>	ug/L	200	32.0	200		07/18/13 19:18	78-87-5	
1,3-Dichloropropane	<b>&lt;34.0</b>	ug/L	200	34.0	200		07/18/13 19:18	142-28-9	
2,2-Dichloropropane	<b>&lt;38.0</b>	ug/L	200	38.0	200		07/18/13 19:18	594-20-7	
1,1-Dichloropropene	<b>&lt;18.0</b>	ug/L	200	18.0	200		07/18/13 19:18	563-58-6	
cis-1,3-Dichloropropene	<b>&lt;28.0</b>	ug/L	200	28.0	200		07/18/13 19:18	10061-01-5	
trans-1,3-Dichloropropene	<b>&lt;24.0</b>	ug/L	200	24.0	200		07/18/13 19:18	10061-02-6	
Ethylbenzene	<b>&lt;36.0</b>	ug/L	200	36.0	200		07/18/13 19:18	100-41-4	
Hexachloro-1,3-butadiene	<b>&lt;36.0</b>	ug/L	200	36.0	200		07/18/13 19:18	87-68-3	
2-Hexanone	<b>&lt;238</b>	ug/L	2000	238	200		07/18/13 19:18	591-78-6	
Isopropylbenzene (Cumene)	<b>&lt;14.0</b>	ug/L	200	14.0	200		07/18/13 19:18	98-82-8	
p-Isopropyltoluene	<b>1720</b>	ug/L	200	20.0	200		07/18/13 19:18	99-87-6	B
Methylene chloride	<b>&lt;30.0</b>	ug/L	200	30.0	200		07/18/13 19:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	<b>&lt;84.0</b>	ug/L	2000	84.0	200		07/18/13 19:18	108-10-1	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF B10

Pace Project No.: 60149002

**Sample: 24-HR B10**      **Lab ID: 6014900202**      Collected: 07/17/13 15:00      Received: 07/18/13 01:05      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Methyl-tert-butyl ether	<12.0	ug/L	200	12.0	200		07/18/13 19:18	1634-04-4	
Naphthalene	702J	ug/L	2000	32.0	200		07/18/13 19:18	91-20-3	B
n-Propylbenzene	<20.0	ug/L	200	20.0	200		07/18/13 19:18	103-65-1	
Styrene	<24.0	ug/L	200	24.0	200		07/18/13 19:18	100-42-5	
1,1,1,2-Tetrachloroethane	<30.0	ug/L	200	30.0	200		07/18/13 19:18	630-20-6	
1,1,2,2-Tetrachloroethane	<30.0	ug/L	200	30.0	200		07/18/13 19:18	79-34-5	
Tetrachloroethene	<20.0	ug/L	200	20.0	200		07/18/13 19:18	127-18-4	
Toluene	<34.0	ug/L	200	34.0	200		07/18/13 19:18	108-88-3	
1,2,3-Trichlorobenzene	<24.0	ug/L	200	24.0	200		07/18/13 19:18	87-61-6	
1,2,4-Trichlorobenzene	<20.0	ug/L	200	20.0	200		07/18/13 19:18	120-82-1	
1,1,1-Trichloroethane	<22.0	ug/L	200	22.0	200		07/18/13 19:18	71-55-6	
1,1,2-Trichloroethane	<40.0	ug/L	200	40.0	200		07/18/13 19:18	79-00-5	
Trichloroethene	<34.0	ug/L	200	34.0	200		07/18/13 19:18	79-01-6	
Trichlorofluoromethane	<68.0	ug/L	200	68.0	200		07/18/13 19:18	75-69-4	
1,2,3-Trichloropropane	<38.0	ug/L	500	38.0	200		07/18/13 19:18	96-18-4	
1,2,4-Trimethylbenzene	175J	ug/L	200	18.0	200		07/18/13 19:18	95-63-6	B
1,3,5-Trimethylbenzene	43.9J	ug/L	200	20.0	200		07/18/13 19:18	108-67-8	B
Vinyl chloride	<26.0	ug/L	200	26.0	200		07/18/13 19:18	75-01-4	
Xylene (Total)	<84.0	ug/L	600	84.0	200		07/18/13 19:18	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	80-120		200		07/18/13 19:18	460-00-4	
Dibromofluoromethane (S)	103	%	80-120		200		07/18/13 19:18	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	80-120		200		07/18/13 19:18	17060-07-0	
Toluene-d8 (S)	100	%	80-120		200		07/18/13 19:18	2037-26-5	
Preservation pH	7.0		0.10	0.10	200		07/18/13 19:18		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF B10

Pace Project No.: 60149002

**Sample: TRIP BLANK**      **Lab ID: 60149002003**      Collected: 07/17/13 15:00      Received: 07/18/13 01:05      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Acetone	<1.9	ug/L	10.0	1.9	1		07/18/13 19:33	67-64-1	
Benzene	<0.060	ug/L	1.0	0.060	1		07/18/13 19:33	71-43-2	
Bromobenzene	<0.10	ug/L	1.0	0.10	1		07/18/13 19:33	108-86-1	
Bromochloromethane	<0.15	ug/L	1.0	0.15	1		07/18/13 19:33	74-97-5	
Bromodichloromethane	<0.19	ug/L	1.0	0.19	1		07/18/13 19:33	75-27-4	
Bromoform	<0.070	ug/L	1.0	0.070	1		07/18/13 19:33	75-25-2	
Bromomethane	<0.16	ug/L	5.0	0.16	1		07/18/13 19:33	74-83-9	
2-Butanone (MEK)	<0.59	ug/L	10.0	0.59	1		07/18/13 19:33	78-93-3	
n-Butylbenzene	<0.10	ug/L	1.0	0.10	1		07/18/13 19:33	104-51-8	
sec-Butylbenzene	<0.050	ug/L	1.0	0.050	1		07/18/13 19:33	135-98-8	
tert-Butylbenzene	<0.34	ug/L	1.0	0.34	1		07/18/13 19:33	98-06-6	
Carbon disulfide	0.34J	ug/L	5.0	0.12	1		07/18/13 19:33	75-15-0	
Carbon tetrachloride	<0.18	ug/L	1.0	0.18	1		07/18/13 19:33	56-23-5	
Chlorobenzene	<0.21	ug/L	1.0	0.21	1		07/18/13 19:33	108-90-7	
Chloroethane	<0.15	ug/L	1.0	0.15	1		07/18/13 19:33	75-00-3	
Chloroform	<0.14	ug/L	1.0	0.14	1		07/18/13 19:33	67-66-3	
Chloromethane	<0.080	ug/L	1.0	0.080	1		07/18/13 19:33	74-87-3	
2-Chlorotoluene	<0.12	ug/L	1.0	0.12	1		07/18/13 19:33	95-49-8	
4-Chlorotoluene	<0.14	ug/L	1.0	0.14	1		07/18/13 19:33	106-43-4	
1,2-Dibromo-3-chloropropane	<0.59	ug/L	2.5	0.59	1		07/18/13 19:33	96-12-8	
Dibromochloromethane	<0.21	ug/L	1.0	0.21	1		07/18/13 19:33	124-48-1	
1,2-Dibromoethane (EDB)	<0.17	ug/L	1.0	0.17	1		07/18/13 19:33	106-93-4	
Dibromomethane	<0.18	ug/L	1.0	0.18	1		07/18/13 19:33	74-95-3	
1,2-Dichlorobenzene	<0.050	ug/L	1.0	0.050	1		07/18/13 19:33	95-50-1	
1,3-Dichlorobenzene	<0.070	ug/L	1.0	0.070	1		07/18/13 19:33	541-73-1	
1,4-Dichlorobenzene	<0.060	ug/L	1.0	0.060	1		07/18/13 19:33	106-46-7	
Dichlorodifluoromethane	<0.21	ug/L	1.0	0.21	1		07/18/13 19:33	75-71-8	
1,1-Dichloroethane	<0.050	ug/L	1.0	0.050	1		07/18/13 19:33	75-34-3	
1,2-Dichloroethane	<0.12	ug/L	1.0	0.12	1		07/18/13 19:33	107-06-2	
1,2-Dichloroethene (Total)	<0.28	ug/L	1.0	0.28	1		07/18/13 19:33	540-59-0	
1,1-Dichloroethene	<0.20	ug/L	1.0	0.20	1		07/18/13 19:33	75-35-4	
cis-1,2-Dichloroethene	<0.080	ug/L	1.0	0.080	1		07/18/13 19:33	156-59-2	
trans-1,2-Dichloroethene	<0.20	ug/L	1.0	0.20	1		07/18/13 19:33	156-60-5	
1,2-Dichloropropane	<0.16	ug/L	1.0	0.16	1		07/18/13 19:33	78-87-5	
1,3-Dichloropropane	<0.17	ug/L	1.0	0.17	1		07/18/13 19:33	142-28-9	
2,2-Dichloropropane	<0.19	ug/L	1.0	0.19	1		07/18/13 19:33	594-20-7	
1,1-Dichloropropene	<0.090	ug/L	1.0	0.090	1		07/18/13 19:33	563-58-6	
cis-1,3-Dichloropropene	<0.14	ug/L	1.0	0.14	1		07/18/13 19:33	10061-01-5	
trans-1,3-Dichloropropene	<0.12	ug/L	1.0	0.12	1		07/18/13 19:33	10061-02-6	
Ethylbenzene	<0.18	ug/L	1.0	0.18	1		07/18/13 19:33	100-41-4	
Hexachloro-1,3-butadiene	<0.18	ug/L	1.0	0.18	1		07/18/13 19:33	87-68-3	
2-Hexanone	<1.2	ug/L	10.0	1.2	1		07/18/13 19:33	591-78-6	
Isopropylbenzene (Cumene)	<0.070	ug/L	1.0	0.070	1		07/18/13 19:33	98-82-8	
p-Isopropyltoluene	0.20J	ug/L	1.0	0.10	1		07/18/13 19:33	99-87-6	B
Methylene chloride	<0.15	ug/L	1.0	0.15	1		07/18/13 19:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.42	ug/L	10.0	0.42	1		07/18/13 19:33	108-10-1	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF B10

Pace Project No.: 60149002

**Sample: TRIP BLANK**      **Lab ID: 60149002003**      Collected: 07/17/13 15:00      Received: 07/18/13 01:05      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Methyl-tert-butyl ether	<0.060	ug/L	1.0	0.060	1		07/18/13 19:33	1634-04-4	
Naphthalene	<0.16	ug/L	10.0	0.16	1		07/18/13 19:33	91-20-3	
n-Propylbenzene	<0.10	ug/L	1.0	0.10	1		07/18/13 19:33	103-65-1	
Styrene	<0.12	ug/L	1.0	0.12	1		07/18/13 19:33	100-42-5	
1,1,1,2-Tetrachloroethane	<0.15	ug/L	1.0	0.15	1		07/18/13 19:33	630-20-6	
1,1,2,2-Tetrachloroethane	<0.15	ug/L	1.0	0.15	1		07/18/13 19:33	79-34-5	
Tetrachloroethene	<0.10	ug/L	1.0	0.10	1		07/18/13 19:33	127-18-4	
Toluene	<0.17	ug/L	1.0	0.17	1		07/18/13 19:33	108-88-3	
1,2,3-Trichlorobenzene	<0.12	ug/L	1.0	0.12	1		07/18/13 19:33	87-61-6	
1,2,4-Trichlorobenzene	<0.10	ug/L	1.0	0.10	1		07/18/13 19:33	120-82-1	
1,1,1-Trichloroethane	<0.11	ug/L	1.0	0.11	1		07/18/13 19:33	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/18/13 19:33	79-00-5	
Trichloroethene	<0.17	ug/L	1.0	0.17	1		07/18/13 19:33	79-01-6	
Trichlorofluoromethane	<0.34	ug/L	1.0	0.34	1		07/18/13 19:33	75-69-4	
1,2,3-Trichloropropane	<0.19	ug/L	2.5	0.19	1		07/18/13 19:33	96-18-4	
1,2,4-Trimethylbenzene	<0.090	ug/L	1.0	0.090	1		07/18/13 19:33	95-63-6	
1,3,5-Trimethylbenzene	<0.10	ug/L	1.0	0.10	1		07/18/13 19:33	108-67-8	
Vinyl chloride	<0.13	ug/L	1.0	0.13	1		07/18/13 19:33	75-01-4	
Xylene (Total)	<0.42	ug/L	3.0	0.42	1		07/18/13 19:33	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	106	%	80-120		1		07/18/13 19:33	460-00-4	
Dibromofluoromethane (S)	102	%	80-120		1		07/18/13 19:33	1868-53-7	
1,2-Dichloroethane-d4 (S)	102	%	80-120		1		07/18/13 19:33	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		07/18/13 19:33	2037-26-5	
Preservation pH	7.0		0.10	0.10	1		07/18/13 19:33		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF B10

Pace Project No.: 60149002

QC Batch: MSV/55014

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 7 day

Associated Lab Samples: 60149002002, 60149002003

METHOD BLANK: 1222416

Matrix: Water

Associated Lab Samples: 60149002002, 60149002003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.15	1.0	07/18/13 15:18	
1,1,1-Trichloroethane	ug/L	<0.11	1.0	07/18/13 15:18	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	07/18/13 15:18	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	07/18/13 15:18	
1,1-Dichloroethane	ug/L	<0.050	1.0	07/18/13 15:18	
1,1-Dichloroethene	ug/L	<0.20	1.0	07/18/13 15:18	
1,1-Dichloropropene	ug/L	<0.090	1.0	07/18/13 15:18	
1,2,3-Trichlorobenzene	ug/L	0.24J	1.0	07/18/13 15:18	
1,2,3-Trichloropropane	ug/L	<0.19	2.5	07/18/13 15:18	
1,2,4-Trichlorobenzene	ug/L	0.23J	1.0	07/18/13 15:18	
1,2,4-Trimethylbenzene	ug/L	0.36J	1.0	07/18/13 15:18	
1,2-Dibromo-3-chloropropane	ug/L	<0.59	2.5	07/18/13 15:18	
1,2-Dibromoethane (EDB)	ug/L	<0.17	1.0	07/18/13 15:18	
1,2-Dichlorobenzene	ug/L	0.10J	1.0	07/18/13 15:18	
1,2-Dichloroethane	ug/L	<0.12	1.0	07/18/13 15:18	
1,2-Dichloroethene (Total)	ug/L	<0.28	1.0	07/18/13 15:18	
1,2-Dichloropropane	ug/L	<0.16	1.0	07/18/13 15:18	
1,3,5-Trimethylbenzene	ug/L	0.18J	1.0	07/18/13 15:18	
1,3-Dichlorobenzene	ug/L	<0.070	1.0	07/18/13 15:18	
1,3-Dichloropropane	ug/L	<0.17	1.0	07/18/13 15:18	
1,4-Dichlorobenzene	ug/L	<0.060	1.0	07/18/13 15:18	
2,2-Dichloropropane	ug/L	<0.19	1.0	07/18/13 15:18	
2-Butanone (MEK)	ug/L	<0.59	10.0	07/18/13 15:18	
2-Chlorotoluene	ug/L	<0.12	1.0	07/18/13 15:18	
2-Hexanone	ug/L	<1.2	10.0	07/18/13 15:18	
4-Chlorotoluene	ug/L	<0.14	1.0	07/18/13 15:18	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	10.0	07/18/13 15:18	
Acetone	ug/L	<1.9	10.0	07/18/13 15:18	
Benzene	ug/L	<0.060	1.0	07/18/13 15:18	
Bromobenzene	ug/L	<0.10	1.0	07/18/13 15:18	
Bromochloromethane	ug/L	<0.15	1.0	07/18/13 15:18	
Bromodichloromethane	ug/L	<0.19	1.0	07/18/13 15:18	
Bromoform	ug/L	<0.070	1.0	07/18/13 15:18	
Bromomethane	ug/L	<0.16	5.0	07/18/13 15:18	
Carbon disulfide	ug/L	<0.12	5.0	07/18/13 15:18	
Carbon tetrachloride	ug/L	<0.18	1.0	07/18/13 15:18	
Chlorobenzene	ug/L	<0.21	1.0	07/18/13 15:18	
Chloroethane	ug/L	<0.15	1.0	07/18/13 15:18	
Chloroform	ug/L	<0.14	1.0	07/18/13 15:18	
Chloromethane	ug/L	<0.080	1.0	07/18/13 15:18	
cis-1,2-Dichloroethene	ug/L	<0.080	1.0	07/18/13 15:18	
cis-1,3-Dichloropropene	ug/L	<0.14	1.0	07/18/13 15:18	
Dibromochloromethane	ug/L	<0.21	1.0	07/18/13 15:18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF B10

Pace Project No.: 60149002

METHOD BLANK: 1222416

Matrix: Water

Associated Lab Samples: 60149002002, 60149002003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	<0.18	1.0	07/18/13 15:18	
Dichlorodifluoromethane	ug/L	<0.21	1.0	07/18/13 15:18	
Ethylbenzene	ug/L	<0.18	1.0	07/18/13 15:18	
Hexachloro-1,3-butadiene	ug/L	0.24J	1.0	07/18/13 15:18	
Isopropylbenzene (Cumene)	ug/L	<0.070	1.0	07/18/13 15:18	
Methyl-tert-butyl ether	ug/L	<0.060	1.0	07/18/13 15:18	
Methylene chloride	ug/L	<0.15	1.0	07/18/13 15:18	
n-Butylbenzene	ug/L	0.33J	1.0	07/18/13 15:18	
n-Propylbenzene	ug/L	0.13J	1.0	07/18/13 15:18	
Naphthalene	ug/L	0.21J	10.0	07/18/13 15:18	
p-Isopropyltoluene	ug/L	0.12J	1.0	07/18/13 15:18	
sec-Butylbenzene	ug/L	<0.050	1.0	07/18/13 15:18	
Styrene	ug/L	<0.12	1.0	07/18/13 15:18	
tert-Butylbenzene	ug/L	<0.34	1.0	07/18/13 15:18	
Tetrachloroethene	ug/L	<0.10	1.0	07/18/13 15:18	
Toluene	ug/L	0.21J	1.0	07/18/13 15:18	
trans-1,2-Dichloroethene	ug/L	<0.20	1.0	07/18/13 15:18	
trans-1,3-Dichloropropene	ug/L	<0.12	1.0	07/18/13 15:18	
Trichloroethene	ug/L	<0.17	1.0	07/18/13 15:18	
Trichlorofluoromethane	ug/L	<0.34	1.0	07/18/13 15:18	
Vinyl chloride	ug/L	<0.13	1.0	07/18/13 15:18	
Xylene (Total)	ug/L	<0.42	3.0	07/18/13 15:18	
1,2-Dichloroethane-d4 (S)	%	92	80-120	07/18/13 15:18	
4-Bromofluorobenzene (S)	%	100	80-120	07/18/13 15:18	
Dibromofluoromethane (S)	%	99	80-120	07/18/13 15:18	
Toluene-d8 (S)	%	100	80-120	07/18/13 15:18	

LABORATORY CONTROL SAMPLE: 1222417

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	20.0	100	79-121	
1,1,1-Trichloroethane	ug/L	20	19.8	99	75-124	
1,1,2,2-Tetrachloroethane	ug/L	20	21.1	105	73-120	
1,1,2-Trichloroethane	ug/L	20	18.1	91	76-120	
1,1-Dichloroethane	ug/L	20	17.3	87	73-120	
1,1-Dichloroethene	ug/L	20	18.6	93	70-127	
1,1-Dichloropropene	ug/L	20	19.5	98	79-124	
1,2,3-Trichlorobenzene	ug/L	20	18.4	92	68-130	
1,2,3-Trichloropropane	ug/L	20	19.6	98	72-124	
1,2,4-Trichlorobenzene	ug/L	20	20.3	101	73-125	
1,2,4-Trimethylbenzene	ug/L	20	19.0	95	76-120	
1,2-Dibromo-3-chloropropane	ug/L	20	19.2	96	68-126	
1,2-Dibromoethane (EDB)	ug/L	20	19.8	99	79-121	
1,2-Dichlorobenzene	ug/L	20	19.6	98	79-120	
1,2-Dichloroethane	ug/L	20	20.4	102	72-122	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF B10

Pace Project No.: 60149002

LABORATORY CONTROL SAMPLE: 1222417

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethene (Total)	ug/L	40	38.2	95	77-120	
1,2-Dichloropropane	ug/L	20	20.8	104	77-120	
1,3,5-Trimethylbenzene	ug/L	20	19.8	99	75-120	
1,3-Dichlorobenzene	ug/L	20	19.5	97	80-120	
1,3-Dichloropropane	ug/L	20	18.3	92	76-120	
1,4-Dichlorobenzene	ug/L	20	19.8	99	80-120	
2,2-Dichloropropane	ug/L	20	17.8	89	52-135	
2-Butanone (MEK)	ug/L	100	100	100	69-124	
2-Chlorotoluene	ug/L	20	20.1	100	78-120	
2-Hexanone	ug/L	100	94.6	95	70-125	
4-Chlorotoluene	ug/L	20	20.4	102	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	97.3	97	72-123	
Acetone	ug/L	100	95.2	95	60-126	
Benzene	ug/L	20	19.1	95	73-122	
Bromobenzene	ug/L	20	20.2	101	79-120	
Bromochloromethane	ug/L	20	18.4	92	76-125	
Bromodichloromethane	ug/L	20	19.1	95	73-120	
Bromoform	ug/L	20	17.7	88	74-120	
Bromomethane	ug/L	20	20.5	103	40-146	
Carbon disulfide	ug/L	20	17.4	87	62-125	
Carbon tetrachloride	ug/L	20	19.6	98	73-125	
Chlorobenzene	ug/L	20	19.6	98	80-120	
Chloroethane	ug/L	20	17.6	88	56-159	
Chloroform	ug/L	20	18.4	92	76-120	
Chloromethane	ug/L	20	16.3	81	40-148	
cis-1,2-Dichloroethene	ug/L	20	19.1	96	69-120	
cis-1,3-Dichloropropene	ug/L	20	18.7	93	76-120	
Dibromochloromethane	ug/L	20	18.7	93	79-121	
Dibromomethane	ug/L	20	19.3	97	77-120	
Dichlorodifluoromethane	ug/L	20	13.3	66	40-141	
Ethylbenzene	ug/L	20	19.3	97	76-123	
Hexachloro-1,3-butadiene	ug/L	20	19.1	95	69-125	
Isopropylbenzene (Cumene)	ug/L	20	21.3	107	80-130	
Methyl-tert-butyl ether	ug/L	20	19.8	99	67-128	
Methylene chloride	ug/L	20	18.1	91	71-123	
n-Butylbenzene	ug/L	20	20.4	102	77-124	
n-Propylbenzene	ug/L	20	19.6	98	78-120	
Naphthalene	ug/L	20	18.3	91	64-127	
p-Isopropyltoluene	ug/L	20	20.0	100	78-120	
sec-Butylbenzene	ug/L	20	20.6	103	77-122	
Styrene	ug/L	20	19.2	96	79-120	
tert-Butylbenzene	ug/L	20	20.1	101	76-123	
Tetrachloroethene	ug/L	20	18.6	93	79-122	
Toluene	ug/L	20	19.0	95	76-122	
trans-1,2-Dichloroethene	ug/L	20	19.1	95	78-126	
trans-1,3-Dichloropropene	ug/L	20	19.8	99	79-124	
Trichloroethene	ug/L	20	17.7	88	76-120	
Trichlorofluoromethane	ug/L	20	15.8	79	69-133	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF B10

Pace Project No.: 60149002

LABORATORY CONTROL SAMPLE: 1222417

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	20	16.3	82	57-140	
Xylene (Total)	ug/L	60	57.2	95	76-122	
1,2-Dichloroethane-d4 (S)	%			106	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Dibromofluoromethane (S)	%			102	80-120	
Toluene-d8 (S)	%			99	80-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF B10

Pace Project No.: 60149002

QC Batch: WET/42444

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149002001

METHOD BLANK: 1222662

Matrix: Water

Associated Lab Samples: 60149002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/24/13 13:20	

LABORATORY CONTROL SAMPLE: 1222663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	186	94	85-115	

SAMPLE DUPLICATE: 1222664

Parameter	Units	60149170002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	4.2	3.2	27	17	D6

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF B10

Pace Project No.: 60149002

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: MSV/55014

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF B10

Pace Project No.: 60149002

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149002002	24-HR B10	EPA 5030B/8260	MSV/55014		
60149002003	TRIP BLANK	EPA 5030B/8260	MSV/55014		
60149002001	24-HR B10	SM 5210B	WET/42444	SM 5210B	WET/42521

### REPORT OF LABORATORY ANALYSIS

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### Sample Condition Upon Receipt

WO#: 60149002  
60149002

Client Name: BCUR

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  road

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PIL

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 3-4

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: 7/16/13

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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>24H</u>
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: <u>VOA</u> coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased): <u>cover</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/16/13



July 24, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-016  
Pace Project No.: 60149009

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 18, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-016

Pace Project No.: 60149009

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-016

Pace Project No.: 60149009

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149009001	316-016	Water	07/17/13 11:33	07/18/13 01:05

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-016

Pace Project No.: 60149009

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149009001	316-016	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-016

Pace Project No.: 60149009

Sample: 316-016	Lab ID: 60149009001	Collected: 07/17/13 11:33	Received: 07/18/13 01:05	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>32300</b>	mg/L	2.0	1	07/19/13 11:02	07/24/13 13:50		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149009

QC Batch: WET/42444

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149009001

METHOD BLANK: 1222662

Matrix: Water

Associated Lab Samples: 60149009001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/24/13 13:20	

LABORATORY CONTROL SAMPLE: 1222663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	186	94	85-115	

SAMPLE DUPLICATE: 1222664

Parameter	Units	60149170002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	4.2	3.2	27	17	D6

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## QUALIFIERS

Project: BRIDGETON LF 316-016

Pace Project No.: 60149009

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-016

Pace Project No.: 60149009

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149009001	316-016	SM 5210B	WET/42444	SM 5210B	WET/42521

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149009



Client Name: Barr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2 PIC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 1.4

Date and initials of person examining contents: PVF 1/8/13

Temperature should be above freezing to 6°C

Chain of Custody present:	<input 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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix:	<u>WT</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17- List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 1/8/13





CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: BARR ENGINEERING; Section B Required Project Information: Report To: ED GALBRAITH/BARR; Section C Invoice Information: Attention: TABITHA PROVINCE

Regulatory Agency; State / Location: Missouri

Main data table with columns: ITEM#, SAMPLE ID, MATRIX CODE, COLLECTED (START/END), PRESERVATIVES, ANALYSES TEST, REQUESTED ANALYSIS FILTERED (Y/N), Residual Chlorine (Y/N)

Summary table with columns: ADDITIONAL COMMENTS, RELINQUISHED BY / AFFILIATION, DATE, TIME, ACCEPTED BY / AFFILIATION, DATE, TIME, SAMPLE CONDITIONS

SAMPLER NAME AND SIGNATURE; PRINT Name of SAMPLER: WILLIAM ABERNATHY; SIGNATURE of SAMPLER; DATE Signed: 7/17/13; TEMP in C, Received on Ice (Y/N), Custody Sealed Cooler (Y/N), Samples Intact (Y/N)

July 24, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-016  
Pace Project No.: 60149010

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 18, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149010001	316-016	Water	07/17/13 11:33	07/18/13 01:05
60149010002	TRIP BLANK	Water	07/17/13 11:33	07/18/13 01:05

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149010001	316-016	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	JMC1	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60149010002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

Sample: 316-016		Lab ID: 60149010001	Collected: 07/17/13 11:33	Received: 07/18/13 01:05	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	10300	ug/L	150	2	07/18/13 16:00	07/23/13 18:05	7429-90-5	
Antimony	60.7	ug/L	50.0	5	07/18/13 16:00	07/23/13 18:09	7440-36-0	
Arsenic	686	ug/L	50.0	5	07/18/13 16:00	07/23/13 18:09	7440-38-2	
Beryllium	ND	ug/L	5.0	5	07/18/13 16:00	07/23/13 18:09	7440-41-7	D3
Cadmium	ND	ug/L	25.0	5	07/18/13 16:00	07/23/13 18:09	7440-43-9	D3
Chromium	271	ug/L	10.0	2	07/18/13 16:00	07/23/13 18:05	7440-47-3	
Cobalt	56.4	ug/L	25.0	5	07/18/13 16:00	07/23/13 18:09	7440-48-4	
Copper	ND	ug/L	20.0	2	07/18/13 16:00	07/23/13 18:05	7440-50-8	D3
Iron	919000	ug/L	100	2	07/18/13 16:00	07/23/13 18:05	7439-89-6	
Lead	226	ug/L	25.0	5	07/18/13 16:00	07/23/13 18:09	7439-92-1	
Nickel	146	ug/L	25.0	5	07/18/13 16:00	07/23/13 18:09	7440-02-0	
Selenium	ND	ug/L	75.0	5	07/18/13 16:00	07/23/13 18:09	7782-49-2	D3
Silver	22.4	ug/L	14.0	2	07/18/13 16:00	07/23/13 18:05	7440-22-4	
Thallium	ND	ug/L	100	5	07/18/13 16:00	07/23/13 18:09	7440-28-0	D3
Zinc	17100	ug/L	1000	20	07/18/13 16:00	07/23/13 18:12	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	4360	ug/L	150	2	07/18/13 16:00	07/19/13 12:51	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	5	07/18/13 16:00	07/19/13 13:18	7440-36-0	D3
Arsenic, Dissolved	604	ug/L	50.0	5	07/18/13 16:00	07/19/13 13:18	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	5	07/18/13 16:00	07/19/13 13:18	7440-41-7	D3
Cadmium, Dissolved	ND	ug/L	25.0	5	07/18/13 16:00	07/19/13 13:18	7440-43-9	D3
Chromium, Dissolved	226	ug/L	25.0	5	07/18/13 16:00	07/19/13 13:18	7440-47-3	
Cobalt, Dissolved	45.8	ug/L	25.0	5	07/18/13 16:00	07/19/13 13:18	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	5	07/18/13 16:00	07/19/13 13:18	7440-50-8	D3
Iron, Dissolved	615000	ug/L	100	2	07/18/13 16:00	07/19/13 12:51	7439-89-6	
Lead, Dissolved	116	ug/L	25.0	5	07/18/13 16:00	07/19/13 13:18	7439-92-1	
Nickel, Dissolved	121	ug/L	25.0	5	07/18/13 16:00	07/19/13 13:18	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	5	07/18/13 16:00	07/19/13 13:18	7782-49-2	D3
Silver, Dissolved	ND	ug/L	35.0	5	07/18/13 16:00	07/19/13 13:18	7440-22-4	D3
Thallium, Dissolved	ND	ug/L	100	5	07/18/13 16:00	07/19/13 13:18	7440-28-0	D3
Zinc, Dissolved	15100	ug/L	1000	20	07/18/13 16:00	07/19/13 13:38	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	9.9	ug/L	0.20	1	07/18/13 09:00	07/18/13 13:33	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND	ug/L	0.20	1	07/19/13 08:30	07/19/13 11:57	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND	ug/L	1000	20	07/22/13 00:00	07/23/13 14:56	83-32-9	
Acenaphthylene	ND	ug/L	1000	20	07/22/13 00:00	07/23/13 14:56	208-96-8	
Anthracene	ND	ug/L	1000	20	07/22/13 00:00	07/23/13 14:56	120-12-7	
Benzidine	ND	ug/L	10000	20	07/22/13 00:00	07/23/13 14:56	92-87-5	
Benzo(a)anthracene	ND	ug/L	1000	20	07/22/13 00:00	07/23/13 14:56	56-55-3	
Benzo(a)pyrene	ND	ug/L	1000	20	07/22/13 00:00	07/23/13 14:56	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

Sample: 316-016	Lab ID: 60149010001	Collected: 07/17/13 11:33	Received: 07/18/13 01:05	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	191-24-2	
Benzo(k)fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	101-55-3	
Butylbenzylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		1200	20	07/22/13 00:00	07/23/13 14:56	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		1200	20	07/22/13 00:00	07/23/13 14:56	39638-32-9	
2-Chloronaphthalene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	91-58-7	
2-Chlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	7005-72-3	
Chrysene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		4000	20	07/22/13 00:00	07/23/13 14:56	91-94-1	
2,4-Dichlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	120-83-2	
Diethylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	84-66-2	
2,4-Dimethylphenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	105-67-9	
Dimethylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	131-11-3	
Di-n-butylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		5000	20	07/22/13 00:00	07/23/13 14:56	534-52-1	
2,4-Dinitrophenol	ND ug/L		10000	20	07/22/13 00:00	07/23/13 14:56	51-28-5	
2,4-Dinitrotoluene	ND ug/L		1200	20	07/22/13 00:00	07/23/13 14:56	121-14-2	
2,6-Dinitrotoluene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	606-20-2	
Di-n-octylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	117-81-7	
Fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	206-44-0	
Fluorene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	87-68-3	
Hexachlorobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	77-47-4	
Hexachloroethane	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	193-39-5	
Isophorone	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	78-59-1	
Naphthalene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	91-20-3	
Nitrobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	98-95-3	
2-Nitrophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	88-75-5	
4-Nitrophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	100-02-7	
N-Nitrosodimethylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	86-30-6	
Pentachlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	87-86-5	
Phenanthrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	85-01-8	
Phenol	<b>15700</b> ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	108-95-2	
Pyrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 14:56	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

**Sample: 316-016**      **Lab ID: 60149010001**      Collected: 07/17/13 11:33      Received: 07/18/13 01:05      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
------------	---------	-------	--------------	----	----------	----------	---------	------

**625 MSSV**

Analytical Method: EPA 625      Preparation Method: EPA 625

**Surrogates**

Nitrobenzene-d5 (S)	0 %		32-120	20	07/22/13 00:00	07/23/13 14:56	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/22/13 00:00	07/23/13 14:56	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/22/13 00:00	07/23/13 14:56	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/22/13 00:00	07/23/13 14:56	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/22/13 00:00	07/23/13 14:56	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/22/13 00:00	07/23/13 14:56	118-79-6	S4

**624 Volatile Organics**

Analytical Method: EPA 624 Low

Benzene	ND ug/L		200	200		07/19/13 13:41	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/19/13 13:41	75-27-4	
Bromoform	ND ug/L		200	200		07/19/13 13:41	75-25-2	
Bromomethane	ND ug/L		1000	200		07/19/13 13:41	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/19/13 13:41	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/19/13 13:41	108-90-7	
Chloroethane	ND ug/L		200	200		07/19/13 13:41	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/19/13 13:41	110-75-8	
Chloroform	ND ug/L		200	200		07/19/13 13:41	67-66-3	
Chloromethane	ND ug/L		200	200		07/19/13 13:41	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/19/13 13:41	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/19/13 13:41	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/19/13 13:41	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/19/13 13:41	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/19/13 13:41	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/19/13 13:41	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/19/13 13:41	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/19/13 13:41	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/19/13 13:41	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/19/13 13:41	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/19/13 13:41	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/19/13 13:41	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/19/13 13:41	100-41-4	
Methylene chloride	ND ug/L		200	200		07/19/13 13:41	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/19/13 13:41	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/19/13 13:41	127-18-4	
Toluene	ND ug/L		200	200		07/19/13 13:41	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/19/13 13:41	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/19/13 13:41	79-00-5	
Trichloroethene	ND ug/L		200	200		07/19/13 13:41	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/19/13 13:41	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/19/13 13:41	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/19/13 13:41	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	107 %		80-120	200		07/19/13 13:41	1868-53-7	D3
4-Bromofluorobenzene (S)	97 %		80-120	200		07/19/13 13:41	460-00-4	
Toluene-d8 (S)	100 %		80-120	200		07/19/13 13:41	2037-26-5	
1,2-Dichloroethane-d4 (S)	113 %		80-120	200		07/19/13 13:41	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

<b>Sample: 316-016</b>		<b>Lab ID: 60149010001</b>	Collected: 07/17/13 11:33	Received: 07/18/13 01:05	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>6.0</b>		1.0	200		07/19/13 13:41		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>541</b>	mg/L	5.0	1		07/19/13 08:46		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>45.9</b>	mg/L	5.0	1		07/19/13 14:41		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>2540</b>	mg/L	5.0	1		07/18/13 08:58		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.3</b>	Std. Units	0.10	1		07/20/13 08:00		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>671</b>	mg/L	20.0	200		07/22/13 14:49	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>60100</b>	mg/L	5000	500		07/22/13 11:09		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

Sample: TRIP BLANK		Lab ID: 60149010002	Collected: 07/17/13 11:33	Received: 07/18/13 01:05	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/19/13 14:02	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/19/13 14:02	75-27-4	
Bromoform	ND ug/L		1.0	1		07/19/13 14:02	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/19/13 14:02	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/19/13 14:02	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/19/13 14:02	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/19/13 14:02	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/19/13 14:02	110-75-8	
Chloroform	ND ug/L		1.0	1		07/19/13 14:02	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/19/13 14:02	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/19/13 14:02	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/19/13 14:02	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/19/13 14:02	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/19/13 14:02	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/19/13 14:02	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/19/13 14:02	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/19/13 14:02	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/19/13 14:02	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/19/13 14:02	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/19/13 14:02	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/19/13 14:02	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/19/13 14:02	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/19/13 14:02	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/19/13 14:02	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/19/13 14:02	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/19/13 14:02	127-18-4	
Toluene	ND ug/L		1.0	1		07/19/13 14:02	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/19/13 14:02	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/19/13 14:02	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/19/13 14:02	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/19/13 14:02	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/19/13 14:02	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/19/13 14:02	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	107 %		80-120	1		07/19/13 14:02	1868-53-7	
4-Bromofluorobenzene (S)	99 %		80-120	1		07/19/13 14:02	460-00-4	
Toluene-d8 (S)	100 %		80-120	1		07/19/13 14:02	2037-26-5	
1,2-Dichloroethane-d4 (S)	91 %		80-120	1		07/19/13 14:02	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/19/13 14:02		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

QC Batch:	MERP/7518	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60149010001		

METHOD BLANK: 1221726 Matrix: Water

Associated Lab Samples: 60149010001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/18/13 13:26	

LABORATORY CONTROL SAMPLE: 1221727

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.3	106	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1221728 1221729

Parameter	Units	60148982002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD
Mercury	ug/L	ND	5	5	3.9	4.1	77	82	70-130	7	20

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

QC Batch:	MERP/7524	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60149010001		

METHOD BLANK: 1222629 Matrix: Water

Associated Lab Samples: 60149010001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/19/13 11:38	

LABORATORY CONTROL SAMPLE: 1222630

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.2	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222631 1222632

Parameter	Units	60148928001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury, Dissolved	ug/L	ND	5	5	0.46	0.39	9	8	70-130	16	20	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016  
Pace Project No.: 60149010

QC Batch: MPRP/23530      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60149010001

METHOD BLANK: 1222425      Matrix: Water  
Associated Lab Samples: 60149010001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/23/13 16:50	
Antimony	ug/L	ND	10.0	07/23/13 16:50	
Arsenic	ug/L	ND	10.0	07/23/13 16:50	
Beryllium	ug/L	ND	1.0	07/23/13 16:50	
Cadmium	ug/L	ND	5.0	07/23/13 16:50	
Chromium	ug/L	ND	5.0	07/23/13 16:50	
Cobalt	ug/L	ND	5.0	07/23/13 16:50	
Copper	ug/L	ND	10.0	07/23/13 16:50	
Iron	ug/L	ND	50.0	07/23/13 16:50	
Lead	ug/L	ND	5.0	07/23/13 16:50	
Nickel	ug/L	ND	5.0	07/23/13 16:50	
Selenium	ug/L	ND	15.0	07/23/13 16:50	
Silver	ug/L	ND	7.0	07/23/13 16:50	
Thallium	ug/L	ND	20.0	07/23/13 16:50	
Zinc	ug/L	ND	50.0	07/23/13 16:50	

LABORATORY CONTROL SAMPLE: 1222426

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10400	104	85-115	
Antimony	ug/L	1000	1010	101	85-115	
Arsenic	ug/L	1000	949	95	85-115	
Beryllium	ug/L	1000	1020	102	85-115	
Cadmium	ug/L	1000	977	98	85-115	
Chromium	ug/L	1000	977	98	85-115	
Cobalt	ug/L	1000	997	100	85-115	
Copper	ug/L	1000	976	98	85-115	
Iron	ug/L	10000	10300	103	85-115	
Lead	ug/L	1000	993	99	85-115	
Nickel	ug/L	1000	1020	102	85-115	
Selenium	ug/L	1000	982	98	85-115	
Silver	ug/L	500	484	97	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	994	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222427      1222428

Parameter	Units	60148971002		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum	ug/L	166000	10000	10000	10000	175000	174000	94	77	70-130	1	8

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222427 1222428											
Parameter	Units	60148971002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Antimony	ug/L	ND	1000	1000	1010	1020	100	101	70-130	1	7
Arsenic	ug/L	27.9	1000	1000	984	998	96	97	70-130	1	10
Beryllium	ug/L	ND	1000	1000	967	975	97	98	70-130	1	7
Cadmium	ug/L	6.0	1000	1000	976	986	97	98	70-130	1	10
Chromium	ug/L	2390	1000	1000	3280	3310	89	92	70-130	1	10
Cobalt	ug/L	ND	1000	1000	942	953	94	95	70-130	1	6
Copper	ug/L	297	1000	1000	1270	1290	98	99	70-130	1	11
Iron	ug/L	9920	10000	10000	19400	19400	94	95	70-130	0	10
Lead	ug/L	20.2	1000	1000	925	939	90	92	70-130	2	10
Nickel	ug/L	134	1000	1000	1080	1090	95	96	70-130	1	10
Selenium	ug/L	ND	1000	1000	979	995	98	99	70-130	2	10
Silver	ug/L	ND	500	500	495	502	99	100	70-130	1	10
Thallium	ug/L	ND	1000	1000	876	889	87	89	70-130	1	6
Zinc	ug/L	87.9	1000	1000	1050	1040	97	95	70-130	1	11

MATRIX SPIKE SAMPLE: 1222429								
Parameter	Units	60148990001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Aluminum	ug/L		118	10000	10400	103	70-130	
Antimony	ug/L		ND	1000	1020	102	70-130	
Arsenic	ug/L		ND	1000	974	97	70-130	
Beryllium	ug/L		ND	1000	1000	100	70-130	
Cadmium	ug/L		ND	1000	986	99	70-130	
Chromium	ug/L		ND	1000	983	98	70-130	
Cobalt	ug/L		ND	1000	997	100	70-130	
Copper	ug/L		ND	1000	1000	99	70-130	
Iron	ug/L		240	10000	10100	99	70-130	
Lead	ug/L		ND	1000	982	98	70-130	
Nickel	ug/L		ND	1000	1020	101	70-130	
Selenium	ug/L		ND	1000	995	99	70-130	
Silver	ug/L		ND	500	490	98	70-130	
Thallium	ug/L		ND	1000	984	98	70-130	
Zinc	ug/L		ND	1000	1010	100	70-130	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

QC Batch:	MPRP/23525	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 Metals, Dissolved
Associated Lab Samples:	60149010001		

METHOD BLANK: 1222176 Matrix: Water

Associated Lab Samples: 60149010001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/19/13 12:27	
Antimony, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Arsenic, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Beryllium, Dissolved	ug/L	ND	1.0	07/19/13 12:27	
Cadmium, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Chromium, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Cobalt, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Copper, Dissolved	ug/L	ND	10.0	07/19/13 12:27	
Iron, Dissolved	ug/L	ND	50.0	07/19/13 12:27	
Lead, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Nickel, Dissolved	ug/L	ND	5.0	07/19/13 12:27	
Selenium, Dissolved	ug/L	ND	15.0	07/19/13 12:27	
Silver, Dissolved	ug/L	ND	7.0	07/19/13 12:27	
Thallium, Dissolved	ug/L	ND	20.0	07/19/13 12:27	
Zinc, Dissolved	ug/L	ND	50.0	07/19/13 12:27	

LABORATORY CONTROL SAMPLE: 1222177

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10700	107	85-115	
Antimony, Dissolved	ug/L	1000	1050	105	85-115	
Arsenic, Dissolved	ug/L	1000	969	97	85-115	
Beryllium, Dissolved	ug/L	1000	1010	101	85-115	
Cadmium, Dissolved	ug/L	1000	1000	100	85-115	
Chromium, Dissolved	ug/L	1000	996	100	85-115	
Cobalt, Dissolved	ug/L	1000	1030	103	85-115	
Copper, Dissolved	ug/L	1000	991	99	85-115	
Iron, Dissolved	ug/L	10000	10400	104	85-115	
Lead, Dissolved	ug/L	1000	1030	103	85-115	
Nickel, Dissolved	ug/L	1000	1030	103	85-115	
Selenium, Dissolved	ug/L	1000	986	99	85-115	
Silver, Dissolved	ug/L	500	502	100	85-115	
Thallium, Dissolved	ug/L	1000	1050	105	85-115	
Zinc, Dissolved	ug/L	1000	963	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222178 1222179

Parameter	Units	60148849001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	5040	10000	10000	10000	15800	15400	108	104	70-130	3	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

Parameter	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1222178			1222179			MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
	60148849001 Units	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					
Antimony, Dissolved	ug/L	ND	1000	1000	1140	1120	110	108	70-130	2	7
Arsenic, Dissolved	ug/L	640	1000	1000	1760	1700	112	106	70-130	3	10
Beryllium, Dissolved	ug/L	ND	1000	1000	974	952	97	95	70-130	2	7
Cadmium, Dissolved	ug/L	ND	1000	1000	1130	1100	112	109	70-130	3	10
Chromium, Dissolved	ug/L	266	1000	1000	1260	1220	99	96	70-130	3	10
Cobalt, Dissolved	ug/L	58.6	1000	1000	1070	1040	101	98	70-130	2	6
Copper, Dissolved	ug/L	ND	1000	1000	1120	1080	110	106	70-130	4	11
Iron, Dissolved	ug/L	707000	10000	10000	682000	657000	-248	-494	70-130	4	10 M1
Lead, Dissolved	ug/L	138	1000	1000	1070	1040	93	90	70-130	3	10
Nickel, Dissolved	ug/L	152	1000	1000	1140	1110	99	96	70-130	3	10
Selenium, Dissolved	ug/L	ND	1000	1000	1230	1190	123	119	70-130	3	10
Silver, Dissolved	ug/L	ND	500	500	41.6	34.4J	8	7	70-130		10 M1
Thallium, Dissolved	ug/L	ND	1000	1000	852	835	85	84	70-130	2	6
Zinc, Dissolved	ug/L	17300	1000	1000	17700	16700	44	-59	70-130	6	11 M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

QC Batch: MSV/55026 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149010001, 60149010002

METHOD BLANK: 1222577 Matrix: Water

Associated Lab Samples: 60149010001, 60149010002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1-Dichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,1-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichloroethane	ug/L	ND	1.0	07/19/13 09:47	
1,2-Dichloropropane	ug/L	ND	1.0	07/19/13 09:47	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/19/13 09:47	
Benzene	ug/L	ND	1.0	07/19/13 09:47	
Bromodichloromethane	ug/L	ND	1.0	07/19/13 09:47	
Bromoform	ug/L	ND	1.0	07/19/13 09:47	
Bromomethane	ug/L	ND	5.0	07/19/13 09:47	
Carbon tetrachloride	ug/L	ND	1.0	07/19/13 09:47	
Chlorobenzene	ug/L	ND	1.0	07/19/13 09:47	
Chloroethane	ug/L	ND	1.0	07/19/13 09:47	
Chloroform	ug/L	ND	1.0	07/19/13 09:47	
Chloromethane	ug/L	ND	1.0	07/19/13 09:47	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/19/13 09:47	
Dibromochloromethane	ug/L	ND	1.0	07/19/13 09:47	
Ethylbenzene	ug/L	ND	1.0	07/19/13 09:47	
Methylene chloride	ug/L	ND	1.0	07/19/13 09:47	
Tetrachloroethene	ug/L	ND	1.0	07/19/13 09:47	
Toluene	ug/L	ND	1.0	07/19/13 09:47	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/19/13 09:47	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/19/13 09:47	
Trichloroethene	ug/L	ND	1.0	07/19/13 09:47	
Trichlorofluoromethane	ug/L	ND	1.0	07/19/13 09:47	
Vinyl chloride	ug/L	ND	1.0	07/19/13 09:47	
Xylene (Total)	ug/L	ND	3.0	07/19/13 09:47	
1,2-Dichloroethane-d4 (S)	%	105	80-120	07/19/13 09:47	
4-Bromofluorobenzene (S)	%	94	80-120	07/19/13 09:47	
Dibromofluoromethane (S)	%	104	80-120	07/19/13 09:47	
Toluene-d8 (S)	%	99	80-120	07/19/13 09:47	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

LABORATORY CONTROL SAMPLE: 1222578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	24.9	125	71-139	
1,1,2,2-Tetrachloroethane	ug/L	20	19.1	95	59-138	
1,1,2-Trichloroethane	ug/L	20	19.3	97	69-127	
1,1-Dichloroethane	ug/L	20	20.2	101	69-126	
1,1-Dichloroethene	ug/L	20	21.2	106	65-153	
1,2-Dichlorobenzene	ug/L	20	20.3	101	66-126	
1,2-Dichloroethane	ug/L	20	21.6	108	71-129	
1,2-Dichloropropane	ug/L	20	20.1	100	66-140	
1,3-Dichlorobenzene	ug/L	20	20.6	103	63-127	
1,4-Dichlorobenzene	ug/L	20	20.6	103	68-124	
2-Chloroethylvinyl ether	ug/L	20	22.9	115	33-159	
Benzene	ug/L	20	20.2	101	73-129	
Bromodichloromethane	ug/L	20	21.4	107	63-129	
Bromoform	ug/L	20	22.4	112	52-123	
Bromomethane	ug/L	20	20.8	104	10-160	
Carbon tetrachloride	ug/L	20	25.6	128	70-140	
Chlorobenzene	ug/L	20	20.8	104	68-127	
Chloroethane	ug/L	20	23.1	115	42-160	
Chloroform	ug/L	20	21.8	109	60-120	
Chloromethane	ug/L	20	16.2	81	10-160	
cis-1,2-Dichloroethene	ug/L	20	22.2	111	70-125	
cis-1,3-Dichloropropene	ug/L	20	20.8	104	66-132	
Dibromochloromethane	ug/L	20	23.0	115	63-134	
Ethylbenzene	ug/L	20	20.8	104	66-133	
Methylene chloride	ug/L	20	17.8	89	56-135	
Tetrachloroethene	ug/L	20	22.7	114	64-143	
Toluene	ug/L	20	20.0	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	20.5	103	67-149	
trans-1,3-Dichloropropene	ug/L	20	23.7	119	66-138	
Trichloroethene	ug/L	20	19.9	99	71-130	
Trichlorofluoromethane	ug/L	20	21.8	109	58-158	
Vinyl chloride	ug/L	20	17.8	89	41-160	
Xylene (Total)	ug/L	60	60.3	101	67-130	
1,2-Dichloroethane-d4 (S)	%			116	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Dibromofluoromethane (S)	%			111	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1222579

Parameter	Units	60148849001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	5140	128	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4130	103	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4290	107	52-150	
1,1-Dichloroethane	ug/L	ND	4000	4420	111	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4490	112	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	4170	104	18-145	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

MATRIX SPIKE SAMPLE:		1222579		60148849001		Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits		
1,2-Dichloroethane	ug/L	ND	4000	4770	119	49-155				
1,2-Dichloropropane	ug/L	ND	4000	4420	111	12-160				
1,3-Dichlorobenzene	ug/L	ND	4000	4170	104	59-146				
1,4-Dichlorobenzene	ug/L	ND	4000	4250	106	18-147				
2-Chloroethylvinyl ether	ug/L	ND	4000	4400	110	10-160				
Benzene	ug/L	ND	4000	4220	105	37-151				
Bromodichloromethane	ug/L	ND	4000	4670	117	35-155				
Bromoform	ug/L	ND	4000	4790	120	45-133				
Bromomethane	ug/L	ND	4000	3360	84	10-160				
Carbon tetrachloride	ug/L	ND	4000	5360	134	70-140				
Chlorobenzene	ug/L	ND	4000	4320	108	37-153				
Chloroethane	ug/L	ND	4000	4240	106	14-160				
Chloroform	ug/L	ND	4000	4680	117	51-138				
Chloromethane	ug/L	ND	4000	2360	59	10-160				
cis-1,2-Dichloroethene	ug/L	ND	4000	4900	123	19-160				
cis-1,3-Dichloropropene	ug/L	ND	4000	4560	114	10-160				
Dibromochloromethane	ug/L	ND	4000	4810	120	53-149				
Ethylbenzene	ug/L	ND	4000	4340	109	37-154				
Methylene chloride	ug/L	ND	4000	3830	95	15-156				
Tetrachloroethene	ug/L	ND	4000	4560	114	64-148				
Toluene	ug/L	ND	4000	4330	108	47-150				
trans-1,2-Dichloroethene	ug/L	ND	4000	4310	108	54-156				
trans-1,3-Dichloropropene	ug/L	ND	4000	4900	123	17-160				
Trichloroethene	ug/L	ND	4000	4160	104	71-157				
Trichlorofluoromethane	ug/L	ND	4000	4000	100	17-160				
Vinyl chloride	ug/L	ND	4000	2820	70	10-160				
Xylene (Total)	ug/L	ND	12000	12500	105	12-153				
1,2-Dichloroethane-d4 (S)	%				116	80-120				
4-Bromofluorobenzene (S)	%				100	80-120				
Dibromofluoromethane (S)	%				109	80-120				
Toluene-d8 (S)	%				100	80-120				
Preservation pH			5.0		5.0					

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

QC Batch: OEXT/39407      Analysis Method: EPA 625  
 QC Batch Method: EPA 625      Analysis Description: 625 MSS  
 Associated Lab Samples: 60149010001

METHOD BLANK: 1223571      Matrix: Water

Associated Lab Samples: 60149010001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/23/13 11:43	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dichlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dimethylphenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dinitrophenol	ug/L	ND	50.0	07/23/13 11:43	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/23/13 11:43	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/23/13 11:43	
2-Chloronaphthalene	ug/L	ND	5.0	07/23/13 11:43	
2-Chlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2-Nitrophenol	ug/L	ND	5.0	07/23/13 11:43	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/23/13 11:43	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/23/13 11:43	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/23/13 11:43	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/23/13 11:43	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/23/13 11:43	
4-Nitrophenol	ug/L	ND	5.0	07/23/13 11:43	
Acenaphthene	ug/L	ND	5.0	07/23/13 11:43	
Acenaphthylene	ug/L	ND	5.0	07/23/13 11:43	
Anthracene	ug/L	ND	5.0	07/23/13 11:43	
Benzidine	ug/L	ND	50.0	07/23/13 11:43	
Benzo(a)anthracene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(a)pyrene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/23/13 11:43	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/23/13 11:43	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/23/13 11:43	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/23/13 11:43	
Butylbenzylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Chrysene	ug/L	ND	5.0	07/23/13 11:43	
Di-n-butylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Di-n-octylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/23/13 11:43	
Diethylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Dimethylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
Fluorene	ug/L	ND	5.0	07/23/13 11:43	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/23/13 11:43	
Hexachlorobenzene	ug/L	ND	5.0	07/23/13 11:43	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/23/13 11:43	
Hexachloroethane	ug/L	ND	5.0	07/23/13 11:43	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/23/13 11:43	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Project No.: 60149010

METHOD BLANK: 1223571

Matrix: Water

Associated Lab Samples: 60149010001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/23/13 11:43	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/23/13 11:43	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/23/13 11:43	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/23/13 11:43	
Naphthalene	ug/L	ND	5.0	07/23/13 11:43	
Nitrobenzene	ug/L	ND	5.0	07/23/13 11:43	
Pentachlorophenol	ug/L	ND	5.0	07/23/13 11:43	
Phenanthrene	ug/L	ND	5.0	07/23/13 11:43	
Phenol	ug/L	ND	5.0	07/23/13 11:43	
Pyrene	ug/L	ND	5.0	07/23/13 11:43	
2,4,6-Tribromophenol (S)	%	90	39-119	07/23/13 11:43	
2-Fluorobiphenyl (S)	%	93	36-120	07/23/13 11:43	
2-Fluorophenol (S)	%	50	18-120	07/23/13 11:43	
Nitrobenzene-d5 (S)	%	86	32-120	07/23/13 11:43	
Phenol-d6 (S)	%	32	12-120	07/23/13 11:43	
Terphenyl-d14 (S)	%	96	44-120	07/23/13 11:43	

LABORATORY CONTROL SAMPLE: 1223572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.9	80	44-120	
2,4,6-Trichlorophenol	ug/L	50	41.8	84	48-120	
2,4-Dichlorophenol	ug/L	50	40.0	80	48-120	
2,4-Dimethylphenol	ug/L	50	35.4	71	37-119	
2,4-Dinitrophenol	ug/L	50	33.9J	68	15-153	
2,4-Dinitrotoluene	ug/L	50	44.2	88	54-120	
2,6-Dinitrotoluene	ug/L	50	43.5	87	52-120	
2-Chloronaphthalene	ug/L	50	43.0	86	60-118	
2-Chlorophenol	ug/L	50	36.5	73	44-120	
2-Nitrophenol	ug/L	50	41.9	84	43-120	
3,3'-Dichlorobenzidine	ug/L	50	53.6	107	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	45.9	92	31-147	
4-Bromophenylphenyl ether	ug/L	50	45.3	91	53-120	
4-Chloro-3-methylphenol	ug/L	50	40.1	80	50-120	
4-Chlorophenylphenyl ether	ug/L	50	43.4	87	54-120	
4-Nitrophenol	ug/L	50	19.3	39	10-120	
Acenaphthene	ug/L	50	42.6	85	51-120	
Acenaphthylene	ug/L	50	42.1	84	51-120	
Anthracene	ug/L	50	45.4	91	54-120	
Benzidine	ug/L	50	29.3J	59	1-124	
Benzo(a)anthracene	ug/L	50	46.2	92	54-120	
Benzo(a)pyrene	ug/L	50	45.1	90	54-120	
Benzo(b)fluoranthene	ug/L	50	48.0	96	57-120	
Benzo(g,h,i)perylene	ug/L	50	46.9	94	54-120	
Benzo(k)fluoranthene	ug/L	50	43.4	87	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

LABORATORY CONTROL SAMPLE: 1223572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	41.3	83	51-120	
bis(2-Chloroethyl) ether	ug/L	50	39.1	78	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	39.8	80	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	46.7	93	51-126	
Butylbenzylphthalate	ug/L	50	45.3	91	45-129	
Chrysene	ug/L	50	46.6	93	54-120	
Di-n-butylphthalate	ug/L	50	47.9	96	57-118	
Di-n-octylphthalate	ug/L	50	44.0	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	47.2	94	56-119	
Diethylphthalate	ug/L	50	45.1	90	55-114	
Dimethylphthalate	ug/L	50	43.7	87	54-112	
Fluoranthene	ug/L	50	48.1	96	56-120	
Fluorene	ug/L	50	43.0	86	59-120	
Hexachloro-1,3-butadiene	ug/L	50	40.0	80	41-116	
Hexachlorobenzene	ug/L	50	44.6	89	53-120	
Hexachlorocyclopentadiene	ug/L	100	48.4	48	31-120	
Hexachloroethane	ug/L	50	36.6	73	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	46.2	92	55-120	
Isophorone	ug/L	50	41.5	83	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	38.8	78	47-120	
N-Nitrosodimethylamine	ug/L	50	30.1	60	28-120	
N-Nitrosodiphenylamine	ug/L	50	42.3	85	53-120	
Naphthalene	ug/L	50	40.7	81	48-120	
Nitrobenzene	ug/L	50	43.7	87	47-120	
Pentachlorophenol	ug/L	50	42.4	85	43-127	
Phenanthrene	ug/L	50	45.6	91	55-120	
Phenol	ug/L	50	15.8	32	15-112	
Pyrene	ug/L	50	45.2	90	55-115	
2,4,6-Tribromophenol (S)	%			89	39-119	
2-Fluorobiphenyl (S)	%			89	36-120	
2-Fluorophenol (S)	%			47	18-120	
Nitrobenzene-d5 (S)	%			84	32-120	
Phenol-d6 (S)	%			30	12-120	
Terphenyl-d14 (S)	%			92	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

QC Batch: WET/42440

Analysis Method: EPA 1664A

QC Batch Method: EPA 1664A

Analysis Description: 1664 HEM, Oil and Grease

Associated Lab Samples: 60149010001

METHOD BLANK: 1222639

Matrix: Water

Associated Lab Samples: 60149010001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/19/13 08:45	

LABORATORY CONTROL SAMPLE: 1222640

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	38.2	96	78-114	

MATRIX SPIKE SAMPLE: 1222643

Parameter	Units	60149007002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.2	40.0	94	78-114	

SAMPLE DUPLICATE: 1222644

Parameter	Units	60149020001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	11.3	10.4	8	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

QC Batch:	WET/42459	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60149010001		

METHOD BLANK: 1223043 Matrix: Water

Associated Lab Samples: 60149010001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/19/13 14:39	

LABORATORY CONTROL SAMPLE: 1223044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.2	106	64-132	

MATRIX SPIKE SAMPLE: 1223049

Parameter	Units	60148726001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20.4	25.0	112	64-132	

SAMPLE DUPLICATE: 1223051

Parameter	Units	60148709002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20.8	35.0	51	34	D6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

QC Batch: WET/42421

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60149010001

METHOD BLANK: 1221747

Matrix: Water

Associated Lab Samples: 60149010001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/18/13 08:55	

SAMPLE DUPLICATE: 1221748

Parameter	Units	60148915001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6700	6240	7	25	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

QC Batch: WET/42460 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149010001

SAMPLE DUPLICATE: 1223382

Parameter	Units	60149015001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.3	7.3	0	5	H6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016  
Pace Project No.: 60149010

QC Batch: WETA/25531 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60149010001

METHOD BLANK: 1223695 Matrix: Water  
Associated Lab Samples: 60149010001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/22/13 14:24	

LABORATORY CONTROL SAMPLE: 1223696

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1223697

Parameter	Units	60148888001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	18.9	10	25.8	68	90-110	M1

MATRIX SPIKE SAMPLE: 1223698

Parameter	Units	60148923001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.2	110	90-110	

SAMPLE DUPLICATE: 1223699

Parameter	Units	60148926001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	10.5	10.6	1	18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

QC Batch: WETA/25518 Analysis Method: EPA 410.4  
 QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD  
 Associated Lab Samples: 60149010001

METHOD BLANK: 1222987 Matrix: Water

Associated Lab Samples: 60149010001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/22/13 11:04	

LABORATORY CONTROL SAMPLE: 1222988

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	51.7	103	90-110	

MATRIX SPIKE SAMPLE: 1222989

Parameter	Units	60148949016 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	11.2	50	64.1	106	90-110	

MATRIX SPIKE SAMPLE: 1222991

Parameter	Units	60149003001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	56.6	97	90-110	

SAMPLE DUPLICATE: 1222990

Parameter	Units	60149010001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	60100	59700	1	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39407

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-016

Pace Project No.: 60149010

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149010001	316-016	EPA 200.7	MPRP/23530	EPA 200.7	ICP/18489
60149010001	316-016	EPA 200.7	MPRP/23525	EPA 200.7	ICP/18485
60149010001	316-016	EPA 245.1	MERP/7518	EPA 245.1	MERC/7476
60149010001	316-016	EPA 245.1	MERP/7524	EPA 245.1	MERC/7481
60149010001	316-016	EPA 625	OEXT/39407	EPA 625	MSSV/12514
60149010001	316-016	EPA 624 Low	MSV/55026		
60149010002	TRIP BLANK	EPA 624 Low	MSV/55026		
60149010001	316-016	EPA 1664A	WET/42440		
60149010001	316-016	EPA 1664A	WET/42459		
60149010001	316-016	SM 2540D	WET/42421		
60149010001	316-016	SM 4500-H+B	WET/42460		
60149010001	316-016	EPA 350.1	WETA/25531		
60149010001	316-016	EPA 410.4	WETA/25518		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149010



Client Name: Barr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  zppic

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue None  Samples received on ice, cooling process has begun.

Cooler Temperature: 1.4

Temperature should be above freezing to 6°C

Date and initials of person examining contents: PV 7/10/13

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 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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>PH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Includes date/time/ID/analyses Matrix: <u>WT</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>Added 2.5 ml of H<sub>2</sub>O<sub>2</sub> to BP310</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>PH 6.0/4.5</u> <u>Added 1.0 ml of H<sub>2</sub>SO<sub>4</sub> to BP36</u> <u>PH 6.0/2.0</u>
Exceptions: <u>C</u> VOA, coliform, TOC, <u>C</u> G&G/WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>PV</u> Lot # of added preservative <u>125/10</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>COVER</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y N Field Data Required? Y N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/10/13





July 29, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 48-HR B10  
Pace Project No.: 60149172

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 19, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 48-HR BIO

Pace Project No.: 60149172

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149172001	48-HR B10	Water	07/18/13 15:00	07/19/13 01:50
60149172002	48-HR B10	Water	07/18/13 15:00	07/19/13 01:50
60149172003	TRIP BLANK	Water	07/18/13 15:00	07/19/13 01:50

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149172001	48-HR B10	SM 5210B	NDL	1
60149172002	48-HR B10	EPA 5030B/8260	PRG	70
60149172003	TRIP BLANK	EPA 5030B/8260	PRG	70

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>Sample: 48-HR B10</b>									
<b>Lab ID: 60149172001</b>									
Collected: 07/18/13 15:00    Received: 07/19/13 01:50    Matrix: Water									
Analytical Method: SM 5210B    Preparation Method: SM 5210B									
BOD, 5 day	<b>29800</b>	mg/L	2.0	2.0	1	07/19/13 16:11	07/24/13 15:45		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

**Sample: 48-HR B10**      **Lab ID: 60149172002**      Collected: 07/18/13 15:00      Received: 07/19/13 01:50      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 5030B/8260									
Acetone	53300	ug/L	2000	376	200		07/22/13 12:21	67-64-1	
Benzene	<12.0	ug/L	200	12.0	200		07/22/13 12:21	71-43-2	
Bromobenzene	<20.0	ug/L	200	20.0	200		07/22/13 12:21	108-86-1	
Bromochloromethane	<30.0	ug/L	200	30.0	200		07/22/13 12:21	74-97-5	
Bromodichloromethane	<38.0	ug/L	200	38.0	200		07/22/13 12:21	75-27-4	
Bromoform	44.0J	ug/L	200	14.0	200		07/22/13 12:21	75-25-2	B
Bromomethane	<32.0	ug/L	1000	32.0	200		07/22/13 12:21	74-83-9	
2-Butanone (MEK)	30900	ug/L	2000	118	200		07/22/13 12:21	78-93-3	
n-Butylbenzene	30.9J	ug/L	200	20.0	200		07/22/13 12:21	104-51-8	
sec-Butylbenzene	<10.0	ug/L	200	10.0	200		07/22/13 12:21	135-98-8	
tert-Butylbenzene	<68.0	ug/L	200	68.0	200		07/22/13 12:21	98-06-6	
Carbon disulfide	<24.0	ug/L	1000	24.0	200		07/22/13 12:21	75-15-0	
Carbon tetrachloride	<36.0	ug/L	200	36.0	200		07/22/13 12:21	56-23-5	
Chlorobenzene	<42.0	ug/L	200	42.0	200		07/22/13 12:21	108-90-7	
Chloroethane	<30.0	ug/L	200	30.0	200		07/22/13 12:21	75-00-3	
Chloroform	37.7J	ug/L	200	28.0	200		07/22/13 12:21	67-66-3	
Chloromethane	<16.0	ug/L	200	16.0	200		07/22/13 12:21	74-87-3	
2-Chlorotoluene	<24.0	ug/L	200	24.0	200		07/22/13 12:21	95-49-8	
4-Chlorotoluene	<28.0	ug/L	200	28.0	200		07/22/13 12:21	106-43-4	
1,2-Dibromo-3-chloropropane	<118	ug/L	500	118	200		07/22/13 12:21	96-12-8	
Dibromochloromethane	<42.0	ug/L	200	42.0	200		07/22/13 12:21	124-48-1	
1,2-Dibromoethane (EDB)	<34.0	ug/L	200	34.0	200		07/22/13 12:21	106-93-4	
Dibromomethane	<36.0	ug/L	200	36.0	200		07/22/13 12:21	74-95-3	
1,2-Dichlorobenzene	<10.0	ug/L	200	10.0	200		07/22/13 12:21	95-50-1	
1,3-Dichlorobenzene	<14.0	ug/L	200	14.0	200		07/22/13 12:21	541-73-1	
1,4-Dichlorobenzene	74.5J	ug/L	200	12.0	200		07/22/13 12:21	106-46-7	
Dichlorodifluoromethane	<42.0	ug/L	200	42.0	200		07/22/13 12:21	75-71-8	
1,1-Dichloroethane	<10.0	ug/L	200	10.0	200		07/22/13 12:21	75-34-3	
1,2-Dichloroethane	<24.0	ug/L	200	24.0	200		07/22/13 12:21	107-06-2	
1,2-Dichloroethene (Total)	<56.0	ug/L	200	56.0	200		07/22/13 12:21	540-59-0	
1,1-Dichloroethene	<40.0	ug/L	200	40.0	200		07/22/13 12:21	75-35-4	
cis-1,2-Dichloroethene	<16.0	ug/L	200	16.0	200		07/22/13 12:21	156-59-2	
trans-1,2-Dichloroethene	<40.0	ug/L	200	40.0	200		07/22/13 12:21	156-60-5	
1,2-Dichloropropane	<32.0	ug/L	200	32.0	200		07/22/13 12:21	78-87-5	
1,3-Dichloropropane	<34.0	ug/L	200	34.0	200		07/22/13 12:21	142-28-9	
2,2-Dichloropropane	<38.0	ug/L	200	38.0	200		07/22/13 12:21	594-20-7	
1,1-Dichloropropene	<18.0	ug/L	200	18.0	200		07/22/13 12:21	563-58-6	
cis-1,3-Dichloropropene	<28.0	ug/L	200	28.0	200		07/22/13 12:21	10061-01-5	
trans-1,3-Dichloropropene	<24.0	ug/L	200	24.0	200		07/22/13 12:21	10061-02-6	
Ethylbenzene	<36.0	ug/L	200	36.0	200		07/22/13 12:21	100-41-4	
Hexachloro-1,3-butadiene	<36.0	ug/L	200	36.0	200		07/22/13 12:21	87-68-3	
2-Hexanone	<238	ug/L	2000	238	200		07/22/13 12:21	591-78-6	
Isopropylbenzene (Cumene)	<14.0	ug/L	200	14.0	200		07/22/13 12:21	98-82-8	
p-Isopropyltoluene	591	ug/L	200	20.0	200		07/22/13 12:21	99-87-6	
Methylene chloride	58.1J	ug/L	200	30.0	200		07/22/13 12:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	155J	ug/L	2000	84.0	200		07/22/13 12:21	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

**Sample: 48-HR B10**      **Lab ID: 60149172002**      Collected: 07/18/13 15:00      Received: 07/19/13 01:50      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Methyl-tert-butyl ether	<12.0	ug/L	200	12.0	200		07/22/13 12:21	1634-04-4	
Naphthalene	424J	ug/L	2000	32.0	200		07/22/13 12:21	91-20-3	
n-Propylbenzene	<20.0	ug/L	200	20.0	200		07/22/13 12:21	103-65-1	
Styrene	<24.0	ug/L	200	24.0	200		07/22/13 12:21	100-42-5	
1,1,1,2-Tetrachloroethane	<30.0	ug/L	200	30.0	200		07/22/13 12:21	630-20-6	
1,1,2,2-Tetrachloroethane	<30.0	ug/L	200	30.0	200		07/22/13 12:21	79-34-5	
Tetrachloroethene	<20.0	ug/L	200	20.0	200		07/22/13 12:21	127-18-4	
Toluene	<34.0	ug/L	200	34.0	200		07/22/13 12:21	108-88-3	
1,2,3-Trichlorobenzene	<24.0	ug/L	200	24.0	200		07/22/13 12:21	87-61-6	
1,2,4-Trichlorobenzene	<20.0	ug/L	200	20.0	200		07/22/13 12:21	120-82-1	
1,1,1-Trichloroethane	<22.0	ug/L	200	22.0	200		07/22/13 12:21	71-55-6	
1,1,2-Trichloroethane	<40.0	ug/L	200	40.0	200		07/22/13 12:21	79-00-5	
Trichloroethene	<34.0	ug/L	200	34.0	200		07/22/13 12:21	79-01-6	
Trichlorofluoromethane	<68.0	ug/L	200	68.0	200		07/22/13 12:21	75-69-4	
1,2,3-Trichloropropane	216J	ug/L	500	38.0	200		07/22/13 12:21	96-18-4	
1,2,4-Trimethylbenzene	76.4J	ug/L	200	18.0	200		07/22/13 12:21	95-63-6	
1,3,5-Trimethylbenzene	<20.0	ug/L	200	20.0	200		07/22/13 12:21	108-67-8	
Vinyl chloride	<26.0	ug/L	200	26.0	200		07/22/13 12:21	75-01-4	
Xylene (Total)	<84.0	ug/L	600	84.0	200		07/22/13 12:21	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	80-120		200		07/22/13 12:21	460-00-4	
Dibromofluoromethane (S)	105	%	80-120		200		07/22/13 12:21	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	80-120		200		07/22/13 12:21	17060-07-0	
Toluene-d8 (S)	100	%	80-120		200		07/22/13 12:21	2037-26-5	
Preservation pH	7.0		0.10	0.10	200		07/22/13 12:21		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

Sample: TRIP BLANK Lab ID: 60149172003 Collected: 07/18/13 15:00 Received: 07/19/13 01:50 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Acetone	<1.9	ug/L	10.0	1.9	1		07/22/13 11:06	67-64-1	
Benzene	<0.060	ug/L	1.0	0.060	1		07/22/13 11:06	71-43-2	
Bromobenzene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:06	108-86-1	
Bromochloromethane	<0.15	ug/L	1.0	0.15	1		07/22/13 11:06	74-97-5	
Bromodichloromethane	<0.19	ug/L	1.0	0.19	1		07/22/13 11:06	75-27-4	
Bromoform	0.35J	ug/L	1.0	0.070	1		07/22/13 11:06	75-25-2	B
Bromomethane	<0.16	ug/L	5.0	0.16	1		07/22/13 11:06	74-83-9	
2-Butanone (MEK)	<0.59	ug/L	10.0	0.59	1		07/22/13 11:06	78-93-3	
n-Butylbenzene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:06	104-51-8	
sec-Butylbenzene	<0.050	ug/L	1.0	0.050	1		07/22/13 11:06	135-98-8	
tert-Butylbenzene	<0.34	ug/L	1.0	0.34	1		07/22/13 11:06	98-06-6	
Carbon disulfide	<0.12	ug/L	5.0	0.12	1		07/22/13 11:06	75-15-0	
Carbon tetrachloride	<0.18	ug/L	1.0	0.18	1		07/22/13 11:06	56-23-5	
Chlorobenzene	<0.21	ug/L	1.0	0.21	1		07/22/13 11:06	108-90-7	
Chloroethane	<0.15	ug/L	1.0	0.15	1		07/22/13 11:06	75-00-3	
Chloroform	<0.14	ug/L	1.0	0.14	1		07/22/13 11:06	67-66-3	
Chloromethane	<0.080	ug/L	1.0	0.080	1		07/22/13 11:06	74-87-3	
2-Chlorotoluene	<0.12	ug/L	1.0	0.12	1		07/22/13 11:06	95-49-8	
4-Chlorotoluene	<0.14	ug/L	1.0	0.14	1		07/22/13 11:06	106-43-4	
1,2-Dibromo-3-chloropropane	<0.59	ug/L	2.5	0.59	1		07/22/13 11:06	96-12-8	
Dibromochloromethane	<0.21	ug/L	1.0	0.21	1		07/22/13 11:06	124-48-1	
1,2-Dibromoethane (EDB)	<0.17	ug/L	1.0	0.17	1		07/22/13 11:06	106-93-4	
Dibromomethane	<0.18	ug/L	1.0	0.18	1		07/22/13 11:06	74-95-3	
1,2-Dichlorobenzene	<0.050	ug/L	1.0	0.050	1		07/22/13 11:06	95-50-1	
1,3-Dichlorobenzene	<0.070	ug/L	1.0	0.070	1		07/22/13 11:06	541-73-1	
1,4-Dichlorobenzene	<0.060	ug/L	1.0	0.060	1		07/22/13 11:06	106-46-7	
Dichlorodifluoromethane	<0.21	ug/L	1.0	0.21	1		07/22/13 11:06	75-71-8	
1,1-Dichloroethane	<0.050	ug/L	1.0	0.050	1		07/22/13 11:06	75-34-3	
1,2-Dichloroethane	<0.12	ug/L	1.0	0.12	1		07/22/13 11:06	107-06-2	
1,2-Dichloroethene (Total)	<0.28	ug/L	1.0	0.28	1		07/22/13 11:06	540-59-0	
1,1-Dichloroethene	<0.20	ug/L	1.0	0.20	1		07/22/13 11:06	75-35-4	
cis-1,2-Dichloroethene	<0.080	ug/L	1.0	0.080	1		07/22/13 11:06	156-59-2	
trans-1,2-Dichloroethene	<0.20	ug/L	1.0	0.20	1		07/22/13 11:06	156-60-5	
1,2-Dichloropropane	<0.16	ug/L	1.0	0.16	1		07/22/13 11:06	78-87-5	
1,3-Dichloropropane	<0.17	ug/L	1.0	0.17	1		07/22/13 11:06	142-28-9	
2,2-Dichloropropane	<0.19	ug/L	1.0	0.19	1		07/22/13 11:06	594-20-7	
1,1-Dichloropropene	<0.090	ug/L	1.0	0.090	1		07/22/13 11:06	563-58-6	
cis-1,3-Dichloropropene	<0.14	ug/L	1.0	0.14	1		07/22/13 11:06	10061-01-5	
trans-1,3-Dichloropropene	<0.12	ug/L	1.0	0.12	1		07/22/13 11:06	10061-02-6	
Ethylbenzene	<0.18	ug/L	1.0	0.18	1		07/22/13 11:06	100-41-4	
Hexachloro-1,3-butadiene	<0.18	ug/L	1.0	0.18	1		07/22/13 11:06	87-68-3	
2-Hexanone	<1.2	ug/L	10.0	1.2	1		07/22/13 11:06	591-78-6	
Isopropylbenzene (Cumene)	<0.070	ug/L	1.0	0.070	1		07/22/13 11:06	98-82-8	
p-Isopropyltoluene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:06	99-87-6	
Methylene chloride	<0.15	ug/L	1.0	0.15	1		07/22/13 11:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.42	ug/L	10.0	0.42	1		07/22/13 11:06	108-10-1	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

**Sample: TRIP BLANK**      **Lab ID: 60149172003**      Collected: 07/18/13 15:00      Received: 07/19/13 01:50      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Methyl-tert-butyl ether	<0.060	ug/L	1.0	0.060	1		07/22/13 11:06	1634-04-4	
Naphthalene	<0.16	ug/L	10.0	0.16	1		07/22/13 11:06	91-20-3	
n-Propylbenzene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:06	103-65-1	
Styrene	<0.12	ug/L	1.0	0.12	1		07/22/13 11:06	100-42-5	
1,1,1,2-Tetrachloroethane	<0.15	ug/L	1.0	0.15	1		07/22/13 11:06	630-20-6	
1,1,2,2-Tetrachloroethane	<0.15	ug/L	1.0	0.15	1		07/22/13 11:06	79-34-5	
Tetrachloroethene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:06	127-18-4	
Toluene	<0.17	ug/L	1.0	0.17	1		07/22/13 11:06	108-88-3	
1,2,3-Trichlorobenzene	<0.12	ug/L	1.0	0.12	1		07/22/13 11:06	87-61-6	
1,2,4-Trichlorobenzene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:06	120-82-1	
1,1,1-Trichloroethane	<0.11	ug/L	1.0	0.11	1		07/22/13 11:06	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/22/13 11:06	79-00-5	
Trichloroethene	<0.17	ug/L	1.0	0.17	1		07/22/13 11:06	79-01-6	
Trichlorofluoromethane	<0.34	ug/L	1.0	0.34	1		07/22/13 11:06	75-69-4	
1,2,3-Trichloropropane	<0.19	ug/L	2.5	0.19	1		07/22/13 11:06	96-18-4	
1,2,4-Trimethylbenzene	<0.090	ug/L	1.0	0.090	1		07/22/13 11:06	95-63-6	
1,3,5-Trimethylbenzene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:06	108-67-8	
Vinyl chloride	<0.13	ug/L	1.0	0.13	1		07/22/13 11:06	75-01-4	
Xylene (Total)	<0.42	ug/L	3.0	0.42	1		07/22/13 11:06	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103	%	80-120		1		07/22/13 11:06	460-00-4	
Dibromofluoromethane (S)	103	%	80-120		1		07/22/13 11:06	1868-53-7	
1,2-Dichloroethane-d4 (S)	106	%	80-120		1		07/22/13 11:06	17060-07-0	
Toluene-d8 (S)	101	%	80-120		1		07/22/13 11:06	2037-26-5	
Preservation pH	7.0		0.10	0.10	1		07/22/13 11:06		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 48-HR BIO

Pace Project No.: 60149172

QC Batch: MSV/55071 Analysis Method: EPA 5030B/8260  
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 7 day  
Associated Lab Samples: 60149172002, 60149172003

METHOD BLANK: 1223715 Matrix: Water

Associated Lab Samples: 60149172002, 60149172003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.15	1.0	07/22/13 09:38	
1,1,1-Trichloroethane	ug/L	<0.11	1.0	07/22/13 09:38	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	07/22/13 09:38	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	07/22/13 09:38	
1,1-Dichloroethane	ug/L	<0.050	1.0	07/22/13 09:38	
1,1-Dichloroethene	ug/L	<0.20	1.0	07/22/13 09:38	
1,1-Dichloropropene	ug/L	<0.090	1.0	07/22/13 09:38	
1,2,3-Trichlorobenzene	ug/L	<0.12	1.0	07/22/13 09:38	
1,2,3-Trichloropropane	ug/L	<0.19	2.5	07/22/13 09:38	
1,2,4-Trichlorobenzene	ug/L	<0.10	1.0	07/22/13 09:38	
1,2,4-Trimethylbenzene	ug/L	<0.090	1.0	07/22/13 09:38	
1,2-Dibromo-3-chloropropane	ug/L	<0.59	2.5	07/22/13 09:38	
1,2-Dibromoethane (EDB)	ug/L	<0.17	1.0	07/22/13 09:38	
1,2-Dichlorobenzene	ug/L	<0.050	1.0	07/22/13 09:38	
1,2-Dichloroethane	ug/L	<0.12	1.0	07/22/13 09:38	
1,2-Dichloroethene (Total)	ug/L	<0.28	1.0	07/22/13 09:38	
1,2-Dichloropropane	ug/L	<0.16	1.0	07/22/13 09:38	
1,3,5-Trimethylbenzene	ug/L	<0.10	1.0	07/22/13 09:38	
1,3-Dichlorobenzene	ug/L	<0.070	1.0	07/22/13 09:38	
1,3-Dichloropropane	ug/L	<0.17	1.0	07/22/13 09:38	
1,4-Dichlorobenzene	ug/L	<0.060	1.0	07/22/13 09:38	
2,2-Dichloropropane	ug/L	<0.19	1.0	07/22/13 09:38	
2-Butanone (MEK)	ug/L	<0.59	10.0	07/22/13 09:38	
2-Chlorotoluene	ug/L	<0.12	1.0	07/22/13 09:38	
2-Hexanone	ug/L	<1.2	10.0	07/22/13 09:38	
4-Chlorotoluene	ug/L	<0.14	1.0	07/22/13 09:38	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	10.0	07/22/13 09:38	
Acetone	ug/L	<1.9	10.0	07/22/13 09:38	
Benzene	ug/L	<0.060	1.0	07/22/13 09:38	
Bromobenzene	ug/L	<0.10	1.0	07/22/13 09:38	
Bromochloromethane	ug/L	<0.15	1.0	07/22/13 09:38	
Bromodichloromethane	ug/L	<0.19	1.0	07/22/13 09:38	
Bromoform	ug/L	0.34J	1.0	07/22/13 09:38	
Bromomethane	ug/L	<0.16	5.0	07/22/13 09:38	
Carbon disulfide	ug/L	<0.12	5.0	07/22/13 09:38	
Carbon tetrachloride	ug/L	<0.18	1.0	07/22/13 09:38	
Chlorobenzene	ug/L	<0.21	1.0	07/22/13 09:38	
Chloroethane	ug/L	<0.15	1.0	07/22/13 09:38	
Chloroform	ug/L	<0.14	1.0	07/22/13 09:38	
Chloromethane	ug/L	<0.080	1.0	07/22/13 09:38	
cis-1,2-Dichloroethene	ug/L	<0.080	1.0	07/22/13 09:38	
cis-1,3-Dichloropropene	ug/L	<0.14	1.0	07/22/13 09:38	
Dibromochloromethane	ug/L	<0.21	1.0	07/22/13 09:38	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 48-HR BIO

Pace Project No.: 60149172

METHOD BLANK: 1223715

Matrix: Water

Associated Lab Samples: 60149172002, 60149172003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	<0.18	1.0	07/22/13 09:38	
Dichlorodifluoromethane	ug/L	<0.21	1.0	07/22/13 09:38	
Ethylbenzene	ug/L	<0.18	1.0	07/22/13 09:38	
Hexachloro-1,3-butadiene	ug/L	<0.18	1.0	07/22/13 09:38	
Isopropylbenzene (Cumene)	ug/L	<0.070	1.0	07/22/13 09:38	
Methyl-tert-butyl ether	ug/L	<0.060	1.0	07/22/13 09:38	
Methylene chloride	ug/L	<0.15	1.0	07/22/13 09:38	
n-Butylbenzene	ug/L	<0.10	1.0	07/22/13 09:38	
n-Propylbenzene	ug/L	<0.10	1.0	07/22/13 09:38	
Naphthalene	ug/L	<0.16	10.0	07/22/13 09:38	
p-Isopropyltoluene	ug/L	<0.10	1.0	07/22/13 09:38	
sec-Butylbenzene	ug/L	<0.050	1.0	07/22/13 09:38	
Styrene	ug/L	<0.12	1.0	07/22/13 09:38	
tert-Butylbenzene	ug/L	<0.34	1.0	07/22/13 09:38	
Tetrachloroethene	ug/L	<0.10	1.0	07/22/13 09:38	
Toluene	ug/L	<0.17	1.0	07/22/13 09:38	
trans-1,2-Dichloroethene	ug/L	<0.20	1.0	07/22/13 09:38	
trans-1,3-Dichloropropene	ug/L	<0.12	1.0	07/22/13 09:38	
Trichloroethene	ug/L	<0.17	1.0	07/22/13 09:38	
Trichlorofluoromethane	ug/L	<0.34	1.0	07/22/13 09:38	
Vinyl chloride	ug/L	<0.13	1.0	07/22/13 09:38	
Xylene (Total)	ug/L	<0.42	3.0	07/22/13 09:38	
1,2-Dichloroethane-d4 (S)	%	107	80-120	07/22/13 09:38	
4-Bromofluorobenzene (S)	%	100	80-120	07/22/13 09:38	
Dibromofluoromethane (S)	%	102	80-120	07/22/13 09:38	
Toluene-d8 (S)	%	101	80-120	07/22/13 09:38	

LABORATORY CONTROL SAMPLE: 1223716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.1	106	79-121	
1,1,1-Trichloroethane	ug/L	20	19.7	99	75-124	
1,1,2,2-Tetrachloroethane	ug/L	20	21.1	105	73-120	
1,1,2-Trichloroethane	ug/L	20	20.4	102	76-120	
1,1-Dichloroethane	ug/L	20	19.7	99	73-120	
1,1-Dichloroethene	ug/L	20	18.7	94	70-127	
1,1-Dichloropropene	ug/L	20	20.4	102	79-124	
1,2,3-Trichlorobenzene	ug/L	20	21.6	108	68-130	
1,2,3-Trichloropropane	ug/L	20	22.4	112	72-124	
1,2,4-Trichlorobenzene	ug/L	20	21.2	106	73-125	
1,2,4-Trimethylbenzene	ug/L	20	20.2	101	76-120	
1,2-Dibromo-3-chloropropane	ug/L	20	21.4	107	68-126	
1,2-Dibromoethane (EDB)	ug/L	20	21.0	105	79-121	
1,2-Dichlorobenzene	ug/L	20	20.8	104	79-120	
1,2-Dichloroethane	ug/L	20	20.9	105	72-122	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

LABORATORY CONTROL SAMPLE: 1223716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethene (Total)	ug/L	40	38.9	97	77-120	
1,2-Dichloropropane	ug/L	20	19.7	99	77-120	
1,3,5-Trimethylbenzene	ug/L	20	20.2	101	75-120	
1,3-Dichlorobenzene	ug/L	20	19.9	100	80-120	
1,3-Dichloropropane	ug/L	20	19.9	99	76-120	
1,4-Dichlorobenzene	ug/L	20	20.3	101	80-120	
2,2-Dichloropropane	ug/L	20	20.5	103	52-135	
2-Butanone (MEK)	ug/L	100	118	118	69-124	
2-Chlorotoluene	ug/L	20	20.3	101	78-120	
2-Hexanone	ug/L	100	102	102	70-125	
4-Chlorotoluene	ug/L	20	19.7	98	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	72-123	
Acetone	ug/L	100	89.8	90	60-126	
Benzene	ug/L	20	19.4	97	73-122	
Bromobenzene	ug/L	20	20.7	104	79-120	
Bromochloromethane	ug/L	20	18.0	90	76-125	
Bromodichloromethane	ug/L	20	20.2	101	73-120	
Bromoform	ug/L	20	19.1	96	74-120	
Bromomethane	ug/L	20	12.9	65	40-146	
Carbon disulfide	ug/L	20	17.7	89	62-125	
Carbon tetrachloride	ug/L	20	21.5	108	73-125	
Chlorobenzene	ug/L	20	20.0	100	80-120	
Chloroethane	ug/L	20	17.8	89	56-159	
Chloroform	ug/L	20	19.2	96	76-120	
Chloromethane	ug/L	20	15.4	77	40-148	
cis-1,2-Dichloroethene	ug/L	20	19.4	97	69-120	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	76-120	
Dibromochloromethane	ug/L	20	20.7	104	79-121	
Dibromomethane	ug/L	20	19.7	98	77-120	
Dichlorodifluoromethane	ug/L	20	13.8	69	40-141	
Ethylbenzene	ug/L	20	19.9	100	76-123	
Hexachloro-1,3-butadiene	ug/L	20	19.7	99	69-125	
Isopropylbenzene (Cumene)	ug/L	20	21.4	107	80-130	
Methyl-tert-butyl ether	ug/L	20	22.4	112	67-128	
Methylene chloride	ug/L	20	19.4	97	71-123	
n-Butylbenzene	ug/L	20	21.2	106	77-124	
n-Propylbenzene	ug/L	20	20.0	100	78-120	
Naphthalene	ug/L	20	21.5	107	64-127	
p-Isopropyltoluene	ug/L	20	20.3	102	78-120	
sec-Butylbenzene	ug/L	20	20.6	103	77-122	
Styrene	ug/L	20	19.4	97	79-120	
tert-Butylbenzene	ug/L	20	20.6	103	76-123	
Tetrachloroethene	ug/L	20	19.6	98	79-122	
Toluene	ug/L	20	19.5	97	76-122	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	78-126	
trans-1,3-Dichloropropene	ug/L	20	21.3	107	79-124	
Trichloroethene	ug/L	20	18.1	91	76-120	
Trichlorofluoromethane	ug/L	20	18.2	91	69-133	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

LABORATORY CONTROL SAMPLE: 1223716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	20	16.0	80	57-140	
Xylene (Total)	ug/L	60	58.9	98	76-122	
1,2-Dichloroethane-d4 (S)	%			109	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Dibromofluoromethane (S)	%			101	80-120	
Toluene-d8 (S)	%			99	80-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

QC Batch: WET/42453

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149172001

METHOD BLANK: 1222914

Matrix: Water

Associated Lab Samples: 60149172001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/24/13 15:02	

LABORATORY CONTROL SAMPLE: 1222915

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	171	86	85-115	

SAMPLE DUPLICATE: 1222916

Parameter	Units	60149174001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	35200	33800	4	17	

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## QUALIFIERS

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: MSV/55071

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 48-HR B10

Pace Project No.: 60149172

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149172002	48-HR B10	EPA 5030B/8260	MSV/55071		
60149172003	TRIP BLANK	EPA 5030B/8260	MSV/55071		
60149172001	48-HR B10	SM 5210B	WET/42453	SM 5210B	WET/42526

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149172  
60149172

Client Name: Barr Eng

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  ZPLL

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 1.1

Date and initials of person examining contents: 7-19-13 BA

Temperature should be above freezing to 6°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 holding time:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>RUSH</u>
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: <u>VOA</u> coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased): <u>covered</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/22



July 24, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-017  
Pace Project No.: 60149174

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 19, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-017

Pace Project No.: 60149174

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-017

Pace Project No.: 60149174

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149174001	316-017	Water	07/18/13 09:44	07/19/13 01:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-017

Pace Project No.: 60149174

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149174001	316-017	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-017

Pace Project No.: 60149174

Sample: 316-017	Lab ID: 60149174001	Collected: 07/18/13 09:44	Received: 07/19/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>35200</b>	mg/L	2.0	1	07/19/13 16:01	07/24/13 15:37		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149174

QC Batch: WET/42453

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149174001

METHOD BLANK: 1222914

Matrix: Water

Associated Lab Samples: 60149174001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/24/13 15:02	

LABORATORY CONTROL SAMPLE: 1222915

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	171	86	85-115	

SAMPLE DUPLICATE: 1222916

Parameter	Units	60149174001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	35200	33800	4	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-017

Pace Project No.: 60149174

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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TNI - The NELAC Institute.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-017

Pace Project No.: 60149174

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149174001	316-017	SM 5210B	WET/42453	SM 5210B	WET/42526

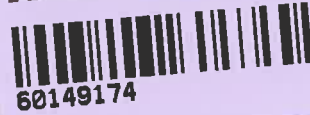
## REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149174



Client Name: Barl Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Crossroads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.7

Temperature should be above freezing to 6°C

Date and initials of person examining contents: KE 7/19/13

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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	10.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	13.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Includes date/time/ID/analyses	Matrix: <u>WT</u>	15.
All containers needing preservation have been checked	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		18.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	19.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	20. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/22/13



July 26, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-017  
Pace Project No.: 60149196

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 19, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149196001	316-017	Water	07/18/13 09:41	07/19/13 01:50
60149196002	TRIP BLANK	Water	07/18/13 09:41	07/19/13 01:50

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149196001	316-017	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60149196002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

Sample: 316-017	Lab ID: 60149196001	Collected: 07/18/13 09:41	Received: 07/19/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum	7130 ug/L		150	2	07/22/13 16:30	07/24/13 17:27	7429-90-5	
Antimony	56.0 ug/L		50.0	5	07/22/13 16:30	07/24/13 17:48	7440-36-0	
Arsenic	730 ug/L		50.0	5	07/22/13 16:30	07/24/13 17:48	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/22/13 16:30	07/24/13 17:48	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/22/13 16:30	07/24/13 17:48	7440-43-9	D3
Chromium	295 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:48	7440-47-3	
Cobalt	51.6 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:48	7440-48-4	
Copper	ND ug/L		50.0	5	07/22/13 16:30	07/24/13 17:48	7440-50-8	D3
Iron	947000 ug/L		100	2	07/22/13 16:30	07/24/13 17:27	7439-89-6	
Lead	98.0 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:48	7439-92-1	
Nickel	137 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:48	7440-02-0	
Selenium	ND ug/L		75.0	5	07/22/13 16:30	07/24/13 17:48	7782-49-2	D3
Silver	ND ug/L		35.0	5	07/22/13 16:30	07/24/13 17:48	7440-22-4	D3
Thallium	ND ug/L		100	5	07/22/13 16:30	07/24/13 17:48	7440-28-0	D3
Zinc	18400 ug/L		1000	20	07/22/13 16:30	07/24/13 18:15	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum, Dissolved	4670 ug/L		150	2	07/22/13 16:30	07/24/13 17:37	7429-90-5	
Antimony, Dissolved	56.4 ug/L		50.0	5	07/22/13 16:30	07/24/13 17:58	7440-36-0	D9
Arsenic, Dissolved	714 ug/L		50.0	5	07/22/13 16:30	07/24/13 17:58	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/22/13 16:30	07/24/13 17:58	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/22/13 16:30	07/24/13 17:58	7440-43-9	D3
Chromium, Dissolved	251 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:58	7440-47-3	
Cobalt, Dissolved	41.8 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:58	7440-48-4	
Copper, Dissolved	ND ug/L		50.0	5	07/22/13 16:30	07/24/13 17:58	7440-50-8	D3
Iron, Dissolved	644000 ug/L		100	2	07/22/13 16:30	07/24/13 17:37	7439-89-6	
Lead, Dissolved	74.6 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:58	7439-92-1	
Nickel, Dissolved	123 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:58	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/22/13 16:30	07/24/13 17:58	7782-49-2	D3
Silver, Dissolved	ND ug/L		35.0	5	07/22/13 16:30	07/24/13 17:58	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/22/13 16:30	07/24/13 17:58	7440-28-0	D3
Zinc, Dissolved	16400 ug/L		1000	20	07/22/13 16:30	07/24/13 18:25	7440-66-6	
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury	0.31 ug/L		0.20	1	07/22/13 09:15	07/22/13 13:12	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND ug/L		0.20	1	07/22/13 14:30	07/23/13 09:36	7439-97-6	
<b>625 MSSV</b>								
Analytical Method: EPA 625 Preparation Method: EPA 625								
Acenaphthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	83-32-9	
Acenaphthylene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	208-96-8	
Anthracene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	120-12-7	
Benzidine	ND ug/L		10000	20	07/22/13 00:00	07/23/13 15:18	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

Sample: 316-017	Lab ID: 60149196001	Collected: 07/18/13 09:41	Received: 07/19/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	191-24-2	
Benzo(k)fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	101-55-3	
Butylbenzylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		1200	20	07/22/13 00:00	07/23/13 15:18	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		1200	20	07/22/13 00:00	07/23/13 15:18	39638-32-9	
2-Chloronaphthalene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	91-58-7	
2-Chlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	7005-72-3	
Chrysene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		4000	20	07/22/13 00:00	07/23/13 15:18	91-94-1	
2,4-Dichlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	120-83-2	
Diethylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	84-66-2	
2,4-Dimethylphenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	105-67-9	
Dimethylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	131-11-3	
Di-n-butylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		5000	20	07/22/13 00:00	07/23/13 15:18	534-52-1	
2,4-Dinitrophenol	ND ug/L		10000	20	07/22/13 00:00	07/23/13 15:18	51-28-5	
2,4-Dinitrotoluene	ND ug/L		1200	20	07/22/13 00:00	07/23/13 15:18	121-14-2	
2,6-Dinitrotoluene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	606-20-2	
Di-n-octylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	117-81-7	
Fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	206-44-0	
Fluorene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	87-68-3	
Hexachlorobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	77-47-4	
Hexachloroethane	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	193-39-5	
Isophorone	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	78-59-1	
Naphthalene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	91-20-3	
Nitrobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	98-95-3	
2-Nitrophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	88-75-5	
4-Nitrophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	100-02-7	
N-Nitrosodimethylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	86-30-6	
Pentachlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	87-86-5	
Phenanthrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	85-01-8	
Phenol	<b>15000</b> ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	108-95-2	
Pyrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:18	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

Sample: 316-017		Lab ID: 60149196001	Collected: 07/18/13 09:41	Received: 07/19/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/22/13 00:00	07/23/13 15:18	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/22/13 00:00	07/23/13 15:18	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/22/13 00:00	07/23/13 15:18	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/22/13 00:00	07/23/13 15:18	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/22/13 00:00	07/23/13 15:18	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/22/13 00:00	07/23/13 15:18	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/24/13 17:54	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/24/13 17:54	75-27-4	
Bromoform	ND ug/L		200	200		07/24/13 17:54	75-25-2	
Bromomethane	ND ug/L		1000	200		07/24/13 17:54	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/24/13 17:54	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/24/13 17:54	108-90-7	
Chloroethane	ND ug/L		200	200		07/24/13 17:54	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/24/13 17:54	110-75-8	
Chloroform	ND ug/L		200	200		07/24/13 17:54	67-66-3	
Chloromethane	ND ug/L		200	200		07/24/13 17:54	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/24/13 17:54	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/24/13 17:54	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/24/13 17:54	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/24/13 17:54	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/24/13 17:54	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/24/13 17:54	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/24/13 17:54	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/24/13 17:54	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/24/13 17:54	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/24/13 17:54	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/24/13 17:54	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/24/13 17:54	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/24/13 17:54	100-41-4	
Methylene chloride	ND ug/L		200	200		07/24/13 17:54	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/24/13 17:54	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/24/13 17:54	127-18-4	
Toluene	ND ug/L		200	200		07/24/13 17:54	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/24/13 17:54	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/24/13 17:54	79-00-5	
Trichloroethene	ND ug/L		200	200		07/24/13 17:54	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/24/13 17:54	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/24/13 17:54	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/24/13 17:54	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	110 %		80-120	200		07/24/13 17:54	1868-53-7	D3,HS
4-Bromofluorobenzene (S)	103 %		80-120	200		07/24/13 17:54	460-00-4	
Toluene-d8 (S)	104 %		80-120	200		07/24/13 17:54	2037-26-5	
1,2-Dichloroethane-d4 (S)	100 %		80-120	200		07/24/13 17:54	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

<b>Sample: 316-017</b>		<b>Lab ID: 60149196001</b>	Collected: 07/18/13 09:41	Received: 07/19/13 01:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Preservation pH	<b>7.0</b>		1.0	200		07/24/13 17:54		
<b>HEM, Oil and Grease</b>		Analytical Method: EPA 1664A						
Oil and Grease	<b>503</b> mg/L		5.0	1		07/19/13 14:23		
<b>1664 SGT-HEM, TPH</b>		Analytical Method: EPA 1664A						
Total Petroleum Hydrocarbons	<b>96.3</b> mg/L		5.0	1		07/19/13 14:42		
<b>2540D Total Suspended Solids</b>		Analytical Method: SM 2540D						
Total Suspended Solids	<b>2410</b> mg/L		5.0	1		07/22/13 08:46		
<b>4500H+ pH, Electrometric</b>		Analytical Method: SM 4500-H+B						
pH at 25 Degrees C	<b>5.3</b> Std. Units		0.10	1		07/22/13 14:55		H6
<b>350.1 Ammonia</b>		Analytical Method: EPA 350.1						
Nitrogen, Ammonia	<b>717</b> mg/L		20.0	200		07/22/13 14:50	7664-41-7	
<b>410.4 COD</b>		Analytical Method: EPA 410.4						
Chemical Oxygen Demand	<b>59100</b> mg/L		5000	500		07/22/13 11:12		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

Sample: TRIP BLANK	Lab ID: 60149196002	Collected: 07/18/13 09:41	Received: 07/19/13 01:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/24/13 15:47	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/24/13 15:47	75-27-4	
Bromoform	ND ug/L		1.0	1		07/24/13 15:47	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/24/13 15:47	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/24/13 15:47	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/24/13 15:47	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/24/13 15:47	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/24/13 15:47	110-75-8	
Chloroform	ND ug/L		1.0	1		07/24/13 15:47	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/24/13 15:47	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/24/13 15:47	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 15:47	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 15:47	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 15:47	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/24/13 15:47	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/24/13 15:47	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/24/13 15:47	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/24/13 15:47	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/24/13 15:47	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/24/13 15:47	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/24/13 15:47	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/24/13 15:47	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/24/13 15:47	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/24/13 15:47	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/24/13 15:47	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/24/13 15:47	127-18-4	
Toluene	ND ug/L		1.0	1		07/24/13 15:47	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/24/13 15:47	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/24/13 15:47	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/24/13 15:47	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/24/13 15:47	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/24/13 15:47	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/24/13 15:47	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		80-120	1		07/24/13 15:47	1868-53-7	
4-Bromofluorobenzene (S)	98 %		80-120	1		07/24/13 15:47	460-00-4	
Toluene-d8 (S)	99 %		80-120	1		07/24/13 15:47	2037-26-5	
1,2-Dichloroethane-d4 (S)	91 %		80-120	1		07/24/13 15:47	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/24/13 15:47		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

QC Batch: MERP/7530

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Associated Lab Samples: 60149196001

METHOD BLANK: 1223638

Matrix: Water

Associated Lab Samples: 60149196001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/22/13 12:50	

LABORATORY CONTROL SAMPLE: 1223639

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223640

1223641

Parameter	Units	60149083001 Result	MS		MSD		MS		MSD		% Rec Limits	Max RPD	RPD	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Mercury	ug/L	ND	5	5	4.5	5.0	90	99	70-130	10	20			

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

QC Batch: MERP/7532 Analysis Method: EPA 245.1  
 QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury - Dissolved  
 Associated Lab Samples: 60149196001

METHOD BLANK: 1223925 Matrix: Water

Associated Lab Samples: 60149196001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/23/13 09:23	

LABORATORY CONTROL SAMPLE: 1223926

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.4	89	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223927 1223928

Parameter	Units	60149304001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury, Dissolved	ug/L	ND	5	5	4.2	4.4	83	86	70-130	4	20	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

QC Batch: MPRP/23568 Analysis Method: EPA 200.7  
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
 Associated Lab Samples: 60149196001

METHOD BLANK: 1223913 Matrix: Water

Associated Lab Samples: 60149196001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/24/13 15:04	
Antimony	ug/L	ND	10.0	07/24/13 15:04	
Arsenic	ug/L	ND	10.0	07/24/13 15:04	
Beryllium	ug/L	ND	1.0	07/24/13 15:04	
Cadmium	ug/L	ND	5.0	07/24/13 15:04	
Chromium	ug/L	ND	5.0	07/24/13 15:04	
Cobalt	ug/L	ND	5.0	07/24/13 15:04	
Copper	ug/L	ND	10.0	07/24/13 15:04	
Iron	ug/L	ND	50.0	07/24/13 15:04	
Lead	ug/L	ND	5.0	07/24/13 15:04	
Nickel	ug/L	ND	5.0	07/24/13 15:04	
Selenium	ug/L	ND	15.0	07/24/13 15:04	
Silver	ug/L	ND	7.0	07/24/13 15:04	
Thallium	ug/L	ND	20.0	07/24/13 15:04	
Zinc	ug/L	ND	50.0	07/24/13 15:04	

LABORATORY CONTROL SAMPLE: 1223914

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10000	100	85-115	
Antimony	ug/L	1000	983	98	85-115	
Arsenic	ug/L	1000	916	92	85-115	
Beryllium	ug/L	1000	968	97	85-115	
Cadmium	ug/L	1000	951	95	85-115	
Chromium	ug/L	1000	918	92	85-115	
Cobalt	ug/L	1000	961	96	85-115	
Copper	ug/L	1000	939	94	85-115	
Iron	ug/L	10000	9780	98	85-115	
Lead	ug/L	1000	963	96	85-115	
Nickel	ug/L	1000	970	97	85-115	
Selenium	ug/L	1000	966	97	85-115	
Silver	ug/L	500	454	91	85-115	
Thallium	ug/L	1000	983	98	85-115	
Zinc	ug/L	1000	920	92	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223915 1223916

Parameter	Units	60149201001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum	ug/L	ND	10000	10000	9950	9920	99	99	70-130	0	8

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

Parameter	Units	60149201001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec							
Antimony	ug/L	ND	1000	1000	1010	1010	101	101	70-130	1	7					
Arsenic	ug/L	ND	1000	1000	942	947	94	95	70-130	0	10					
Beryllium	ug/L	ND	1000	1000	971	963	97	96	70-130	1	7					
Cadmium	ug/L	ND	1000	1000	964	968	96	97	70-130	0	10					
Chromium	ug/L	ND	1000	1000	940	929	94	93	70-130	1	10					
Cobalt	ug/L	ND	1000	1000	954	958	95	96	70-130	0	6					
Copper	ug/L	42.9	1000	1000	997	999	95	96	70-130	0	11					
Iron	ug/L	ND	10000	10000	9620	9560	96	95	70-130	1	10					
Lead	ug/L	ND	1000	1000	960	964	96	96	70-130	0	10					
Nickel	ug/L	16.9	1000	1000	979	981	96	96	70-130	0	10					
Selenium	ug/L	ND	1000	1000	965	970	96	97	70-130	0	10					
Silver	ug/L	ND	500	500	490	493	98	99	70-130	1	10					
Thallium	ug/L	ND	1000	1000	966	969	97	97	70-130	0	6					
Zinc	ug/L	53.4	1000	1000	977	975	92	92	70-130	0	11					

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

QC Batch: MPRP/23569

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Dissolved

Associated Lab Samples: 60149196001

METHOD BLANK: 1223969

Matrix: Water

Associated Lab Samples: 60149196001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/24/13 16:49	
Antimony, Dissolved	ug/L	ND	10.0	07/24/13 16:49	
Arsenic, Dissolved	ug/L	ND	10.0	07/24/13 16:49	
Beryllium, Dissolved	ug/L	ND	1.0	07/24/13 16:49	
Cadmium, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Chromium, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Cobalt, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Copper, Dissolved	ug/L	ND	10.0	07/24/13 16:49	
Iron, Dissolved	ug/L	ND	50.0	07/24/13 16:49	
Lead, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Nickel, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Selenium, Dissolved	ug/L	ND	15.0	07/24/13 16:49	
Silver, Dissolved	ug/L	ND	7.0	07/24/13 16:49	
Thallium, Dissolved	ug/L	ND	20.0	07/24/13 16:49	
Zinc, Dissolved	ug/L	ND	50.0	07/24/13 16:49	

LABORATORY CONTROL SAMPLE: 1223970

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10400	104	85-115	
Antimony, Dissolved	ug/L	1000	1000	100	85-115	
Arsenic, Dissolved	ug/L	1000	950	95	85-115	
Beryllium, Dissolved	ug/L	1000	1020	102	85-115	
Cadmium, Dissolved	ug/L	1000	983	98	85-115	
Chromium, Dissolved	ug/L	1000	1000	100	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	972	97	85-115	
Iron, Dissolved	ug/L	10000	10400	104	85-115	
Lead, Dissolved	ug/L	1000	1020	102	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	971	97	85-115	
Silver, Dissolved	ug/L	500	492	98	85-115	
Thallium, Dissolved	ug/L	1000	1020	102	85-115	
Zinc, Dissolved	ug/L	1000	999	100	85-115	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

Parameter	Units	60149213001		MS		MSD		MS		MSD		% Rec	% Rec	Limits	RPD	Max	RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	MSD % Rec										
Aluminum, Dissolved	ug/L	0.018J mg/L	10000	10000	10300	10400	103	104	70-130	1	8							
Antimony, Dissolved	ug/L	ND	1000	1000	1090	1070	109	107	70-130	2	7							
Arsenic, Dissolved	ug/L	0.0052J mg/L	1000	1000	1060	1050	106	104	70-130	1	10							
Beryllium, Dissolved	ug/L	ND	1000	1000	998	1010	100	101	70-130	1	7							
Cadmium, Dissolved	ug/L	ND	1000	1000	1060	1050	106	105	70-130	1	10							
Chromium, Dissolved	ug/L	0.0017J mg/L	1000	1000	1020	1030	101	102	70-130	1	10							
Cobalt, Dissolved	ug/L	ND	1000	1000	986	987	99	99	70-130	0	6							
Copper, Dissolved	ug/L	0.0092J mg/L	1000	1000	1040	1030	103	102	70-130	1	11							
Iron, Dissolved	ug/L	ND	10000	10000	10200	10300	102	103	70-130	1	10							
Lead, Dissolved	ug/L	ND	1000	1000	951	959	95	96	70-130	1	10							
Nickel, Dissolved	ug/L	0.011 mg/L	1000	1000	999	1000	99	99	70-130	0	10							
Selenium, Dissolved	ug/L	ND	1000	1000	1100	1080	110	108	70-130	2	10							
Silver, Dissolved	ug/L	ND	500	500	543	544	109	109	70-130	0	10							
Thallium, Dissolved	ug/L	ND	1000	1000	889	893	89	89	70-130	0	6							
Zinc, Dissolved	ug/L	ND	1000	1000	999	1020	100	102	70-130	2	11							

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

QC Batch: MSV/55133 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149196001, 60149196002

METHOD BLANK: 1225012 Matrix: Water

Associated Lab Samples: 60149196001, 60149196002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1-Dichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichloropropane	ug/L	ND	1.0	07/24/13 15:25	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/24/13 15:25	
Benzene	ug/L	ND	1.0	07/24/13 15:25	
Bromodichloromethane	ug/L	ND	1.0	07/24/13 15:25	
Bromoform	ug/L	ND	1.0	07/24/13 15:25	
Bromomethane	ug/L	ND	5.0	07/24/13 15:25	
Carbon tetrachloride	ug/L	ND	1.0	07/24/13 15:25	
Chlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
Chloroethane	ug/L	ND	1.0	07/24/13 15:25	
Chloroform	ug/L	ND	1.0	07/24/13 15:25	
Chloromethane	ug/L	ND	1.0	07/24/13 15:25	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/24/13 15:25	
Dibromochloromethane	ug/L	ND	1.0	07/24/13 15:25	
Ethylbenzene	ug/L	ND	1.0	07/24/13 15:25	
Methylene chloride	ug/L	ND	1.0	07/24/13 15:25	
Tetrachloroethene	ug/L	ND	1.0	07/24/13 15:25	
Toluene	ug/L	ND	1.0	07/24/13 15:25	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/24/13 15:25	
Trichloroethene	ug/L	ND	1.0	07/24/13 15:25	
Trichlorofluoromethane	ug/L	ND	1.0	07/24/13 15:25	
Vinyl chloride	ug/L	ND	1.0	07/24/13 15:25	
Xylene (Total)	ug/L	ND	3.0	07/24/13 15:25	
1,2-Dichloroethane-d4 (S)	%	97	80-120	07/24/13 15:25	
4-Bromofluorobenzene (S)	%	98	80-120	07/24/13 15:25	
Toluene-d8 (S)	%	100	80-120	07/24/13 15:25	

LABORATORY CONTROL SAMPLE: 1225013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	17.9	90	71-139	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

LABORATORY CONTROL SAMPLE: 1225013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	18.9	95	59-138	
1,1,2-Trichloroethane	ug/L	20	18.2	91	69-127	
1,1-Dichloroethane	ug/L	20	17.2	86	69-126	
1,1-Dichloroethene	ug/L	20	20.6	103	65-153	
1,2-Dichlorobenzene	ug/L	20	19.6	98	66-126	
1,2-Dichloroethane	ug/L	20	18.3	91	71-129	
1,2-Dichloropropane	ug/L	20	18.8	94	66-140	
1,3-Dichlorobenzene	ug/L	20	19.9	100	63-127	
1,4-Dichlorobenzene	ug/L	20	19.7	99	68-124	
2-Chloroethylvinyl ether	ug/L	20	14.7	73	33-159	
Benzene	ug/L	20	20.3	101	73-129	
Bromodichloromethane	ug/L	20	17.4	87	63-129	
Bromoform	ug/L	20	20.3	101	52-123	
Bromomethane	ug/L	20	23.2	116	10-160	
Carbon tetrachloride	ug/L	20	19.1	96	70-140	
Chlorobenzene	ug/L	20	17.8	89	68-127	
Chloroethane	ug/L	20	16.9	84	42-160	
Chloroform	ug/L	20	17.6	88	60-120	
Chloromethane	ug/L	20	17.6	88	10-160	
cis-1,2-Dichloroethene	ug/L	20	18.5	92	70-125	
cis-1,3-Dichloropropene	ug/L	20	17.2	86	66-132	
Dibromochloromethane	ug/L	20	17.6	88	63-134	
Ethylbenzene	ug/L	20	18.4	92	66-133	
Methylene chloride	ug/L	20	20.7	104	56-135	
Tetrachloroethene	ug/L	20	20.2	101	64-143	
Toluene	ug/L	20	20.0	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	19.9	100	67-149	
trans-1,3-Dichloropropene	ug/L	20	18.7	93	66-138	
Trichloroethene	ug/L	20	17.7	88	71-130	
Trichlorofluoromethane	ug/L	20	17.5	88	58-158	
Vinyl chloride	ug/L	20	18.0	90	41-160	
Xylene (Total)	ug/L	60	60.0	100	67-130	
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1225014

Parameter	Units	60149196001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3570	89	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3660	92	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3170	79	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3330	83	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3830	96	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3550	89	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3510	88	49-155	
1,2-Dichloropropane	ug/L	ND	4000	3590	90	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

MATRIX SPIKE SAMPLE:		1225014					
Parameter	Units	60149196001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	ND	4000	3560	89	59-146	
1,4-Dichlorobenzene	ug/L	ND	4000	3620	90	18-147	
2-Chloroethylvinyl ether	ug/L	ND	4000	5810	145	10-160	
Benzene	ug/L	ND	4000	3910	98	37-151	
Bromodichloromethane	ug/L	ND	4000	3440	86	35-155	
Bromoform	ug/L	ND	4000	3680	92	45-133	
Bromomethane	ug/L	ND	4000	3550	89	10-160	
Carbon tetrachloride	ug/L	ND	4000	3650	91	70-140	
Chlorobenzene	ug/L	ND	4000	3170	79	37-153	
Chloroethane	ug/L	ND	4000	3210	80	14-160	
Chloroform	ug/L	ND	4000	3380	84	51-138	
Chloromethane	ug/L	ND	4000	3380	84	10-160	
cis-1,2-Dichloroethene	ug/L	ND	4000	3590	90	19-160	
cis-1,3-Dichloropropene	ug/L	ND	4000	3320	83	10-160	
Dibromochloromethane	ug/L	ND	4000	3400	85	53-149	
Ethylbenzene	ug/L	ND	4000	3250	81	37-154	
Methylene chloride	ug/L	ND	4000	4100	99	15-156	
Tetrachloroethene	ug/L	ND	4000	3630	91	64-148	
Toluene	ug/L	ND	4000	3850	96	47-150	
trans-1,2-Dichloroethene	ug/L	ND	4000	3760	94	54-156	
trans-1,3-Dichloropropene	ug/L	ND	4000	3470	87	17-160	
Trichloroethene	ug/L	ND	4000	3320	83	71-157	
Trichlorofluoromethane	ug/L	ND	4000	3330	83	17-160	
Vinyl chloride	ug/L	ND	4000	3290	82	10-160	
Xylene (Total)	ug/L	ND	12000	10900	91	12-153	
1,2-Dichloroethane-d4 (S)	%				100	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	D3,HS
Toluene-d8 (S)	%				101	80-120	
Preservation pH		7.0		7.0			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017  
Pace Project No.: 60149196

QC Batch: OEXT/39407 Analysis Method: EPA 625  
QC Batch Method: EPA 625 Analysis Description: 625 MSS  
Associated Lab Samples: 60149196001

METHOD BLANK: 1223571 Matrix: Water  
Associated Lab Samples: 60149196001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/23/13 11:43	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dichlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dimethylphenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dinitrophenol	ug/L	ND	50.0	07/23/13 11:43	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/23/13 11:43	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/23/13 11:43	
2-Chloronaphthalene	ug/L	ND	5.0	07/23/13 11:43	
2-Chlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2-Nitrophenol	ug/L	ND	5.0	07/23/13 11:43	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/23/13 11:43	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/23/13 11:43	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/23/13 11:43	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/23/13 11:43	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/23/13 11:43	
4-Nitrophenol	ug/L	ND	5.0	07/23/13 11:43	
Acenaphthene	ug/L	ND	5.0	07/23/13 11:43	
Acenaphthylene	ug/L	ND	5.0	07/23/13 11:43	
Anthracene	ug/L	ND	5.0	07/23/13 11:43	
Benzidine	ug/L	ND	50.0	07/23/13 11:43	
Benzo(a)anthracene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(a)pyrene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/23/13 11:43	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/23/13 11:43	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/23/13 11:43	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/23/13 11:43	
Butylbenzylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Chrysene	ug/L	ND	5.0	07/23/13 11:43	
Di-n-butylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Di-n-octylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/23/13 11:43	
Diethylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Dimethylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
Fluorene	ug/L	ND	5.0	07/23/13 11:43	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/23/13 11:43	
Hexachlorobenzene	ug/L	ND	5.0	07/23/13 11:43	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/23/13 11:43	
Hexachloroethane	ug/L	ND	5.0	07/23/13 11:43	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/23/13 11:43	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Project No.: 60149196

METHOD BLANK: 1223571

Matrix: Water

Associated Lab Samples: 60149196001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/23/13 11:43	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/23/13 11:43	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/23/13 11:43	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/23/13 11:43	
Naphthalene	ug/L	ND	5.0	07/23/13 11:43	
Nitrobenzene	ug/L	ND	5.0	07/23/13 11:43	
Pentachlorophenol	ug/L	ND	5.0	07/23/13 11:43	
Phenanthrene	ug/L	ND	5.0	07/23/13 11:43	
Phenol	ug/L	ND	5.0	07/23/13 11:43	
Pyrene	ug/L	ND	5.0	07/23/13 11:43	
2,4,6-Tribromophenol (S)	%	90	39-119	07/23/13 11:43	
2-Fluorobiphenyl (S)	%	93	36-120	07/23/13 11:43	
2-Fluorophenol (S)	%	50	18-120	07/23/13 11:43	
Nitrobenzene-d5 (S)	%	86	32-120	07/23/13 11:43	
Phenol-d6 (S)	%	32	12-120	07/23/13 11:43	
Terphenyl-d14 (S)	%	96	44-120	07/23/13 11:43	

LABORATORY CONTROL SAMPLE: 1223572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.9	80	44-120	
2,4,6-Trichlorophenol	ug/L	50	41.8	84	48-120	
2,4-Dichlorophenol	ug/L	50	40.0	80	48-120	
2,4-Dimethylphenol	ug/L	50	35.4	71	37-119	
2,4-Dinitrophenol	ug/L	50	33.9J	68	15-153	
2,4-Dinitrotoluene	ug/L	50	44.2	88	54-120	
2,6-Dinitrotoluene	ug/L	50	43.5	87	52-120	
2-Chloronaphthalene	ug/L	50	43.0	86	60-118	
2-Chlorophenol	ug/L	50	36.5	73	44-120	
2-Nitrophenol	ug/L	50	41.9	84	43-120	
3,3'-Dichlorobenzidine	ug/L	50	53.6	107	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	45.9	92	31-147	
4-Bromophenylphenyl ether	ug/L	50	45.3	91	53-120	
4-Chloro-3-methylphenol	ug/L	50	40.1	80	50-120	
4-Chlorophenylphenyl ether	ug/L	50	43.4	87	54-120	
4-Nitrophenol	ug/L	50	19.3	39	10-120	
Acenaphthene	ug/L	50	42.6	85	51-120	
Acenaphthylene	ug/L	50	42.1	84	51-120	
Anthracene	ug/L	50	45.4	91	54-120	
Benzidine	ug/L	50	29.3J	59	1-124	
Benzo(a)anthracene	ug/L	50	46.2	92	54-120	
Benzo(a)pyrene	ug/L	50	45.1	90	54-120	
Benzo(b)fluoranthene	ug/L	50	48.0	96	57-120	
Benzo(g,h,i)perylene	ug/L	50	46.9	94	54-120	
Benzo(k)fluoranthene	ug/L	50	43.4	87	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

LABORATORY CONTROL SAMPLE: 1223572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	41.3	83	51-120	
bis(2-Chloroethyl) ether	ug/L	50	39.1	78	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	39.8	80	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	46.7	93	51-126	
Butylbenzylphthalate	ug/L	50	45.3	91	45-129	
Chrysene	ug/L	50	46.6	93	54-120	
Di-n-butylphthalate	ug/L	50	47.9	96	57-118	
Di-n-octylphthalate	ug/L	50	44.0	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	47.2	94	56-119	
Diethylphthalate	ug/L	50	45.1	90	55-114	
Dimethylphthalate	ug/L	50	43.7	87	54-112	
Fluoranthene	ug/L	50	48.1	96	56-120	
Fluorene	ug/L	50	43.0	86	59-120	
Hexachloro-1,3-butadiene	ug/L	50	40.0	80	41-116	
Hexachlorobenzene	ug/L	50	44.6	89	53-120	
Hexachlorocyclopentadiene	ug/L	100	48.4	48	31-120	
Hexachloroethane	ug/L	50	36.6	73	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	46.2	92	55-120	
Isophorone	ug/L	50	41.5	83	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	38.8	78	47-120	
N-Nitrosodimethylamine	ug/L	50	30.1	60	28-120	
N-Nitrosodiphenylamine	ug/L	50	42.3	85	53-120	
Naphthalene	ug/L	50	40.7	81	48-120	
Nitrobenzene	ug/L	50	43.7	87	47-120	
Pentachlorophenol	ug/L	50	42.4	85	43-127	
Phenanthrene	ug/L	50	45.6	91	55-120	
Phenol	ug/L	50	15.8	32	15-112	
Pyrene	ug/L	50	45.2	90	55-115	
2,4,6-Tribromophenol (S)	%			89	39-119	
2-Fluorobiphenyl (S)	%			89	36-120	
2-Fluorophenol (S)	%			47	18-120	
Nitrobenzene-d5 (S)	%			84	32-120	
Phenol-d6 (S)	%			30	12-120	
Terphenyl-d14 (S)	%			92	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

QC Batch:	WET/42458	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149196001		

METHOD BLANK: 1222948 Matrix: Water

Associated Lab Samples: 60149196001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/19/13 14:21	

LABORATORY CONTROL SAMPLE: 1222949

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	38.4	96	78-114	

MATRIX SPIKE SAMPLE: 1222953

Parameter	Units	60148993001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.8	40.6	96	78-114	

SAMPLE DUPLICATE: 1222954

Parameter	Units	60148999002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	1.5J		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

QC Batch:	WET/42459	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60149196001		

METHOD BLANK: 1223043 Matrix: Water  
Associated Lab Samples: 60149196001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/19/13 14:39	

LABORATORY CONTROL SAMPLE: 1223044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.2	106	64-132	

MATRIX SPIKE SAMPLE: 1223049

Parameter	Units	60148726001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20.4	25.0	112	64-132	

SAMPLE DUPLICATE: 1223051

Parameter	Units	60148709002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20.8	35.0	51	34	D6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

QC Batch:	WET/42475	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60149196001		

METHOD BLANK: 1223645 Matrix: Water

Associated Lab Samples: 60149196001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/22/13 08:44	

SAMPLE DUPLICATE: 1223646

Parameter	Units	60149137001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		25	

SAMPLE DUPLICATE: 1223647

Parameter	Units	60149149001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	70.0	55.7	23	25	

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

QC Batch: WET/42464 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149196001

SAMPLE DUPLICATE: 1223388

Parameter	Units	60149183001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.7	7.8	1	5	H6

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017  
Pace Project No.: 60149196

QC Batch: WETA/25531 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60149196001

METHOD BLANK: 1223695 Matrix: Water  
Associated Lab Samples: 60149196001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/22/13 14:24	

LABORATORY CONTROL SAMPLE: 1223696

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1223697

Parameter	Units	60148888001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	18.9	10	25.8	68	90-110	M1

MATRIX SPIKE SAMPLE: 1223698

Parameter	Units	60148923001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.2	110	90-110	

SAMPLE DUPLICATE: 1223699

Parameter	Units	60148926001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	10.5	10.6	1	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

QC Batch:	WETA/25518	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60149196001		

METHOD BLANK: 1222987 Matrix: Water  
Associated Lab Samples: 60149196001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/22/13 11:04	

LABORATORY CONTROL SAMPLE: 1222988

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	51.7	103	90-110	

MATRIX SPIKE SAMPLE: 1222989

Parameter	Units	60148949016 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	11.2	50	64.1	106	90-110	

MATRIX SPIKE SAMPLE: 1222991

Parameter	Units	60149003001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	56.6	97	90-110	

SAMPLE DUPLICATE: 1222990

Parameter	Units	60149010001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	60100	59700	1	25	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39407

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

D9 Dissolved result is greater than the total. Data is within laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-017

Pace Project No.: 60149196

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149196001	316-017	EPA 200.7	MPRP/23568	EPA 200.7	ICP/18510
60149196001	316-017	EPA 200.7	MPRP/23569	EPA 200.7	ICP/18503
60149196001	316-017	EPA 245.1	MERP/7530	EPA 245.1	MERC/7484
60149196001	316-017	EPA 245.1	MERP/7532	EPA 245.1	MERC/7489
60149196001	316-017	EPA 625	OEXT/39407	EPA 625	MSSV/12514
60149196001	316-017	EPA 624 Low	MSV/55133		
60149196002	TRIP BLANK	EPA 624 Low	MSV/55133		
60149196001	316-017	EPA 1664A	WET/42458		
60149196001	316-017	EPA 1664A	WET/42459		
60149196001	316-017	SM 2540D	WET/42475		
60149196001	316-017	SM 4500-H+B	WET/42464		
60149196001	316-017	EPA 350.1	WETA/25531		
60149196001	316-017	EPA 410.4	WETA/25518		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149196
Barcode
60149196

Client Name: Barr Eng

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other [x] roads

Tracking #: Pace Shipping Label Used? Yes [x] No [ ]

Custody Seal on Cooler/Box Present: Yes [x] No [ ] Seals intact: Yes [x] No [ ]

Packing Material: Bubble Wrap [ ] Bubble Bags [x] Foam [x] None [ ] Other [ ]

Thermometer Used: T-112 / T-194 Type of Ice: [x] VWR Blue None [ ] Samples received on ice, cooling process has begun.

Cooler Temperature: 2.7

Date and initials of person examining contents: KE 7/19/13

Temperature should be above freezing to 6°C

Table with 17 rows and 2 columns. Row 1: Chain of Custody present: [x] Yes [ ] No [ ] N/A. Row 2: Chain of Custody filled out: [x] Yes [ ] No [ ] N/A. Row 3: Chain of Custody relinquished: [x] Yes [ ] No [ ] N/A. Row 4: Sampler name & signature on COC: [x] Yes [ ] No [ ] N/A. Row 5: Samples arrived within holding time: [x] Yes [ ] No [ ] N/A. Row 6: Short Hold Time analyses (<72hr): [x] Yes [ ] No [ ] N/A. Row 7: Rush Turn Around Time requested: [ ] Yes [x] No [ ] N/A. Row 8: Sufficient volume: [x] Yes [ ] No [ ] N/A. Row 9: Correct containers used: [x] Yes [ ] No [ ] N/A. Row 10: Pace containers used: [x] Yes [ ] No [ ] N/A. Row 11: Containers intact: [x] Yes [ ] No [ ] N/A. Row 12: Unpreserved 5035A soils frozen w/in 48hrs? [ ] Yes [ ] No [x] N/A. Row 13: Filtered volume received for dissolved tests? [x] Yes [ ] No [ ] N/A. Row 14: Sample labels match COC: [x] Yes [ ] No [ ] N/A. Row 15: Includes date/time/ID/analyses Matrix: WT. Row 16: All containers needing preservation have been checked. [x] Yes [ ] No [ ] N/A. Row 17: All containers needing preservation are found to be in compliance with EPA recommendation. [ ] Yes [x] No [ ] N/A. Row 18: Exceptions: VOA, coliform, TOC, O&O, WI-DRO (water), Phenolics. [x] Yes [ ] No. Row 19: Trip Blank present: [x] Yes [ ] No [ ] N/A. Row 20: Pace Trip Blank lot # (if purchased): Jul 10. Row 21: Headspace in VOA vials (>6mm): [x] Yes [ ] No [ ] N/A. Row 22: Project sampled in USDA Regulated Area: [ ] Yes [x] No [ ] N/A. Row 23: List State: [ ]

Initial pH ~ 5.0. Added 25 ml of respective preservative to get a final pH ~ 2.0.
Initial when completed KE Lot # of added preservative 12510

5 of 5 316-017 FOOTNOTE

Client Notification/ Resolution: Copy COC to Client? Y / [ ] N Field Data Required? Y / [ ] N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date: 7/22/13



July 26, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-018  
Pace Project No.: 60149280

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 20, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-018

Pace Project No.: 60149280

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-018

Pace Project No.: 60149280

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149280001	316-01R	Water	07/19/13 12:22	07/20/13 00:40

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-018

Pace Project No.: 60149280

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149280001	316-01R	SM 5210B	JMC1	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-018

Pace Project No.: 60149280

Sample: 316-01R	Lab ID: 60149280001	Collected: 07/19/13 12:22	Received: 07/20/13 00:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>27500</b>	mg/L	2.0	1	07/20/13 11:34	07/25/13 14:56		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149280

QC Batch: WET/42470

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149280001

METHOD BLANK: 1223421

Matrix: Water

Associated Lab Samples: 60149280001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/25/13 14:36	

LABORATORY CONTROL SAMPLE: 1223422

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	169	85	85-115	

SAMPLE DUPLICATE: 1223424

Parameter	Units	60149284001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	511	542	6	17	

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## QUALIFIERS

Project: BRIDGETON LF 316-018

Pace Project No.: 60149280

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-018

Pace Project No.: 60149280

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149280001	316-01R	SM 5210B	WET/42470	SM 5210B	WET/42552

## REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149280



60149280

Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  XR

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 0.5

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: JMS 7/20/13 BJS

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>water</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	initial when completed <u>JMS</u> Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>60149280</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
		16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/20/13



July 26, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 286/287  
Pace Project No.: 60149281

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 20, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 286/287

Pace Project No.: 60149281

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 286/287

Pace Project No.: 60149281

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149281001	286/287	Water	07/19/13 08:47	07/20/13 00:40

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 286/287

Pace Project No.: 60149281

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149281001	286/287	SM 5210B	JMC1	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 286/287

Pace Project No.: 60149281

Sample: 286/287	Lab ID: 60149281001	Collected: 07/19/13 08:47	Received: 07/20/13 00:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>31000</b>	mg/L	2.0	1	07/20/13 11:16	07/25/13 14:49		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149281

QC Batch: WET/42470

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149281001

METHOD BLANK: 1223421

Matrix: Water

Associated Lab Samples: 60149281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/25/13 14:36	

LABORATORY CONTROL SAMPLE: 1223422

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	169	85	85-115	

SAMPLE DUPLICATE: 1223424

Parameter	Units	60149284001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	511	542	6	17	

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## QUALIFIERS

Project: BRIDGETON LF 286/287

Pace Project No.: 60149281

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 286/287

Pace Project No.: 60149281

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149281001	286/287	SM 5210B	WET/42470	SM 5210B	WET/42552

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149281



60149281

Client Name: Barr

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2" P/I

Thermometer Used: T-112 / T-194 Type of Ice:  Wet  Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 0.9

Date and initials of person examining contents: 2/7/2013

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix:	<u>WT</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	<u>2/7/2013</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client?  Y  N Field Data Required?  Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 2/22/13



July 29, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 286/287  
Pace Project No.: 60149282

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 20, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

---

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Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149282001	286/287	Water	07/19/13 08:47	07/20/13 00:40
60149282002	TRIP BLANK	Water	07/19/13 08:47	07/20/13 00:40

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149282001	286/287	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60149282002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

Sample: 286/287	Lab ID: 60149282001	Collected: 07/19/13 08:47	Received: 07/20/13 00:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum	12900	ug/L	150	2	07/22/13 16:30	07/24/13 17:30	7429-90-5	
Antimony	ND	ug/L	50.0	5	07/22/13 16:30	07/24/13 17:51	7440-36-0	D3
Arsenic	738	ug/L	50.0	5	07/22/13 16:30	07/24/13 17:51	7440-38-2	
Beryllium	ND	ug/L	5.0	5	07/22/13 16:30	07/24/13 17:51	7440-41-7	D3
Cadmium	ND	ug/L	25.0	5	07/22/13 16:30	07/24/13 17:51	7440-43-9	D3
Chromium	310	ug/L	25.0	5	07/22/13 16:30	07/24/13 17:51	7440-47-3	
Cobalt	53.1	ug/L	25.0	5	07/22/13 16:30	07/24/13 17:51	7440-48-4	
Copper	ND	ug/L	50.0	5	07/22/13 16:30	07/24/13 17:51	7440-50-8	D3
Iron	1080000	ug/L	250	5	07/22/13 16:30	07/24/13 17:51	7439-89-6	
Lead	263	ug/L	25.0	5	07/22/13 16:30	07/24/13 17:51	7439-92-1	
Nickel	140	ug/L	25.0	5	07/22/13 16:30	07/24/13 17:51	7440-02-0	
Selenium	ND	ug/L	75.0	5	07/22/13 16:30	07/24/13 17:51	7782-49-2	D3
Silver	ND	ug/L	35.0	5	07/22/13 16:30	07/24/13 17:51	7440-22-4	D3
Thallium	ND	ug/L	100	5	07/22/13 16:30	07/24/13 17:51	7440-28-0	D3
Zinc	15500	ug/L	1000	20	07/22/13 16:30	07/24/13 18:18	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum, Dissolved	5030	ug/L	150	2	07/22/13 16:30	07/24/13 17:41	7429-90-5	
Antimony, Dissolved	60.0	ug/L	50.0	5	07/22/13 16:30	07/24/13 18:08	7440-36-0	D9
Arsenic, Dissolved	704	ug/L	50.0	5	07/22/13 16:30	07/24/13 18:08	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	5	07/22/13 16:30	07/24/13 18:08	7440-41-7	D3
Cadmium, Dissolved	ND	ug/L	25.0	5	07/22/13 16:30	07/24/13 18:08	7440-43-9	D3
Chromium, Dissolved	274	ug/L	25.0	5	07/22/13 16:30	07/24/13 18:08	7440-47-3	
Cobalt, Dissolved	48.2	ug/L	25.0	5	07/22/13 16:30	07/24/13 18:08	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	5	07/22/13 16:30	07/24/13 18:08	7440-50-8	D3
Iron, Dissolved	839000	ug/L	100	2	07/22/13 16:30	07/24/13 17:41	7439-89-6	
Lead, Dissolved	76.2	ug/L	25.0	5	07/22/13 16:30	07/24/13 18:08	7439-92-1	
Nickel, Dissolved	133	ug/L	25.0	5	07/22/13 16:30	07/24/13 18:08	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	5	07/22/13 16:30	07/24/13 18:08	7782-49-2	D3
Silver, Dissolved	ND	ug/L	35.0	5	07/22/13 16:30	07/24/13 18:08	7440-22-4	D3
Thallium, Dissolved	ND	ug/L	100	5	07/22/13 16:30	07/24/13 18:08	7440-28-0	D3
Zinc, Dissolved	17900	ug/L	1000	20	07/22/13 16:30	07/24/13 18:28	7440-66-6	D9
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury	0.50	ug/L	0.20	1	07/22/13 09:15	07/22/13 13:17	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND	ug/L	0.20	1	07/22/13 14:30	07/23/13 09:39	7439-97-6	
<b>625 MSSV</b>								
Analytical Method: EPA 625 Preparation Method: EPA 625								
Acenaphthene	ND	ug/L	1000	20	07/22/13 00:00	07/23/13 15:39	83-32-9	
Acenaphthylene	ND	ug/L	1000	20	07/22/13 00:00	07/23/13 15:39	208-96-8	
Anthracene	ND	ug/L	1000	20	07/22/13 00:00	07/23/13 15:39	120-12-7	
Benzidine	ND	ug/L	10000	20	07/22/13 00:00	07/23/13 15:39	92-87-5	
Benzo(a)anthracene	ND	ug/L	1000	20	07/22/13 00:00	07/23/13 15:39	56-55-3	
Benzo(a)pyrene	ND	ug/L	1000	20	07/22/13 00:00	07/23/13 15:39	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

Sample: 286/287	Lab ID: 60149282001	Collected: 07/19/13 08:47	Received: 07/20/13 00:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	191-24-2	
Benzo(k)fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	101-55-3	
Butylbenzylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		1200	20	07/22/13 00:00	07/23/13 15:39	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		1200	20	07/22/13 00:00	07/23/13 15:39	39638-32-9	
2-Chloronaphthalene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	91-58-7	
2-Chlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	7005-72-3	
Chrysene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		4000	20	07/22/13 00:00	07/23/13 15:39	91-94-1	
2,4-Dichlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	120-83-2	
Diethylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	84-66-2	
2,4-Dimethylphenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	105-67-9	
Dimethylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	131-11-3	
Di-n-butylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		5000	20	07/22/13 00:00	07/23/13 15:39	534-52-1	
2,4-Dinitrophenol	ND ug/L		10000	20	07/22/13 00:00	07/23/13 15:39	51-28-5	
2,4-Dinitrotoluene	ND ug/L		1200	20	07/22/13 00:00	07/23/13 15:39	121-14-2	
2,6-Dinitrotoluene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	606-20-2	
Di-n-octylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	117-81-7	
Fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	206-44-0	
Fluorene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	87-68-3	
Hexachlorobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	77-47-4	
Hexachloroethane	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	193-39-5	
Isophorone	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	78-59-1	
Naphthalene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	91-20-3	
Nitrobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	98-95-3	
2-Nitrophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	88-75-5	
4-Nitrophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	100-02-7	
N-Nitrosodimethylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	86-30-6	
Pentachlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	87-86-5	
Phenanthrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	85-01-8	
Phenol	<b>15400</b> ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	108-95-2	
Pyrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 15:39	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

Sample: 286/287		Lab ID: 60149282001	Collected: 07/19/13 08:47	Received: 07/20/13 00:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/22/13 00:00	07/23/13 15:39	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/22/13 00:00	07/23/13 15:39	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/22/13 00:00	07/23/13 15:39	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/22/13 00:00	07/23/13 15:39	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/22/13 00:00	07/23/13 15:39	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/22/13 00:00	07/23/13 15:39	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/24/13 18:37	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/24/13 18:37	75-27-4	
Bromoform	ND ug/L		200	200		07/24/13 18:37	75-25-2	
Bromomethane	ND ug/L		1000	200		07/24/13 18:37	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/24/13 18:37	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/24/13 18:37	108-90-7	
Chloroethane	ND ug/L		200	200		07/24/13 18:37	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/24/13 18:37	110-75-8	
Chloroform	ND ug/L		200	200		07/24/13 18:37	67-66-3	
Chloromethane	ND ug/L		200	200		07/24/13 18:37	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/24/13 18:37	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/24/13 18:37	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/24/13 18:37	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/24/13 18:37	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/24/13 18:37	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/24/13 18:37	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/24/13 18:37	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/24/13 18:37	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/24/13 18:37	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/24/13 18:37	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/24/13 18:37	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/24/13 18:37	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/24/13 18:37	100-41-4	
Methylene chloride	ND ug/L		200	200		07/24/13 18:37	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/24/13 18:37	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/24/13 18:37	127-18-4	
Toluene	ND ug/L		200	200		07/24/13 18:37	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/24/13 18:37	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/24/13 18:37	79-00-5	
Trichloroethene	ND ug/L		200	200		07/24/13 18:37	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/24/13 18:37	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/24/13 18:37	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/24/13 18:37	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		80-120	200		07/24/13 18:37	1868-53-7	D3
4-Bromofluorobenzene (S)	97 %		80-120	200		07/24/13 18:37	460-00-4	
Toluene-d8 (S)	98 %		80-120	200		07/24/13 18:37	2037-26-5	
1,2-Dichloroethane-d4 (S)	99 %		80-120	200		07/24/13 18:37	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

<b>Sample: 286/287</b>		<b>Lab ID: 60149282001</b>	Collected: 07/19/13 08:47	Received: 07/20/13 00:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/24/13 18:37		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>334</b>	mg/L	5.0	1		07/23/13 06:55		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>5.7</b>	mg/L	5.0	1		07/29/13 12:39		M1
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>1160</b>	mg/L	5.0	1		07/23/13 08:20		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.4</b>	Std. Units	0.10	1		07/23/13 15:20		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>715</b>	mg/L	20.0	200		07/22/13 14:55	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>66600</b>	mg/L	5000	500		07/23/13 14:31		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

Sample: TRIP BLANK		Lab ID: 60149282002	Collected: 07/19/13 08:47	Received: 07/20/13 00:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND	ug/L	1.0	1		07/24/13 16:08	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		07/24/13 16:08	75-27-4	
Bromoform	ND	ug/L	1.0	1		07/24/13 16:08	75-25-2	
Bromomethane	ND	ug/L	5.0	1		07/24/13 16:08	74-83-9	
Carbon tetrachloride	ND	ug/L	1.0	1		07/24/13 16:08	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		07/24/13 16:08	108-90-7	
Chloroethane	ND	ug/L	1.0	1		07/24/13 16:08	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		07/24/13 16:08	110-75-8	
Chloroform	ND	ug/L	1.0	1		07/24/13 16:08	67-66-3	
Chloromethane	ND	ug/L	1.0	1		07/24/13 16:08	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		07/24/13 16:08	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		07/24/13 16:08	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		07/24/13 16:08	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		07/24/13 16:08	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		07/24/13 16:08	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		07/24/13 16:08	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		07/24/13 16:08	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		07/24/13 16:08	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		07/24/13 16:08	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		07/24/13 16:08	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		07/24/13 16:08	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		07/24/13 16:08	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		07/24/13 16:08	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		07/24/13 16:08	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		07/24/13 16:08	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		07/24/13 16:08	127-18-4	
Toluene	ND	ug/L	1.0	1		07/24/13 16:08	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		07/24/13 16:08	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		07/24/13 16:08	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		07/24/13 16:08	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		07/24/13 16:08	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		07/24/13 16:08	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		07/24/13 16:08	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	103 %		80-120	1		07/24/13 16:08	1868-53-7	
4-Bromofluorobenzene (S)	100 %		80-120	1		07/24/13 16:08	460-00-4	
Toluene-d8 (S)	100 %		80-120	1		07/24/13 16:08	2037-26-5	
1,2-Dichloroethane-d4 (S)	97 %		80-120	1		07/24/13 16:08	17060-07-0	
Preservation pH	7.0			1		07/24/13 16:08		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

QC Batch:	MERP/7530	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60149282001		

METHOD BLANK: 1223638 Matrix: Water

Associated Lab Samples: 60149282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/22/13 12:50	

LABORATORY CONTROL SAMPLE: 1223639

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223640 1223641

Parameter	Units	60149083001		MS		MSD		MS		MSD		% Rec Limits	Max RPD	RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Mercury	ug/L	ND	5	5	5	5	4.5	5.0	90	99	70-130	10	20		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

QC Batch: MERP/7532

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury - Dissolved

Associated Lab Samples: 60149282001

METHOD BLANK: 1223925

Matrix: Water

Associated Lab Samples: 60149282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/23/13 09:23	

LABORATORY CONTROL SAMPLE: 1223926

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.4	89	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223927

1223928

Parameter	Units	60149304001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury, Dissolved	ug/L	ND	5	5	4.2	4.4	83	86	70-130	4	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287  
Pace Project No.: 60149282

QC Batch: MPRP/23568      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60149282001

METHOD BLANK: 1223913      Matrix: Water  
Associated Lab Samples: 60149282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/24/13 15:04	
Antimony	ug/L	ND	10.0	07/24/13 15:04	
Arsenic	ug/L	ND	10.0	07/24/13 15:04	
Beryllium	ug/L	ND	1.0	07/24/13 15:04	
Cadmium	ug/L	ND	5.0	07/24/13 15:04	
Chromium	ug/L	ND	5.0	07/24/13 15:04	
Cobalt	ug/L	ND	5.0	07/24/13 15:04	
Copper	ug/L	ND	10.0	07/24/13 15:04	
Iron	ug/L	ND	50.0	07/24/13 15:04	
Lead	ug/L	ND	5.0	07/24/13 15:04	
Nickel	ug/L	ND	5.0	07/24/13 15:04	
Selenium	ug/L	ND	15.0	07/24/13 15:04	
Silver	ug/L	ND	7.0	07/24/13 15:04	
Thallium	ug/L	ND	20.0	07/24/13 15:04	
Zinc	ug/L	ND	50.0	07/24/13 15:04	

LABORATORY CONTROL SAMPLE: 1223914

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10000	100	85-115	
Antimony	ug/L	1000	983	98	85-115	
Arsenic	ug/L	1000	916	92	85-115	
Beryllium	ug/L	1000	968	97	85-115	
Cadmium	ug/L	1000	951	95	85-115	
Chromium	ug/L	1000	918	92	85-115	
Cobalt	ug/L	1000	961	96	85-115	
Copper	ug/L	1000	939	94	85-115	
Iron	ug/L	10000	9780	98	85-115	
Lead	ug/L	1000	963	96	85-115	
Nickel	ug/L	1000	970	97	85-115	
Selenium	ug/L	1000	966	97	85-115	
Silver	ug/L	500	454	91	85-115	
Thallium	ug/L	1000	983	98	85-115	
Zinc	ug/L	1000	920	92	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223915      1223916

Parameter	Units	60149201001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Aluminum	ug/L	ND	10000	10000	9950	9920	99	99	70-130	0	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

Parameter	Units	60149201001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max	RPD	Qual
		Result	Conc.	Spike	Conc.	Result	Conc.	% Rec	% Rec								
Antimony	ug/L	ND	1000	1000	1010	1010	101	101	70-130	1	7						
Arsenic	ug/L	ND	1000	1000	942	947	94	95	70-130	0	10						
Beryllium	ug/L	ND	1000	1000	971	963	97	96	70-130	1	7						
Cadmium	ug/L	ND	1000	1000	964	968	96	97	70-130	0	10						
Chromium	ug/L	ND	1000	1000	940	929	94	93	70-130	1	10						
Cobalt	ug/L	ND	1000	1000	954	958	95	96	70-130	0	6						
Copper	ug/L	42.9	1000	1000	997	999	95	96	70-130	0	11						
Iron	ug/L	ND	10000	10000	9620	9560	96	95	70-130	1	10						
Lead	ug/L	ND	1000	1000	960	964	96	96	70-130	0	10						
Nickel	ug/L	16.9	1000	1000	979	981	96	96	70-130	0	10						
Selenium	ug/L	ND	1000	1000	965	970	96	97	70-130	0	10						
Silver	ug/L	ND	500	500	490	493	98	99	70-130	1	10						
Thallium	ug/L	ND	1000	1000	966	969	97	97	70-130	0	6						
Zinc	ug/L	53.4	1000	1000	977	975	92	92	70-130	0	11						

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

QC Batch: MPRP/23569

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Dissolved

Associated Lab Samples: 60149282001

METHOD BLANK: 1223969

Matrix: Water

Associated Lab Samples: 60149282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/24/13 16:49	
Antimony, Dissolved	ug/L	ND	10.0	07/24/13 16:49	
Arsenic, Dissolved	ug/L	ND	10.0	07/24/13 16:49	
Beryllium, Dissolved	ug/L	ND	1.0	07/24/13 16:49	
Cadmium, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Chromium, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Cobalt, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Copper, Dissolved	ug/L	ND	10.0	07/24/13 16:49	
Iron, Dissolved	ug/L	ND	50.0	07/24/13 16:49	
Lead, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Nickel, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Selenium, Dissolved	ug/L	ND	15.0	07/24/13 16:49	
Silver, Dissolved	ug/L	ND	7.0	07/24/13 16:49	
Thallium, Dissolved	ug/L	ND	20.0	07/24/13 16:49	
Zinc, Dissolved	ug/L	ND	50.0	07/24/13 16:49	

LABORATORY CONTROL SAMPLE: 1223970

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10400	104	85-115	
Antimony, Dissolved	ug/L	1000	1000	100	85-115	
Arsenic, Dissolved	ug/L	1000	950	95	85-115	
Beryllium, Dissolved	ug/L	1000	1020	102	85-115	
Cadmium, Dissolved	ug/L	1000	983	98	85-115	
Chromium, Dissolved	ug/L	1000	1000	100	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	972	97	85-115	
Iron, Dissolved	ug/L	10000	10400	104	85-115	
Lead, Dissolved	ug/L	1000	1020	102	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	971	97	85-115	
Silver, Dissolved	ug/L	500	492	98	85-115	
Thallium, Dissolved	ug/L	1000	1020	102	85-115	
Zinc, Dissolved	ug/L	1000	999	100	85-115	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

Parameter	Units	60149213001		MS		MSD		MS		MSD		% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	% Rec								
Aluminum, Dissolved	ug/L	0.018J mg/L	10000	10000	10300	10400	103	104	70-130	1	8					
Antimony, Dissolved	ug/L	ND	1000	1000	1090	1070	109	107	70-130	2	7					
Arsenic, Dissolved	ug/L	0.0052J mg/L	1000	1000	1060	1050	106	104	70-130	1	10					
Beryllium, Dissolved	ug/L	ND	1000	1000	998	1010	100	101	70-130	1	7					
Cadmium, Dissolved	ug/L	ND	1000	1000	1060	1050	106	105	70-130	1	10					
Chromium, Dissolved	ug/L	0.0017J mg/L	1000	1000	1020	1030	101	102	70-130	1	10					
Cobalt, Dissolved	ug/L	ND	1000	1000	986	987	99	99	70-130	0	6					
Copper, Dissolved	ug/L	0.0092J mg/L	1000	1000	1040	1030	103	102	70-130	1	11					
Iron, Dissolved	ug/L	ND	10000	10000	10200	10300	102	103	70-130	1	10					
Lead, Dissolved	ug/L	ND	1000	1000	951	959	95	96	70-130	1	10					
Nickel, Dissolved	ug/L	0.011 mg/L	1000	1000	999	1000	99	99	70-130	0	10					
Selenium, Dissolved	ug/L	ND	1000	1000	1100	1080	110	108	70-130	2	10					
Silver, Dissolved	ug/L	ND	500	500	543	544	109	109	70-130	0	10					
Thallium, Dissolved	ug/L	ND	1000	1000	889	893	89	89	70-130	0	6					
Zinc, Dissolved	ug/L	ND	1000	1000	999	1020	100	102	70-130	2	11					

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

QC Batch: MSV/55133 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149282001, 60149282002

METHOD BLANK: 1225012 Matrix: Water

Associated Lab Samples: 60149282001, 60149282002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1-Dichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichloropropane	ug/L	ND	1.0	07/24/13 15:25	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/24/13 15:25	
Benzene	ug/L	ND	1.0	07/24/13 15:25	
Bromodichloromethane	ug/L	ND	1.0	07/24/13 15:25	
Bromoform	ug/L	ND	1.0	07/24/13 15:25	
Bromomethane	ug/L	ND	5.0	07/24/13 15:25	
Carbon tetrachloride	ug/L	ND	1.0	07/24/13 15:25	
Chlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
Chloroethane	ug/L	ND	1.0	07/24/13 15:25	
Chloroform	ug/L	ND	1.0	07/24/13 15:25	
Chloromethane	ug/L	ND	1.0	07/24/13 15:25	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/24/13 15:25	
Dibromochloromethane	ug/L	ND	1.0	07/24/13 15:25	
Ethylbenzene	ug/L	ND	1.0	07/24/13 15:25	
Methylene chloride	ug/L	ND	1.0	07/24/13 15:25	
Tetrachloroethene	ug/L	ND	1.0	07/24/13 15:25	
Toluene	ug/L	ND	1.0	07/24/13 15:25	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/24/13 15:25	
Trichloroethene	ug/L	ND	1.0	07/24/13 15:25	
Trichlorofluoromethane	ug/L	ND	1.0	07/24/13 15:25	
Vinyl chloride	ug/L	ND	1.0	07/24/13 15:25	
Xylene (Total)	ug/L	ND	3.0	07/24/13 15:25	
1,2-Dichloroethane-d4 (S)	%	97	80-120	07/24/13 15:25	
4-Bromofluorobenzene (S)	%	98	80-120	07/24/13 15:25	
Toluene-d8 (S)	%	100	80-120	07/24/13 15:25	

LABORATORY CONTROL SAMPLE: 1225013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	17.9	90	71-139	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

LABORATORY CONTROL SAMPLE: 1225013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	18.9	95	59-138	
1,1,2-Trichloroethane	ug/L	20	18.2	91	69-127	
1,1-Dichloroethane	ug/L	20	17.2	86	69-126	
1,1-Dichloroethene	ug/L	20	20.6	103	65-153	
1,2-Dichlorobenzene	ug/L	20	19.6	98	66-126	
1,2-Dichloroethane	ug/L	20	18.3	91	71-129	
1,2-Dichloropropane	ug/L	20	18.8	94	66-140	
1,3-Dichlorobenzene	ug/L	20	19.9	100	63-127	
1,4-Dichlorobenzene	ug/L	20	19.7	99	68-124	
2-Chloroethylvinyl ether	ug/L	20	14.7	73	33-159	
Benzene	ug/L	20	20.3	101	73-129	
Bromodichloromethane	ug/L	20	17.4	87	63-129	
Bromoform	ug/L	20	20.3	101	52-123	
Bromomethane	ug/L	20	23.2	116	10-160	
Carbon tetrachloride	ug/L	20	19.1	96	70-140	
Chlorobenzene	ug/L	20	17.8	89	68-127	
Chloroethane	ug/L	20	16.9	84	42-160	
Chloroform	ug/L	20	17.6	88	60-120	
Chloromethane	ug/L	20	17.6	88	10-160	
cis-1,2-Dichloroethene	ug/L	20	18.5	92	70-125	
cis-1,3-Dichloropropene	ug/L	20	17.2	86	66-132	
Dibromochloromethane	ug/L	20	17.6	88	63-134	
Ethylbenzene	ug/L	20	18.4	92	66-133	
Methylene chloride	ug/L	20	20.7	104	56-135	
Tetrachloroethene	ug/L	20	20.2	101	64-143	
Toluene	ug/L	20	20.0	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	19.9	100	67-149	
trans-1,3-Dichloropropene	ug/L	20	18.7	93	66-138	
Trichloroethene	ug/L	20	17.7	88	71-130	
Trichlorofluoromethane	ug/L	20	17.5	88	58-158	
Vinyl chloride	ug/L	20	18.0	90	41-160	
Xylene (Total)	ug/L	60	60.0	100	67-130	
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1225014

Parameter	Units	60149196001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3570	89	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3660	92	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3170	79	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3330	83	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3830	96	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3550	89	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3510	88	49-155	
1,2-Dichloropropane	ug/L	ND	4000	3590	90	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

MATRIX SPIKE SAMPLE:		1225014					
Parameter	Units	60149196001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	ND	4000	3560	89	59-146	
1,4-Dichlorobenzene	ug/L	ND	4000	3620	90	18-147	
2-Chloroethylvinyl ether	ug/L	ND	4000	5810	145	10-160	
Benzene	ug/L	ND	4000	3910	98	37-151	
Bromodichloromethane	ug/L	ND	4000	3440	86	35-155	
Bromoform	ug/L	ND	4000	3680	92	45-133	
Bromomethane	ug/L	ND	4000	3550	89	10-160	
Carbon tetrachloride	ug/L	ND	4000	3650	91	70-140	
Chlorobenzene	ug/L	ND	4000	3170	79	37-153	
Chloroethane	ug/L	ND	4000	3210	80	14-160	
Chloroform	ug/L	ND	4000	3380	84	51-138	
Chloromethane	ug/L	ND	4000	3380	84	10-160	
cis-1,2-Dichloroethene	ug/L	ND	4000	3590	90	19-160	
cis-1,3-Dichloropropene	ug/L	ND	4000	3320	83	10-160	
Dibromochloromethane	ug/L	ND	4000	3400	85	53-149	
Ethylbenzene	ug/L	ND	4000	3250	81	37-154	
Methylene chloride	ug/L	ND	4000	4100	99	15-156	
Tetrachloroethene	ug/L	ND	4000	3630	91	64-148	
Toluene	ug/L	ND	4000	3850	96	47-150	
trans-1,2-Dichloroethene	ug/L	ND	4000	3760	94	54-156	
trans-1,3-Dichloropropene	ug/L	ND	4000	3470	87	17-160	
Trichloroethene	ug/L	ND	4000	3320	83	71-157	
Trichlorofluoromethane	ug/L	ND	4000	3330	83	17-160	
Vinyl chloride	ug/L	ND	4000	3290	82	10-160	
Xylene (Total)	ug/L	ND	12000	10900	91	12-153	
1,2-Dichloroethane-d4 (S)	%				100	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	D3,HS
Toluene-d8 (S)	%				101	80-120	
Preservation pH		7.0		7.0			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

QC Batch: OEXT/39407 Analysis Method: EPA 625  
QC Batch Method: EPA 625 Analysis Description: 625 MSS  
Associated Lab Samples: 60149282001

METHOD BLANK: 1223571 Matrix: Water

Associated Lab Samples: 60149282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/23/13 11:43	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dichlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dimethylphenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dinitrophenol	ug/L	ND	50.0	07/23/13 11:43	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/23/13 11:43	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/23/13 11:43	
2-Chloronaphthalene	ug/L	ND	5.0	07/23/13 11:43	
2-Chlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2-Nitrophenol	ug/L	ND	5.0	07/23/13 11:43	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/23/13 11:43	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/23/13 11:43	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/23/13 11:43	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/23/13 11:43	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/23/13 11:43	
4-Nitrophenol	ug/L	ND	5.0	07/23/13 11:43	
Acenaphthene	ug/L	ND	5.0	07/23/13 11:43	
Acenaphthylene	ug/L	ND	5.0	07/23/13 11:43	
Anthracene	ug/L	ND	5.0	07/23/13 11:43	
Benzidine	ug/L	ND	50.0	07/23/13 11:43	
Benzo(a)anthracene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(a)pyrene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/23/13 11:43	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/23/13 11:43	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/23/13 11:43	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/23/13 11:43	
Butylbenzylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Chrysene	ug/L	ND	5.0	07/23/13 11:43	
Di-n-butylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Di-n-octylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/23/13 11:43	
Diethylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Dimethylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
Fluorene	ug/L	ND	5.0	07/23/13 11:43	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/23/13 11:43	
Hexachlorobenzene	ug/L	ND	5.0	07/23/13 11:43	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/23/13 11:43	
Hexachloroethane	ug/L	ND	5.0	07/23/13 11:43	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/23/13 11:43	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Project No.: 60149282

METHOD BLANK: 1223571

Matrix: Water

Associated Lab Samples: 60149282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/23/13 11:43	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/23/13 11:43	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/23/13 11:43	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/23/13 11:43	
Naphthalene	ug/L	ND	5.0	07/23/13 11:43	
Nitrobenzene	ug/L	ND	5.0	07/23/13 11:43	
Pentachlorophenol	ug/L	ND	5.0	07/23/13 11:43	
Phenanthrene	ug/L	ND	5.0	07/23/13 11:43	
Phenol	ug/L	ND	5.0	07/23/13 11:43	
Pyrene	ug/L	ND	5.0	07/23/13 11:43	
2,4,6-Tribromophenol (S)	%	90	39-119	07/23/13 11:43	
2-Fluorobiphenyl (S)	%	93	36-120	07/23/13 11:43	
2-Fluorophenol (S)	%	50	18-120	07/23/13 11:43	
Nitrobenzene-d5 (S)	%	86	32-120	07/23/13 11:43	
Phenol-d6 (S)	%	32	12-120	07/23/13 11:43	
Terphenyl-d14 (S)	%	96	44-120	07/23/13 11:43	

LABORATORY CONTROL SAMPLE: 1223572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.9	80	44-120	
2,4,6-Trichlorophenol	ug/L	50	41.8	84	48-120	
2,4-Dichlorophenol	ug/L	50	40.0	80	48-120	
2,4-Dimethylphenol	ug/L	50	35.4	71	37-119	
2,4-Dinitrophenol	ug/L	50	33.9J	68	15-153	
2,4-Dinitrotoluene	ug/L	50	44.2	88	54-120	
2,6-Dinitrotoluene	ug/L	50	43.5	87	52-120	
2-Chloronaphthalene	ug/L	50	43.0	86	60-118	
2-Chlorophenol	ug/L	50	36.5	73	44-120	
2-Nitrophenol	ug/L	50	41.9	84	43-120	
3,3'-Dichlorobenzidine	ug/L	50	53.6	107	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	45.9	92	31-147	
4-Bromophenylphenyl ether	ug/L	50	45.3	91	53-120	
4-Chloro-3-methylphenol	ug/L	50	40.1	80	50-120	
4-Chlorophenylphenyl ether	ug/L	50	43.4	87	54-120	
4-Nitrophenol	ug/L	50	19.3	39	10-120	
Acenaphthene	ug/L	50	42.6	85	51-120	
Acenaphthylene	ug/L	50	42.1	84	51-120	
Anthracene	ug/L	50	45.4	91	54-120	
Benzidine	ug/L	50	29.3J	59	1-124	
Benzo(a)anthracene	ug/L	50	46.2	92	54-120	
Benzo(a)pyrene	ug/L	50	45.1	90	54-120	
Benzo(b)fluoranthene	ug/L	50	48.0	96	57-120	
Benzo(g,h,i)perylene	ug/L	50	46.9	94	54-120	
Benzo(k)fluoranthene	ug/L	50	43.4	87	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

LABORATORY CONTROL SAMPLE: 1223572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	41.3	83	51-120	
bis(2-Chloroethyl) ether	ug/L	50	39.1	78	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	39.8	80	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	46.7	93	51-126	
Butylbenzylphthalate	ug/L	50	45.3	91	45-129	
Chrysene	ug/L	50	46.6	93	54-120	
Di-n-butylphthalate	ug/L	50	47.9	96	57-118	
Di-n-octylphthalate	ug/L	50	44.0	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	47.2	94	56-119	
Diethylphthalate	ug/L	50	45.1	90	55-114	
Dimethylphthalate	ug/L	50	43.7	87	54-112	
Fluoranthene	ug/L	50	48.1	96	56-120	
Fluorene	ug/L	50	43.0	86	59-120	
Hexachloro-1,3-butadiene	ug/L	50	40.0	80	41-116	
Hexachlorobenzene	ug/L	50	44.6	89	53-120	
Hexachlorocyclopentadiene	ug/L	100	48.4	48	31-120	
Hexachloroethane	ug/L	50	36.6	73	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	46.2	92	55-120	
Isophorone	ug/L	50	41.5	83	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	38.8	78	47-120	
N-Nitrosodimethylamine	ug/L	50	30.1	60	28-120	
N-Nitrosodiphenylamine	ug/L	50	42.3	85	53-120	
Naphthalene	ug/L	50	40.7	81	48-120	
Nitrobenzene	ug/L	50	43.7	87	47-120	
Pentachlorophenol	ug/L	50	42.4	85	43-127	
Phenanthrene	ug/L	50	45.6	91	55-120	
Phenol	ug/L	50	15.8	32	15-112	
Pyrene	ug/L	50	45.2	90	55-115	
2,4,6-Tribromophenol (S)	%			89	39-119	
2-Fluorobiphenyl (S)	%			89	36-120	
2-Fluorophenol (S)	%			47	18-120	
Nitrobenzene-d5 (S)	%			84	32-120	
Phenol-d6 (S)	%			30	12-120	
Terphenyl-d14 (S)	%			92	44-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

QC Batch:	WET/42489	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149282001		

METHOD BLANK: 1224000 Matrix: Water

Associated Lab Samples: 60149282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/23/13 06:52	

LABORATORY CONTROL SAMPLE: 1224001

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	35.4	88	78-114	

MATRIX SPIKE SAMPLE: 1224004

Parameter	Units	60149254005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	43	41.5	86	78-114	

SAMPLE DUPLICATE: 1224005

Parameter	Units	60149254006 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	47.4	47.9	1	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

QC Batch:	WET/42605	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60149282001		

METHOD BLANK: 1227372 Matrix: Water

Associated Lab Samples: 60149282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/29/13 12:38	

LABORATORY CONTROL SAMPLE: 1227373

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	22.5	112	64-132	

MATRIX SPIKE SAMPLE: 1227374

Parameter	Units	60149282001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	5.7	20.4	8.8	15	64-132	M1

SAMPLE DUPLICATE: 1227376

Parameter	Units	60149283001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	5.0	9.5	62	34	D6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

QC Batch:	WET/42490	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60149282001		

METHOD BLANK: 1224049 Matrix: Water

Associated Lab Samples: 60149282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/23/13 08:18	

SAMPLE DUPLICATE: 1224050

Parameter	Units	60149302002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	120	124	3	25	

SAMPLE DUPLICATE: 1224051

Parameter	Units	60149302012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

QC Batch: WET/42497 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149282001

SAMPLE DUPLICATE: 1224189

Parameter	Units	60149148002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.6	5.6	0	5	H6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

QC Batch:	WETA/25531	Analysis Method:	EPA 350.1
QC Batch Method:	EPA 350.1	Analysis Description:	350.1 Ammonia
Associated Lab Samples:	60149282001		

METHOD BLANK: 1223695 Matrix: Water  
Associated Lab Samples: 60149282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/22/13 14:24	

LABORATORY CONTROL SAMPLE: 1223696

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1223697

Parameter	Units	60148888001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	18.9	10	25.8	68	90-110	M1

MATRIX SPIKE SAMPLE: 1223698

Parameter	Units	60148923001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.2	110	90-110	

SAMPLE DUPLICATE: 1223699

Parameter	Units	60148926001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	10.5	10.6	1	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

QC Batch:	WETA/25536	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60149282001		

METHOD BLANK: 1223979 Matrix: Water

Associated Lab Samples: 60149282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/23/13 14:30	

LABORATORY CONTROL SAMPLE: 1223980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	48.6	97	90-110	

MATRIX SPIKE SAMPLE: 1223982

Parameter	Units	60149249003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	88.0	50	133	90	90-110	

MATRIX SPIKE SAMPLE: 1223983

Parameter	Units	60149267001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	109	50	143	69	90-110	M1

SAMPLE DUPLICATE: 1223981

Parameter	Units	60149282001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	66600	62500	6	25	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39407

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

D9 Dissolved result is greater than the total. Data is within laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 286/287

Pace Project No.: 60149282

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149282001	286/287	EPA 200.7	MPRP/23568	EPA 200.7	ICP/18510
60149282001	286/287	EPA 200.7	MPRP/23569	EPA 200.7	ICP/18503
60149282001	286/287	EPA 245.1	MERP/7530	EPA 245.1	MERC/7484
60149282001	286/287	EPA 245.1	MERP/7532	EPA 245.1	MERC/7489
60149282001	286/287	EPA 625	OEXT/39407	EPA 625	MSSV/12514
60149282001	286/287	EPA 624 Low	MSV/55133		
60149282002	TRIP BLANK	EPA 624 Low	MSV/55133		
60149282001	286/287	EPA 1664A	WET/42489		
60149282001	286/287	EPA 1664A	WET/42605		
60149282001	286/287	SM 2540D	WET/42490		
60149282001	286/287	SM 4500-H+B	WET/42497		
60149282001	286/287	EPA 350.1	WETA/25531		
60149282001	286/287	EPA 410.4	WETA/25536		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149282



60149282

Client Name: Barr

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other [x] Xroad

Tracking #: Pace Shipping Label Used? Yes [ ] No [x]

Custody Seal on Cooler/Box Present: Yes [x] No [ ] Seals intact: Yes [x] No [ ]

Packing Material: Bubble Wrap [ ] Bubble Bags [x] Foam [x] None [ ] Other [x] 12pk

Thermometer Used: T-112 / T-194 Type of Ice: Wet [x] Blue [ ] None [ ] Samples received on ice, cooling process has begun.

Cooler Temperature: 0.9
Temperature should be above freezing to 6°C

Date and initials of person examining contents: 7/20/13

Table with 17 rows and 3 columns. Row 1: Chain of Custody present: [x] Yes [ ] No [ ] N/A 1. Row 2: Chain of Custody filled out: [x] Yes [ ] No [ ] N/A 2. Row 3: Chain of Custody relinquished: [x] Yes [ ] No [ ] N/A 3. Row 4: Sampler name & signature on COC: [x] Yes [ ] No [ ] N/A 4. Row 5: Samples arrived within holding time: [x] Yes [ ] No [ ] N/A 5. Row 6: Short Hold Time analyses (<72hr): [x] Yes [ ] No [ ] N/A 6. PH. Row 7: Rush Turn Around Time requested: [ ] Yes [x] No [ ] N/A 7. Row 8: Sufficient volume: [x] Yes [ ] No [ ] N/A 8. Row 9: Correct containers used: [x] Yes [ ] No [ ] N/A. Row 10: Pace containers used: [x] Yes [ ] No [ ] N/A 9. Row 11: Containers intact: [x] Yes [ ] No [ ] N/A 10. Row 12: Unpreserved 5035A soils frozen w/in 48hrs? [ ] Yes [ ] No [x] N/A 11. Row 13: Filtered volume received for dissolved tests? [ ] Yes [ ] No [x] N/A 12. Row 14: Sample labels match COC: [x] Yes [ ] No [ ] N/A. Includes date/time/ID/analyses Matrix: WT 13. Row 15: All containers needing preservation have been checked. [x] Yes [ ] No [ ] N/A. All containers needing preservation are found to be in compliance with EPA recommendation. [x] Yes [x] No [ ] N/A. Exceptions: VOA coliform, TOC, O&G WI-DRO (water), Phenolics [x] Yes [ ] No. Initial when completed PH. Lot # of added preservative 12570. Row 16: Trip Blank present: [x] Yes [ ] No [ ] N/A. Pace Trip Blank lot # (if purchased): cover 15. Row 17: Headspace in VOA vials (>6mm): [ ] Yes [x] No [ ] N/A 16. Row 18: Project sampled in USDA Regulated Area: [ ] Yes [ ] No [x] N/A 17. List State:

Client Notification/ Resolution: Copy COC to Client? Y [ ] N [x] Field Data Required? Y [ ] N [x]

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager EPA Review:

Date: 7/22/13



July 29, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-018  
Pace Project No.: 60149283

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 20, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149283001	316-018	Water	07/19/13 12:22	07/20/13 00:40
60149283002	TRIP BLANK	Water	07/19/13 08:00	07/20/13 00:40

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149283001	316-018	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60149283002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

Sample: 316-018	Lab ID: 60149283001	Collected: 07/19/13 12:22	Received: 07/20/13 00:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum	7500 ug/L		150	2	07/22/13 16:30	07/24/13 17:34	7429-90-5	
Antimony	62.0 ug/L		50.0	5	07/22/13 16:30	07/24/13 17:55	7440-36-0	
Arsenic	790 ug/L		50.0	5	07/22/13 16:30	07/24/13 17:55	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/22/13 16:30	07/24/13 17:55	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/22/13 16:30	07/24/13 17:55	7440-43-9	D3
Chromium	293 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:55	7440-47-3	
Cobalt	51.4 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:55	7440-48-4	
Copper	ND ug/L		50.0	5	07/22/13 16:30	07/24/13 17:55	7440-50-8	D3
Iron	1070000 ug/L		250	5	07/22/13 16:30	07/24/13 17:55	7439-89-6	
Lead	214 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:55	7439-92-1	
Nickel	135 ug/L		25.0	5	07/22/13 16:30	07/24/13 17:55	7440-02-0	
Selenium	ND ug/L		75.0	5	07/22/13 16:30	07/24/13 17:55	7782-49-2	D3
Silver	ND ug/L		35.0	5	07/22/13 16:30	07/24/13 17:55	7440-22-4	D3
Thallium	ND ug/L		100	5	07/22/13 16:30	07/24/13 17:55	7440-28-0	D3
Zinc	16800 ug/L		1000	20	07/22/13 16:30	07/24/13 18:22	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum, Dissolved	4050 ug/L		150	2	07/22/13 16:30	07/24/13 17:44	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/22/13 16:30	07/24/13 18:12	7440-36-0	D3
Arsenic, Dissolved	602 ug/L		50.0	5	07/22/13 16:30	07/24/13 18:12	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/22/13 16:30	07/24/13 18:12	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/22/13 16:30	07/24/13 18:12	7440-43-9	D3
Chromium, Dissolved	232 ug/L		25.0	5	07/22/13 16:30	07/24/13 18:12	7440-47-3	
Cobalt, Dissolved	36.9 ug/L		25.0	5	07/22/13 16:30	07/24/13 18:12	7440-48-4	
Copper, Dissolved	ND ug/L		50.0	5	07/22/13 16:30	07/24/13 18:12	7440-50-8	D3
Iron, Dissolved	578000 ug/L		100	2	07/22/13 16:30	07/24/13 17:44	7439-89-6	
Lead, Dissolved	76.0 ug/L		25.0	5	07/22/13 16:30	07/24/13 18:12	7439-92-1	
Nickel, Dissolved	112 ug/L		25.0	5	07/22/13 16:30	07/24/13 18:12	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/22/13 16:30	07/24/13 18:12	7782-49-2	D3
Silver, Dissolved	ND ug/L		35.0	5	07/22/13 16:30	07/24/13 18:12	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/22/13 16:30	07/24/13 18:12	7440-28-0	D3
Zinc, Dissolved	13900 ug/L		1000	20	07/22/13 16:30	07/24/13 18:31	7440-66-6	
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury	0.57 ug/L		0.20	1	07/22/13 09:15	07/22/13 13:19	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND ug/L		0.20	1	07/22/13 14:30	07/23/13 09:41	7439-97-6	
<b>625 MSSV</b>								
Analytical Method: EPA 625 Preparation Method: EPA 625								
Acenaphthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	83-32-9	
Acenaphthylene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	208-96-8	
Anthracene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	120-12-7	
Benzidine	ND ug/L		10000	20	07/22/13 00:00	07/23/13 16:01	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

Sample: 316-018	Lab ID: 60149283001	Collected: 07/19/13 12:22	Received: 07/20/13 00:40	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	191-24-2	
Benzo(k)fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	101-55-3	
Butylbenzylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		1200	20	07/22/13 00:00	07/23/13 16:01	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		1200	20	07/22/13 00:00	07/23/13 16:01	39638-32-9	
2-Chloronaphthalene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	91-58-7	
2-Chlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	7005-72-3	
Chrysene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		4000	20	07/22/13 00:00	07/23/13 16:01	91-94-1	
2,4-Dichlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	120-83-2	
Diethylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	84-66-2	
2,4-Dimethylphenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	105-67-9	
Dimethylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	131-11-3	
Di-n-butylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		5000	20	07/22/13 00:00	07/23/13 16:01	534-52-1	
2,4-Dinitrophenol	ND ug/L		10000	20	07/22/13 00:00	07/23/13 16:01	51-28-5	
2,4-Dinitrotoluene	ND ug/L		1200	20	07/22/13 00:00	07/23/13 16:01	121-14-2	
2,6-Dinitrotoluene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	606-20-2	
Di-n-octylphthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	117-81-7	
Fluoranthene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	206-44-0	
Fluorene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	87-68-3	
Hexachlorobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	77-47-4	
Hexachloroethane	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	193-39-5	
Isophorone	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	78-59-1	
Naphthalene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	91-20-3	
Nitrobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	98-95-3	
2-Nitrophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	88-75-5	
4-Nitrophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	100-02-7	
N-Nitrosodimethylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	86-30-6	
Pentachlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	87-86-5	
Phenanthrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	85-01-8	
Phenol	<b>13400</b> ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	108-95-2	
Pyrene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/22/13 00:00	07/23/13 16:01	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

Sample: 316-018		Lab ID: 60149283001	Collected: 07/19/13 12:22	Received: 07/20/13 00:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/22/13 00:00	07/23/13 16:01	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/22/13 00:00	07/23/13 16:01	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/22/13 00:00	07/23/13 16:01	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/22/13 00:00	07/23/13 16:01	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/22/13 00:00	07/23/13 16:01	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/22/13 00:00	07/23/13 16:01	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/24/13 18:58	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/24/13 18:58	75-27-4	
Bromoform	ND ug/L		200	200		07/24/13 18:58	75-25-2	
Bromomethane	ND ug/L		1000	200		07/24/13 18:58	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/24/13 18:58	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/24/13 18:58	108-90-7	
Chloroethane	ND ug/L		200	200		07/24/13 18:58	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/24/13 18:58	110-75-8	
Chloroform	ND ug/L		200	200		07/24/13 18:58	67-66-3	
Chloromethane	ND ug/L		200	200		07/24/13 18:58	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/24/13 18:58	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/24/13 18:58	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/24/13 18:58	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/24/13 18:58	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/24/13 18:58	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/24/13 18:58	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/24/13 18:58	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/24/13 18:58	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/24/13 18:58	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/24/13 18:58	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/24/13 18:58	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/24/13 18:58	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/24/13 18:58	100-41-4	
Methylene chloride	ND ug/L		200	200		07/24/13 18:58	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/24/13 18:58	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/24/13 18:58	127-18-4	
Toluene	ND ug/L		200	200		07/24/13 18:58	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/24/13 18:58	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/24/13 18:58	79-00-5	
Trichloroethene	ND ug/L		200	200		07/24/13 18:58	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/24/13 18:58	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/24/13 18:58	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/24/13 18:58	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	105 %		80-120	200		07/24/13 18:58	1868-53-7	D3
4-Bromofluorobenzene (S)	101 %		80-120	200		07/24/13 18:58	460-00-4	
Toluene-d8 (S)	101 %		80-120	200		07/24/13 18:58	2037-26-5	
1,2-Dichloroethane-d4 (S)	105 %		80-120	200		07/24/13 18:58	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

<b>Sample: 316-018</b>		<b>Lab ID: 60149283001</b>	Collected: 07/19/13 12:22	Received: 07/20/13 00:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/24/13 18:58		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>409</b>	mg/L	5.0	1		07/23/13 06:55		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>5.0</b>	mg/L	5.0	1		07/29/13 12:39		D6
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>3350</b>	mg/L	5.0	1		07/23/13 08:21		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.4</b>	Std. Units	0.10	1		07/23/13 15:20		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>685</b>	mg/L	20.0	200		07/22/13 14:56	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>63700</b>	mg/L	5000	500		07/23/13 14:32		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

Sample: TRIP BLANK		Lab ID: 60149283002	Collected: 07/19/13 08:00	Received: 07/20/13 00:40	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/24/13 16:29	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/24/13 16:29	75-27-4	
Bromoform	ND ug/L		1.0	1		07/24/13 16:29	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/24/13 16:29	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/24/13 16:29	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/24/13 16:29	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/24/13 16:29	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/24/13 16:29	110-75-8	
Chloroform	ND ug/L		1.0	1		07/24/13 16:29	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/24/13 16:29	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/24/13 16:29	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 16:29	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 16:29	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 16:29	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/24/13 16:29	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/24/13 16:29	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/24/13 16:29	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/24/13 16:29	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/24/13 16:29	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/24/13 16:29	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/24/13 16:29	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/24/13 16:29	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/24/13 16:29	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/24/13 16:29	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/24/13 16:29	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/24/13 16:29	127-18-4	
Toluene	ND ug/L		1.0	1		07/24/13 16:29	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/24/13 16:29	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/24/13 16:29	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/24/13 16:29	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/24/13 16:29	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/24/13 16:29	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/24/13 16:29	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	97 %		80-120	1		07/24/13 16:29	1868-53-7	
4-Bromofluorobenzene (S)	97 %		80-120	1		07/24/13 16:29	460-00-4	
Toluene-d8 (S)	101 %		80-120	1		07/24/13 16:29	2037-26-5	
1,2-Dichloroethane-d4 (S)	97 %		80-120	1		07/24/13 16:29	17060-07-0	
Preservation pH	7.0		1.0	1		07/24/13 16:29		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

QC Batch:	MERP/7530	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60149283001		

METHOD BLANK: 1223638 Matrix: Water  
Associated Lab Samples: 60149283001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/22/13 12:50	

LABORATORY CONTROL SAMPLE: 1223639

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223640 1223641

Parameter	Units	60149083001		MS		MSD		% Rec		Max		Qual	
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD		RPD
Mercury	ug/L	ND	5	5	5	4.5	5.0	90	99	70-130	10	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018  
Pace Project No.: 60149283

QC Batch: MERP/7532 Analysis Method: EPA 245.1  
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury - Dissolved  
Associated Lab Samples: 60149283001

METHOD BLANK: 1223925 Matrix: Water  
Associated Lab Samples: 60149283001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/23/13 09:23	

LABORATORY CONTROL SAMPLE: 1223926

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.4	89	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223927 1223928

Parameter	Units	60149304001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	5	4.2	4.4	83	86	70-130	4	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018  
Pace Project No.: 60149283

QC Batch: MPRP/23568      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60149283001

METHOD BLANK: 1223913      Matrix: Water  
Associated Lab Samples: 60149283001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/24/13 15:04	
Antimony	ug/L	ND	10.0	07/24/13 15:04	
Arsenic	ug/L	ND	10.0	07/24/13 15:04	
Beryllium	ug/L	ND	1.0	07/24/13 15:04	
Cadmium	ug/L	ND	5.0	07/24/13 15:04	
Chromium	ug/L	ND	5.0	07/24/13 15:04	
Cobalt	ug/L	ND	5.0	07/24/13 15:04	
Copper	ug/L	ND	10.0	07/24/13 15:04	
Iron	ug/L	ND	50.0	07/24/13 15:04	
Lead	ug/L	ND	5.0	07/24/13 15:04	
Nickel	ug/L	ND	5.0	07/24/13 15:04	
Selenium	ug/L	ND	15.0	07/24/13 15:04	
Silver	ug/L	ND	7.0	07/24/13 15:04	
Thallium	ug/L	ND	20.0	07/24/13 15:04	
Zinc	ug/L	ND	50.0	07/24/13 15:04	

LABORATORY CONTROL SAMPLE: 1223914

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10000	100	85-115	
Antimony	ug/L	1000	983	98	85-115	
Arsenic	ug/L	1000	916	92	85-115	
Beryllium	ug/L	1000	968	97	85-115	
Cadmium	ug/L	1000	951	95	85-115	
Chromium	ug/L	1000	918	92	85-115	
Cobalt	ug/L	1000	961	96	85-115	
Copper	ug/L	1000	939	94	85-115	
Iron	ug/L	10000	9780	98	85-115	
Lead	ug/L	1000	963	96	85-115	
Nickel	ug/L	1000	970	97	85-115	
Selenium	ug/L	1000	966	97	85-115	
Silver	ug/L	500	454	91	85-115	
Thallium	ug/L	1000	983	98	85-115	
Zinc	ug/L	1000	920	92	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223915      1223916

Parameter	Units	60149201001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Aluminum	ug/L	ND	10000	9950	10000	9920	99	99	70-130	0	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

Parameter	Units	60149201001		1223915		1223916		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Antimony	ug/L	ND	1000	1000	1010	1010	101	101	70-130	1	7			
Arsenic	ug/L	ND	1000	1000	942	947	94	95	70-130	0	10			
Beryllium	ug/L	ND	1000	1000	971	963	97	96	70-130	1	7			
Cadmium	ug/L	ND	1000	1000	964	968	96	97	70-130	0	10			
Chromium	ug/L	ND	1000	1000	940	929	94	93	70-130	1	10			
Cobalt	ug/L	ND	1000	1000	954	958	95	96	70-130	0	6			
Copper	ug/L	42.9	1000	1000	997	999	95	96	70-130	0	11			
Iron	ug/L	ND	10000	10000	9620	9560	96	95	70-130	1	10			
Lead	ug/L	ND	1000	1000	960	964	96	96	70-130	0	10			
Nickel	ug/L	16.9	1000	1000	979	981	96	96	70-130	0	10			
Selenium	ug/L	ND	1000	1000	965	970	96	97	70-130	0	10			
Silver	ug/L	ND	500	500	490	493	98	99	70-130	1	10			
Thallium	ug/L	ND	1000	1000	966	969	97	97	70-130	0	6			
Zinc	ug/L	53.4	1000	1000	977	975	92	92	70-130	0	11			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018  
Pace Project No.: 60149283

QC Batch: MPRP/23569      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60149283001

METHOD BLANK: 1223969      Matrix: Water  
Associated Lab Samples: 60149283001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/24/13 16:49	
Antimony, Dissolved	ug/L	ND	10.0	07/24/13 16:49	
Arsenic, Dissolved	ug/L	ND	10.0	07/24/13 16:49	
Beryllium, Dissolved	ug/L	ND	1.0	07/24/13 16:49	
Cadmium, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Chromium, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Cobalt, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Copper, Dissolved	ug/L	ND	10.0	07/24/13 16:49	
Iron, Dissolved	ug/L	ND	50.0	07/24/13 16:49	
Lead, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Nickel, Dissolved	ug/L	ND	5.0	07/24/13 16:49	
Selenium, Dissolved	ug/L	ND	15.0	07/24/13 16:49	
Silver, Dissolved	ug/L	ND	7.0	07/24/13 16:49	
Thallium, Dissolved	ug/L	ND	20.0	07/24/13 16:49	
Zinc, Dissolved	ug/L	ND	50.0	07/24/13 16:49	

LABORATORY CONTROL SAMPLE: 1223970

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10400	104	85-115	
Antimony, Dissolved	ug/L	1000	1000	100	85-115	
Arsenic, Dissolved	ug/L	1000	950	95	85-115	
Beryllium, Dissolved	ug/L	1000	1020	102	85-115	
Cadmium, Dissolved	ug/L	1000	983	98	85-115	
Chromium, Dissolved	ug/L	1000	1000	100	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	972	97	85-115	
Iron, Dissolved	ug/L	10000	10400	104	85-115	
Lead, Dissolved	ug/L	1000	1020	102	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	971	97	85-115	
Silver, Dissolved	ug/L	500	492	98	85-115	
Thallium, Dissolved	ug/L	1000	1020	102	85-115	
Zinc, Dissolved	ug/L	1000	999	100	85-115	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

Parameter	60149213001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Aluminum, Dissolved	ug/L	0.018J mg/L	10000	10000	10300	10400	103	104	70-130	1	8			
Antimony, Dissolved	ug/L	ND	1000	1000	1090	1070	109	107	70-130	2	7			
Arsenic, Dissolved	ug/L	0.0052J mg/L	1000	1000	1060	1050	106	104	70-130	1	10			
Beryllium, Dissolved	ug/L	ND	1000	1000	998	1010	100	101	70-130	1	7			
Cadmium, Dissolved	ug/L	ND	1000	1000	1060	1050	106	105	70-130	1	10			
Chromium, Dissolved	ug/L	0.0017J mg/L	1000	1000	1020	1030	101	102	70-130	1	10			
Cobalt, Dissolved	ug/L	ND	1000	1000	986	987	99	99	70-130	0	6			
Copper, Dissolved	ug/L	0.0092J mg/L	1000	1000	1040	1030	103	102	70-130	1	11			
Iron, Dissolved	ug/L	ND	10000	10000	10200	10300	102	103	70-130	1	10			
Lead, Dissolved	ug/L	ND	1000	1000	951	959	95	96	70-130	1	10			
Nickel, Dissolved	ug/L	0.011 mg/L	1000	1000	999	1000	99	99	70-130	0	10			
Selenium, Dissolved	ug/L	ND	1000	1000	1100	1080	110	108	70-130	2	10			
Silver, Dissolved	ug/L	ND	500	500	543	544	109	109	70-130	0	10			
Thallium, Dissolved	ug/L	ND	1000	1000	889	893	89	89	70-130	0	6			
Zinc, Dissolved	ug/L	ND	1000	1000	999	1020	100	102	70-130	2	11			

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

QC Batch: MSV/55133 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149283001, 60149283002

METHOD BLANK: 1225012 Matrix: Water

Associated Lab Samples: 60149283001, 60149283002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1-Dichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichloropropane	ug/L	ND	1.0	07/24/13 15:25	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/24/13 15:25	
Benzene	ug/L	ND	1.0	07/24/13 15:25	
Bromodichloromethane	ug/L	ND	1.0	07/24/13 15:25	
Bromoform	ug/L	ND	1.0	07/24/13 15:25	
Bromomethane	ug/L	ND	5.0	07/24/13 15:25	
Carbon tetrachloride	ug/L	ND	1.0	07/24/13 15:25	
Chlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
Chloroethane	ug/L	ND	1.0	07/24/13 15:25	
Chloroform	ug/L	ND	1.0	07/24/13 15:25	
Chloromethane	ug/L	ND	1.0	07/24/13 15:25	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/24/13 15:25	
Dibromochloromethane	ug/L	ND	1.0	07/24/13 15:25	
Ethylbenzene	ug/L	ND	1.0	07/24/13 15:25	
Methylene chloride	ug/L	ND	1.0	07/24/13 15:25	
Tetrachloroethene	ug/L	ND	1.0	07/24/13 15:25	
Toluene	ug/L	ND	1.0	07/24/13 15:25	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/24/13 15:25	
Trichloroethene	ug/L	ND	1.0	07/24/13 15:25	
Trichlorofluoromethane	ug/L	ND	1.0	07/24/13 15:25	
Vinyl chloride	ug/L	ND	1.0	07/24/13 15:25	
Xylene (Total)	ug/L	ND	3.0	07/24/13 15:25	
1,2-Dichloroethane-d4 (S)	%	97	80-120	07/24/13 15:25	
4-Bromofluorobenzene (S)	%	98	80-120	07/24/13 15:25	
Toluene-d8 (S)	%	100	80-120	07/24/13 15:25	

LABORATORY CONTROL SAMPLE: 1225013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	17.9	90	71-139	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

LABORATORY CONTROL SAMPLE: 1225013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	18.9	95	59-138	
1,1,2-Trichloroethane	ug/L	20	18.2	91	69-127	
1,1-Dichloroethane	ug/L	20	17.2	86	69-126	
1,1-Dichloroethene	ug/L	20	20.6	103	65-153	
1,2-Dichlorobenzene	ug/L	20	19.6	98	66-126	
1,2-Dichloroethane	ug/L	20	18.3	91	71-129	
1,2-Dichloropropane	ug/L	20	18.8	94	66-140	
1,3-Dichlorobenzene	ug/L	20	19.9	100	63-127	
1,4-Dichlorobenzene	ug/L	20	19.7	99	68-124	
2-Chloroethylvinyl ether	ug/L	20	14.7	73	33-159	
Benzene	ug/L	20	20.3	101	73-129	
Bromodichloromethane	ug/L	20	17.4	87	63-129	
Bromoform	ug/L	20	20.3	101	52-123	
Bromomethane	ug/L	20	23.2	116	10-160	
Carbon tetrachloride	ug/L	20	19.1	96	70-140	
Chlorobenzene	ug/L	20	17.8	89	68-127	
Chloroethane	ug/L	20	16.9	84	42-160	
Chloroform	ug/L	20	17.6	88	60-120	
Chloromethane	ug/L	20	17.6	88	10-160	
cis-1,2-Dichloroethene	ug/L	20	18.5	92	70-125	
cis-1,3-Dichloropropene	ug/L	20	17.2	86	66-132	
Dibromochloromethane	ug/L	20	17.6	88	63-134	
Ethylbenzene	ug/L	20	18.4	92	66-133	
Methylene chloride	ug/L	20	20.7	104	56-135	
Tetrachloroethene	ug/L	20	20.2	101	64-143	
Toluene	ug/L	20	20.0	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	19.9	100	67-149	
trans-1,3-Dichloropropene	ug/L	20	18.7	93	66-138	
Trichloroethene	ug/L	20	17.7	88	71-130	
Trichlorofluoromethane	ug/L	20	17.5	88	58-158	
Vinyl chloride	ug/L	20	18.0	90	41-160	
Xylene (Total)	ug/L	60	60.0	100	67-130	
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1225014

Parameter	Units	60149196001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3570	89	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3660	92	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3170	79	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3330	83	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3830	96	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3550	89	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3510	88	49-155	
1,2-Dichloropropane	ug/L	ND	4000	3590	90	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

MATRIX SPIKE SAMPLE:		1225014		60149196001		Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits		
1,3-Dichlorobenzene	ug/L	ND	4000	3560	89			59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	3620	90			18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	5810	145			10-160		
Benzene	ug/L	ND	4000	3910	98			37-151		
Bromodichloromethane	ug/L	ND	4000	3440	86			35-155		
Bromoform	ug/L	ND	4000	3680	92			45-133		
Bromomethane	ug/L	ND	4000	3550	89			10-160		
Carbon tetrachloride	ug/L	ND	4000	3650	91			70-140		
Chlorobenzene	ug/L	ND	4000	3170	79			37-153		
Chloroethane	ug/L	ND	4000	3210	80			14-160		
Chloroform	ug/L	ND	4000	3380	84			51-138		
Chloromethane	ug/L	ND	4000	3380	84			10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	3590	90			19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	3320	83			10-160		
Dibromochloromethane	ug/L	ND	4000	3400	85			53-149		
Ethylbenzene	ug/L	ND	4000	3250	81			37-154		
Methylene chloride	ug/L	ND	4000	4100	99			15-156		
Tetrachloroethene	ug/L	ND	4000	3630	91			64-148		
Toluene	ug/L	ND	4000	3850	96			47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	3760	94			54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	3470	87			17-160		
Trichloroethene	ug/L	ND	4000	3320	83			71-157		
Trichlorofluoromethane	ug/L	ND	4000	3330	83			17-160		
Vinyl chloride	ug/L	ND	4000	3290	82			10-160		
Xylene (Total)	ug/L	ND	12000	10900	91			12-153		
1,2-Dichloroethane-d4 (S)	%				100			80-120		
4-Bromofluorobenzene (S)	%				100			80-120	D3,HS	
Toluene-d8 (S)	%				101			80-120		
Preservation pH			7.0			7.0				

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

QC Batch:	OEXT/39407	Analysis Method:	EPA 625
QC Batch Method:	EPA 625	Analysis Description:	625 MSS
Associated Lab Samples:	60149283001		

METHOD BLANK: 1223571 Matrix: Water

Associated Lab Samples: 60149283001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/23/13 11:43	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dichlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dimethylphenol	ug/L	ND	5.0	07/23/13 11:43	
2,4-Dinitrophenol	ug/L	ND	50.0	07/23/13 11:43	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/23/13 11:43	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/23/13 11:43	
2-Chloronaphthalene	ug/L	ND	5.0	07/23/13 11:43	
2-Chlorophenol	ug/L	ND	5.0	07/23/13 11:43	
2-Nitrophenol	ug/L	ND	5.0	07/23/13 11:43	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/23/13 11:43	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/23/13 11:43	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/23/13 11:43	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/23/13 11:43	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/23/13 11:43	
4-Nitrophenol	ug/L	ND	5.0	07/23/13 11:43	
Acenaphthene	ug/L	ND	5.0	07/23/13 11:43	
Acenaphthylene	ug/L	ND	5.0	07/23/13 11:43	
Anthracene	ug/L	ND	5.0	07/23/13 11:43	
Benzidine	ug/L	ND	50.0	07/23/13 11:43	
Benzo(a)anthracene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(a)pyrene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/23/13 11:43	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/23/13 11:43	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/23/13 11:43	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/23/13 11:43	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/23/13 11:43	
Butylbenzylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Chrysene	ug/L	ND	5.0	07/23/13 11:43	
Di-n-butylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Di-n-octylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/23/13 11:43	
Diethylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Dimethylphthalate	ug/L	ND	5.0	07/23/13 11:43	
Fluoranthene	ug/L	ND	5.0	07/23/13 11:43	
Fluorene	ug/L	ND	5.0	07/23/13 11:43	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/23/13 11:43	
Hexachlorobenzene	ug/L	ND	5.0	07/23/13 11:43	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/23/13 11:43	
Hexachloroethane	ug/L	ND	5.0	07/23/13 11:43	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/23/13 11:43	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Project No.: 60149283

METHOD BLANK: 1223571

Matrix: Water

Associated Lab Samples: 60149283001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/23/13 11:43	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/23/13 11:43	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/23/13 11:43	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/23/13 11:43	
Naphthalene	ug/L	ND	5.0	07/23/13 11:43	
Nitrobenzene	ug/L	ND	5.0	07/23/13 11:43	
Pentachlorophenol	ug/L	ND	5.0	07/23/13 11:43	
Phenanthrene	ug/L	ND	5.0	07/23/13 11:43	
Phenol	ug/L	ND	5.0	07/23/13 11:43	
Pyrene	ug/L	ND	5.0	07/23/13 11:43	
2,4,6-Tribromophenol (S)	%	90	39-119	07/23/13 11:43	
2-Fluorobiphenyl (S)	%	93	36-120	07/23/13 11:43	
2-Fluorophenol (S)	%	50	18-120	07/23/13 11:43	
Nitrobenzene-d5 (S)	%	86	32-120	07/23/13 11:43	
Phenol-d6 (S)	%	32	12-120	07/23/13 11:43	
Terphenyl-d14 (S)	%	96	44-120	07/23/13 11:43	

LABORATORY CONTROL SAMPLE: 1223572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.9	80	44-120	
2,4,6-Trichlorophenol	ug/L	50	41.8	84	48-120	
2,4-Dichlorophenol	ug/L	50	40.0	80	48-120	
2,4-Dimethylphenol	ug/L	50	35.4	71	37-119	
2,4-Dinitrophenol	ug/L	50	33.9J	68	15-153	
2,4-Dinitrotoluene	ug/L	50	44.2	88	54-120	
2,6-Dinitrotoluene	ug/L	50	43.5	87	52-120	
2-Chloronaphthalene	ug/L	50	43.0	86	60-118	
2-Chlorophenol	ug/L	50	36.5	73	44-120	
2-Nitrophenol	ug/L	50	41.9	84	43-120	
3,3'-Dichlorobenzidine	ug/L	50	53.6	107	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	45.9	92	31-147	
4-Bromophenylphenyl ether	ug/L	50	45.3	91	53-120	
4-Chloro-3-methylphenol	ug/L	50	40.1	80	50-120	
4-Chlorophenylphenyl ether	ug/L	50	43.4	87	54-120	
4-Nitrophenol	ug/L	50	19.3	39	10-120	
Acenaphthene	ug/L	50	42.6	85	51-120	
Acenaphthylene	ug/L	50	42.1	84	51-120	
Anthracene	ug/L	50	45.4	91	54-120	
Benzidine	ug/L	50	29.3J	59	1-124	
Benzo(a)anthracene	ug/L	50	46.2	92	54-120	
Benzo(a)pyrene	ug/L	50	45.1	90	54-120	
Benzo(b)fluoranthene	ug/L	50	48.0	96	57-120	
Benzo(g,h,i)perylene	ug/L	50	46.9	94	54-120	
Benzo(k)fluoranthene	ug/L	50	43.4	87	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

LABORATORY CONTROL SAMPLE: 1223572

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	41.3	83	51-120	
bis(2-Chloroethyl) ether	ug/L	50	39.1	78	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	39.8	80	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	46.7	93	51-126	
Butylbenzylphthalate	ug/L	50	45.3	91	45-129	
Chrysene	ug/L	50	46.6	93	54-120	
Di-n-butylphthalate	ug/L	50	47.9	96	57-118	
Di-n-octylphthalate	ug/L	50	44.0	88	48-130	
Dibenz(a,h)anthracene	ug/L	50	47.2	94	56-119	
Diethylphthalate	ug/L	50	45.1	90	55-114	
Dimethylphthalate	ug/L	50	43.7	87	54-112	
Fluoranthene	ug/L	50	48.1	96	56-120	
Fluorene	ug/L	50	43.0	86	59-120	
Hexachloro-1,3-butadiene	ug/L	50	40.0	80	41-116	
Hexachlorobenzene	ug/L	50	44.6	89	53-120	
Hexachlorocyclopentadiene	ug/L	100	48.4	48	31-120	
Hexachloroethane	ug/L	50	36.6	73	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	46.2	92	55-120	
Isophorone	ug/L	50	41.5	83	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	38.8	78	47-120	
N-Nitrosodimethylamine	ug/L	50	30.1	60	28-120	
N-Nitrosodiphenylamine	ug/L	50	42.3	85	53-120	
Naphthalene	ug/L	50	40.7	81	48-120	
Nitrobenzene	ug/L	50	43.7	87	47-120	
Pentachlorophenol	ug/L	50	42.4	85	43-127	
Phenanthrene	ug/L	50	45.6	91	55-120	
Phenol	ug/L	50	15.8	32	15-112	
Pyrene	ug/L	50	45.2	90	55-115	
2,4,6-Tribromophenol (S)	%			89	39-119	
2-Fluorobiphenyl (S)	%			89	36-120	
2-Fluorophenol (S)	%			47	18-120	
Nitrobenzene-d5 (S)	%			84	32-120	
Phenol-d6 (S)	%			30	12-120	
Terphenyl-d14 (S)	%			92	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

QC Batch:	WET/42489	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149283001		

METHOD BLANK: 1224000 Matrix: Water

Associated Lab Samples: 60149283001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/23/13 06:52	

LABORATORY CONTROL SAMPLE: 1224001

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	35.4	88	78-114	

MATRIX SPIKE SAMPLE: 1224004

Parameter	Units	60149254005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	43	41.5	86	78-114	

SAMPLE DUPLICATE: 1224005

Parameter	Units	60149254006 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	47.4	47.9	1	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

QC Batch:	WET/42605	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60149283001		

METHOD BLANK: 1227372 Matrix: Water

Associated Lab Samples: 60149283001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/29/13 12:38	

LABORATORY CONTROL SAMPLE: 1227373

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	22.5	112	64-132	

MATRIX SPIKE SAMPLE: 1227374

Parameter	Units	60149282001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	5.7	20.4	8.8	15	64-132	M1

SAMPLE DUPLICATE: 1227376

Parameter	Units	60149283001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	5.0	9.5	62	34	D6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

QC Batch: WET/42490

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60149283001

METHOD BLANK: 1224049

Matrix: Water

Associated Lab Samples: 60149283001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/23/13 08:18	

SAMPLE DUPLICATE: 1224050

Parameter	Units	60149302002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	120	124	3	25	

SAMPLE DUPLICATE: 1224051

Parameter	Units	60149302012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		25	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

QC Batch: WET/42497 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149283001

SAMPLE DUPLICATE: 1224189

Parameter	Units	60149148002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.6	5.6	0	5	H6

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

QC Batch: WETA/25531 Analysis Method: EPA 350.1  
 QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
 Associated Lab Samples: 60149283001

METHOD BLANK: 1223695 Matrix: Water  
 Associated Lab Samples: 60149283001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/22/13 14:24	

LABORATORY CONTROL SAMPLE: 1223696

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1223697

Parameter	Units	60148888001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	18.9	10	25.8	68	90-110	M1

MATRIX SPIKE SAMPLE: 1223698

Parameter	Units	60148923001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.2	110	90-110	

SAMPLE DUPLICATE: 1223699

Parameter	Units	60148926001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	10.5	10.6	1	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

QC Batch:	WETA/25536	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60149283001		

METHOD BLANK: 1223979 Matrix: Water  
Associated Lab Samples: 60149283001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/23/13 14:30	

LABORATORY CONTROL SAMPLE: 1223980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	48.6	97	90-110	

MATRIX SPIKE SAMPLE: 1223982

Parameter	Units	60149249003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	88.0	50	133	90	90-110	

MATRIX SPIKE SAMPLE: 1223983

Parameter	Units	60149267001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	109	50	143	69	90-110	M1

SAMPLE DUPLICATE: 1223981

Parameter	Units	60149282001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	66600	62500	6	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39407

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-018

Pace Project No.: 60149283

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149283001	316-018	EPA 200.7	MPRP/23568	EPA 200.7	ICP/18510
60149283001	316-018	EPA 200.7	MPRP/23569	EPA 200.7	ICP/18503
60149283001	316-018	EPA 245.1	MERP/7530	EPA 245.1	MERC/7484
60149283001	316-018	EPA 245.1	MERP/7532	EPA 245.1	MERC/7489
60149283001	316-018	EPA 625	OEXT/39407	EPA 625	MSSV/12514
60149283001	316-018	EPA 624 Low	MSV/55133		
60149283002	TRIP BLANK	EPA 624 Low	MSV/55133		
60149283001	316-018	EPA 1664A	WET/42489		
60149283001	316-018	EPA 1664A	WET/42605		
60149283001	316-018	SM 2540D	WET/42490		
60149283001	316-018	SM 4500-H+B	WET/42497		
60149283001	316-018	EPA 350.1	WETA/25531		
60149283001	316-018	EPA 410.4	WETA/25536		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149283
Barcode
60149283

Client Name: Barr Eng.

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [X] Pace [ ] Other [X] R
Tracking #: Pace Shipping Label Used? Yes [ ] No [X]

Optional
Proj Due Date:
Proj Name:

Custody Seal on Cooler/Box Present: Yes [X] No [ ] Seals intact: Yes [X] No [ ]
Packing Material: Bubble Wrap [X] Bubble Bags [X] Foam [ ] None [ ] Other [ ]

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue None [ ] Samples received on ice, cooling process has begun.
Cooler Temperature: 0.5 (circle one)

Date and initials of person examining contents: JNS 7/2/13 BJS

Table with 17 rows and 2 columns. Row 1: Chain of Custody present: [X] Yes [ ] No [ ] N/A. Row 2: Chain of Custody filled out: [X] Yes [ ] No [ ] N/A. Row 3: Chain of Custody relinquished: [X] Yes [ ] No [ ] N/A. Row 4: Sampler name & signature on COC: [X] Yes [ ] No [ ] N/A. Row 5: Samples arrived within holding time: [X] Yes [ ] No [ ] N/A. Row 6: Short Hold Time analyses (<72hr): [X] Yes [ ] No [ ] N/A. Row 7: Rush Turn Around Time requested: [ ] Yes [X] No [ ] N/A. Row 8: Sufficient volume: [X] Yes [ ] No [ ] N/A. Row 9: Correct containers used: [X] Yes [ ] No [ ] N/A. Row 10: Pace containers used: [X] Yes [ ] No [ ] N/A. Row 11: Containers intact: [X] Yes [ ] No [ ] N/A. Row 12: Unpreserved 5035A soils frozen w/in 48hrs?: [X] Yes [ ] No [ ] N/A. Row 13: Filtered volume received for dissolved tests?: [ ] Yes [ ] No [X] N/A. Row 14: Sample labels match COC: [X] Yes [ ] No [ ] N/A. Row 15: Includes date/time/ID/analyses Matrix: water. Row 16: All containers needing preservation have been checked: [X] Yes [ ] No [ ] N/A. Row 17: All containers needing preservation are found to be in compliance with EPA recommendation: [X] Yes [ ] No [ ] N/A. Row 18: Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics: [X] Yes [ ] No. Row 19: Trip Blank present: [X] Yes [ ] No [X] N/A. Row 20: Pace Trip Blank lot # (if purchased): Lovarel. Row 21: Headspace in VOA vials (>6mm): [ ] Yes [X] No [X] N/A. Row 22: Project sampled in USDA Regulated Area: [ ] Yes [ ] No [X] N/A. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: Date:



July 26, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 72 HR BIO  
Pace Project No.: 60149288

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 20, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149288001	72-HR B10	Water	07/19/13 15:00	07/20/13 00:40
60149288002	TRIP BLANK	Water	07/19/13 08:00	07/20/13 00:40

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149288001	72-HR B10	EPA 5030B/8260	PRG	70
		SM 5210B	JMC1	1
60149288002	TRIP BLANK	EPA 5030B/8260	PRG	70

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

**Sample: 72-HR B10**      **Lab ID: 60149288001**      Collected: 07/19/13 15:00      Received: 07/20/13 00:40      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b> Analytical Method: EPA 5030B/8260									
Acetone	<b>55300</b>	ug/L	2000	376	200		07/22/13 12:36	67-64-1	
Benzene	< <b>12.0</b>	ug/L	200	12.0	200		07/22/13 12:36	71-43-2	
Bromobenzene	< <b>20.0</b>	ug/L	200	20.0	200		07/22/13 12:36	108-86-1	
Bromochloromethane	< <b>30.0</b>	ug/L	200	30.0	200		07/22/13 12:36	74-97-5	
Bromodichloromethane	< <b>38.0</b>	ug/L	200	38.0	200		07/22/13 12:36	75-27-4	
Bromoform	<b>68.7J</b>	ug/L	200	14.0	200		07/22/13 12:36	75-25-2	B
Bromomethane	< <b>32.0</b>	ug/L	1000	32.0	200		07/22/13 12:36	74-83-9	
2-Butanone (MEK)	<b>21400</b>	ug/L	2000	118	200		07/22/13 12:36	78-93-3	
n-Butylbenzene	< <b>20.0</b>	ug/L	200	20.0	200		07/22/13 12:36	104-51-8	
sec-Butylbenzene	< <b>10.0</b>	ug/L	200	10.0	200		07/22/13 12:36	135-98-8	
tert-Butylbenzene	< <b>68.0</b>	ug/L	200	68.0	200		07/22/13 12:36	98-06-6	
Carbon disulfide	< <b>24.0</b>	ug/L	1000	24.0	200		07/22/13 12:36	75-15-0	
Carbon tetrachloride	< <b>36.0</b>	ug/L	200	36.0	200		07/22/13 12:36	56-23-5	
Chlorobenzene	< <b>42.0</b>	ug/L	200	42.0	200		07/22/13 12:36	108-90-7	
Chloroethane	< <b>30.0</b>	ug/L	200	30.0	200		07/22/13 12:36	75-00-3	
Chloroform	<b>36.7J</b>	ug/L	200	28.0	200		07/22/13 12:36	67-66-3	
Chloromethane	< <b>16.0</b>	ug/L	200	16.0	200		07/22/13 12:36	74-87-3	
2-Chlorotoluene	< <b>24.0</b>	ug/L	200	24.0	200		07/22/13 12:36	95-49-8	
4-Chlorotoluene	< <b>28.0</b>	ug/L	200	28.0	200		07/22/13 12:36	106-43-4	
1,2-Dibromo-3-chloropropane	< <b>118</b>	ug/L	500	118	200		07/22/13 12:36	96-12-8	
Dibromochloromethane	< <b>42.0</b>	ug/L	200	42.0	200		07/22/13 12:36	124-48-1	
1,2-Dibromoethane (EDB)	< <b>34.0</b>	ug/L	200	34.0	200		07/22/13 12:36	106-93-4	
Dibromomethane	< <b>36.0</b>	ug/L	200	36.0	200		07/22/13 12:36	74-95-3	
1,2-Dichlorobenzene	< <b>10.0</b>	ug/L	200	10.0	200		07/22/13 12:36	95-50-1	
1,3-Dichlorobenzene	< <b>14.0</b>	ug/L	200	14.0	200		07/22/13 12:36	541-73-1	
1,4-Dichlorobenzene	<b>52.0J</b>	ug/L	200	12.0	200		07/22/13 12:36	106-46-7	
Dichlorodifluoromethane	< <b>42.0</b>	ug/L	200	42.0	200		07/22/13 12:36	75-71-8	
1,1-Dichloroethane	< <b>10.0</b>	ug/L	200	10.0	200		07/22/13 12:36	75-34-3	
1,2-Dichloroethane	< <b>24.0</b>	ug/L	200	24.0	200		07/22/13 12:36	107-06-2	
1,2-Dichloroethene (Total)	< <b>56.0</b>	ug/L	200	56.0	200		07/22/13 12:36	540-59-0	
1,1-Dichloroethene	< <b>40.0</b>	ug/L	200	40.0	200		07/22/13 12:36	75-35-4	
cis-1,2-Dichloroethene	< <b>16.0</b>	ug/L	200	16.0	200		07/22/13 12:36	156-59-2	
trans-1,2-Dichloroethene	< <b>40.0</b>	ug/L	200	40.0	200		07/22/13 12:36	156-60-5	
1,2-Dichloropropane	< <b>32.0</b>	ug/L	200	32.0	200		07/22/13 12:36	78-87-5	
1,3-Dichloropropane	< <b>34.0</b>	ug/L	200	34.0	200		07/22/13 12:36	142-28-9	
2,2-Dichloropropane	< <b>38.0</b>	ug/L	200	38.0	200		07/22/13 12:36	594-20-7	
1,1-Dichloropropene	< <b>18.0</b>	ug/L	200	18.0	200		07/22/13 12:36	563-58-6	
cis-1,3-Dichloropropene	< <b>28.0</b>	ug/L	200	28.0	200		07/22/13 12:36	10061-01-5	
trans-1,3-Dichloropropene	< <b>24.0</b>	ug/L	200	24.0	200		07/22/13 12:36	10061-02-6	
Ethylbenzene	< <b>36.0</b>	ug/L	200	36.0	200		07/22/13 12:36	100-41-4	
Hexachloro-1,3-butadiene	< <b>36.0</b>	ug/L	200	36.0	200		07/22/13 12:36	87-68-3	
2-Hexanone	< <b>238</b>	ug/L	2000	238	200		07/22/13 12:36	591-78-6	
Isopropylbenzene (Cumene)	< <b>14.0</b>	ug/L	200	14.0	200		07/22/13 12:36	98-82-8	
p-Isopropyltoluene	<b>490</b>	ug/L	200	20.0	200		07/22/13 12:36	99-87-6	
Methylene chloride	<b>49.2J</b>	ug/L	200	30.0	200		07/22/13 12:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	<b>156J</b>	ug/L	2000	84.0	200		07/22/13 12:36	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

**Sample: 72-HR B10**      **Lab ID: 60149288001**      Collected: 07/19/13 15:00      Received: 07/20/13 00:40      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Methyl-tert-butyl ether	<12.0	ug/L	200	12.0	200		07/22/13 12:36	1634-04-4	
Naphthalene	434J	ug/L	2000	32.0	200		07/22/13 12:36	91-20-3	
n-Propylbenzene	<20.0	ug/L	200	20.0	200		07/22/13 12:36	103-65-1	
Styrene	<24.0	ug/L	200	24.0	200		07/22/13 12:36	100-42-5	
1,1,1,2-Tetrachloroethane	<30.0	ug/L	200	30.0	200		07/22/13 12:36	630-20-6	
1,1,2,2-Tetrachloroethane	<30.0	ug/L	200	30.0	200		07/22/13 12:36	79-34-5	
Tetrachloroethene	<20.0	ug/L	200	20.0	200		07/22/13 12:36	127-18-4	
Toluene	<34.0	ug/L	200	34.0	200		07/22/13 12:36	108-88-3	
1,2,3-Trichlorobenzene	<24.0	ug/L	200	24.0	200		07/22/13 12:36	87-61-6	
1,2,4-Trichlorobenzene	<20.0	ug/L	200	20.0	200		07/22/13 12:36	120-82-1	
1,1,1-Trichloroethane	<22.0	ug/L	200	22.0	200		07/22/13 12:36	71-55-6	
1,1,2-Trichloroethane	<40.0	ug/L	200	40.0	200		07/22/13 12:36	79-00-5	
Trichloroethene	<34.0	ug/L	200	34.0	200		07/22/13 12:36	79-01-6	
Trichlorofluoromethane	<68.0	ug/L	200	68.0	200		07/22/13 12:36	75-69-4	
1,2,3-Trichloropropane	<38.0	ug/L	500	38.0	200		07/22/13 12:36	96-18-4	
1,2,4-Trimethylbenzene	52.3J	ug/L	200	18.0	200		07/22/13 12:36	95-63-6	
1,3,5-Trimethylbenzene	<20.0	ug/L	200	20.0	200		07/22/13 12:36	108-67-8	
Vinyl chloride	<26.0	ug/L	200	26.0	200		07/22/13 12:36	75-01-4	
Xylene (Total)	<84.0	ug/L	600	84.0	200		07/22/13 12:36	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100 %		80-120		200		07/22/13 12:36	460-00-4	
Dibromofluoromethane (S)	100 %		80-120		200		07/22/13 12:36	1868-53-7	
1,2-Dichloroethane-d4 (S)	95 %		80-120		200		07/22/13 12:36	17060-07-0	
Toluene-d8 (S)	99 %		80-120		200		07/22/13 12:36	2037-26-5	
Preservation pH	7.0		0.10	0.10	200		07/22/13 12:36		
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B      Preparation Method: SM 5210B							
BOD, 5 day	26400	mg/L	2.0	2.0	1	07/20/13 11:48	07/25/13 15:05		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

Sample: **TRIP BLANK** Lab ID: **60149288002** Collected: 07/19/13 08:00 Received: 07/20/13 00:40 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>									
Analytical Method: EPA 5030B/8260									
Acetone	<1.9	ug/L	10.0	1.9	1		07/22/13 11:21	67-64-1	
Benzene	<0.060	ug/L	1.0	0.060	1		07/22/13 11:21	71-43-2	
Bromobenzene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:21	108-86-1	
Bromochloromethane	<0.15	ug/L	1.0	0.15	1		07/22/13 11:21	74-97-5	
Bromodichloromethane	<0.19	ug/L	1.0	0.19	1		07/22/13 11:21	75-27-4	
Bromoform	0.37J	ug/L	1.0	0.070	1		07/22/13 11:21	75-25-2	B
Bromomethane	<0.16	ug/L	5.0	0.16	1		07/22/13 11:21	74-83-9	
2-Butanone (MEK)	<0.59	ug/L	10.0	0.59	1		07/22/13 11:21	78-93-3	
n-Butylbenzene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:21	104-51-8	
sec-Butylbenzene	<0.050	ug/L	1.0	0.050	1		07/22/13 11:21	135-98-8	
tert-Butylbenzene	<0.34	ug/L	1.0	0.34	1		07/22/13 11:21	98-06-6	
Carbon disulfide	<0.12	ug/L	5.0	0.12	1		07/22/13 11:21	75-15-0	
Carbon tetrachloride	<0.18	ug/L	1.0	0.18	1		07/22/13 11:21	56-23-5	
Chlorobenzene	<0.21	ug/L	1.0	0.21	1		07/22/13 11:21	108-90-7	
Chloroethane	<0.15	ug/L	1.0	0.15	1		07/22/13 11:21	75-00-3	
Chloroform	<0.14	ug/L	1.0	0.14	1		07/22/13 11:21	67-66-3	
Chloromethane	<0.080	ug/L	1.0	0.080	1		07/22/13 11:21	74-87-3	
2-Chlorotoluene	<0.12	ug/L	1.0	0.12	1		07/22/13 11:21	95-49-8	
4-Chlorotoluene	<0.14	ug/L	1.0	0.14	1		07/22/13 11:21	106-43-4	
1,2-Dibromo-3-chloropropane	<0.59	ug/L	2.5	0.59	1		07/22/13 11:21	96-12-8	
Dibromochloromethane	<0.21	ug/L	1.0	0.21	1		07/22/13 11:21	124-48-1	
1,2-Dibromoethane (EDB)	<0.17	ug/L	1.0	0.17	1		07/22/13 11:21	106-93-4	
Dibromomethane	<0.18	ug/L	1.0	0.18	1		07/22/13 11:21	74-95-3	
1,2-Dichlorobenzene	<0.050	ug/L	1.0	0.050	1		07/22/13 11:21	95-50-1	
1,3-Dichlorobenzene	<0.070	ug/L	1.0	0.070	1		07/22/13 11:21	541-73-1	
1,4-Dichlorobenzene	<0.060	ug/L	1.0	0.060	1		07/22/13 11:21	106-46-7	
Dichlorodifluoromethane	<0.21	ug/L	1.0	0.21	1		07/22/13 11:21	75-71-8	
1,1-Dichloroethane	<0.050	ug/L	1.0	0.050	1		07/22/13 11:21	75-34-3	
1,2-Dichloroethane	<0.12	ug/L	1.0	0.12	1		07/22/13 11:21	107-06-2	
1,2-Dichloroethene (Total)	<0.28	ug/L	1.0	0.28	1		07/22/13 11:21	540-59-0	
1,1-Dichloroethene	<0.20	ug/L	1.0	0.20	1		07/22/13 11:21	75-35-4	
cis-1,2-Dichloroethene	<0.080	ug/L	1.0	0.080	1		07/22/13 11:21	156-59-2	
trans-1,2-Dichloroethene	<0.20	ug/L	1.0	0.20	1		07/22/13 11:21	156-60-5	
1,2-Dichloropropane	<0.16	ug/L	1.0	0.16	1		07/22/13 11:21	78-87-5	
1,3-Dichloropropane	<0.17	ug/L	1.0	0.17	1		07/22/13 11:21	142-28-9	
2,2-Dichloropropane	<0.19	ug/L	1.0	0.19	1		07/22/13 11:21	594-20-7	
1,1-Dichloropropene	<0.090	ug/L	1.0	0.090	1		07/22/13 11:21	563-58-6	
cis-1,3-Dichloropropene	<0.14	ug/L	1.0	0.14	1		07/22/13 11:21	10061-01-5	
trans-1,3-Dichloropropene	<0.12	ug/L	1.0	0.12	1		07/22/13 11:21	10061-02-6	
Ethylbenzene	<0.18	ug/L	1.0	0.18	1		07/22/13 11:21	100-41-4	
Hexachloro-1,3-butadiene	<0.18	ug/L	1.0	0.18	1		07/22/13 11:21	87-68-3	
2-Hexanone	<1.2	ug/L	10.0	1.2	1		07/22/13 11:21	591-78-6	
Isopropylbenzene (Cumene)	<0.070	ug/L	1.0	0.070	1		07/22/13 11:21	98-82-8	
p-Isopropyltoluene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:21	99-87-6	
Methylene chloride	0.27J	ug/L	1.0	0.15	1		07/22/13 11:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.42	ug/L	10.0	0.42	1		07/22/13 11:21	108-10-1	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

**Sample: TRIP BLANK**      **Lab ID: 60149288002**      Collected: 07/19/13 08:00      Received: 07/20/13 00:40      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Methyl-tert-butyl ether	<0.060	ug/L	1.0	0.060	1		07/22/13 11:21	1634-04-4	
Naphthalene	<0.16	ug/L	10.0	0.16	1		07/22/13 11:21	91-20-3	
n-Propylbenzene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:21	103-65-1	
Styrene	<0.12	ug/L	1.0	0.12	1		07/22/13 11:21	100-42-5	
1,1,1,2-Tetrachloroethane	<0.15	ug/L	1.0	0.15	1		07/22/13 11:21	630-20-6	
1,1,2,2-Tetrachloroethane	<0.15	ug/L	1.0	0.15	1		07/22/13 11:21	79-34-5	
Tetrachloroethene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:21	127-18-4	
Toluene	<0.17	ug/L	1.0	0.17	1		07/22/13 11:21	108-88-3	
1,2,3-Trichlorobenzene	<0.12	ug/L	1.0	0.12	1		07/22/13 11:21	87-61-6	
1,2,4-Trichlorobenzene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:21	120-82-1	
1,1,1-Trichloroethane	<0.11	ug/L	1.0	0.11	1		07/22/13 11:21	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/22/13 11:21	79-00-5	
Trichloroethene	<0.17	ug/L	1.0	0.17	1		07/22/13 11:21	79-01-6	
Trichlorofluoromethane	<0.34	ug/L	1.0	0.34	1		07/22/13 11:21	75-69-4	
1,2,3-Trichloropropane	<0.19	ug/L	2.5	0.19	1		07/22/13 11:21	96-18-4	
1,2,4-Trimethylbenzene	<0.090	ug/L	1.0	0.090	1		07/22/13 11:21	95-63-6	
1,3,5-Trimethylbenzene	<0.10	ug/L	1.0	0.10	1		07/22/13 11:21	108-67-8	
Vinyl chloride	<0.13	ug/L	1.0	0.13	1		07/22/13 11:21	75-01-4	
Xylene (Total)	<0.42	ug/L	3.0	0.42	1		07/22/13 11:21	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102	%	80-120		1		07/22/13 11:21	460-00-4	
Dibromofluoromethane (S)	103	%	80-120		1		07/22/13 11:21	1868-53-7	
1,2-Dichloroethane-d4 (S)	108	%	80-120		1		07/22/13 11:21	17060-07-0	
Toluene-d8 (S)	100	%	80-120		1		07/22/13 11:21	2037-26-5	
Preservation pH	7.0		0.10	0.10	1		07/22/13 11:21		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

QC Batch: MSV/55071 Analysis Method: EPA 5030B/8260  
 QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Water 7 day  
 Associated Lab Samples: 60149288001, 60149288002

METHOD BLANK: 1223715 Matrix: Water

Associated Lab Samples: 60149288001, 60149288002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.15	1.0	07/22/13 09:38	
1,1,1-Trichloroethane	ug/L	<0.11	1.0	07/22/13 09:38	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	07/22/13 09:38	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	07/22/13 09:38	
1,1-Dichloroethane	ug/L	<0.050	1.0	07/22/13 09:38	
1,1-Dichloroethene	ug/L	<0.20	1.0	07/22/13 09:38	
1,1-Dichloropropene	ug/L	<0.090	1.0	07/22/13 09:38	
1,2,3-Trichlorobenzene	ug/L	<0.12	1.0	07/22/13 09:38	
1,2,3-Trichloropropane	ug/L	<0.19	2.5	07/22/13 09:38	
1,2,4-Trichlorobenzene	ug/L	<0.10	1.0	07/22/13 09:38	
1,2,4-Trimethylbenzene	ug/L	<0.090	1.0	07/22/13 09:38	
1,2-Dibromo-3-chloropropane	ug/L	<0.59	2.5	07/22/13 09:38	
1,2-Dibromoethane (EDB)	ug/L	<0.17	1.0	07/22/13 09:38	
1,2-Dichlorobenzene	ug/L	<0.050	1.0	07/22/13 09:38	
1,2-Dichloroethane	ug/L	<0.12	1.0	07/22/13 09:38	
1,2-Dichloroethene (Total)	ug/L	<0.28	1.0	07/22/13 09:38	
1,2-Dichloropropane	ug/L	<0.16	1.0	07/22/13 09:38	
1,3,5-Trimethylbenzene	ug/L	<0.10	1.0	07/22/13 09:38	
1,3-Dichlorobenzene	ug/L	<0.070	1.0	07/22/13 09:38	
1,3-Dichloropropane	ug/L	<0.17	1.0	07/22/13 09:38	
1,4-Dichlorobenzene	ug/L	<0.060	1.0	07/22/13 09:38	
2,2-Dichloropropane	ug/L	<0.19	1.0	07/22/13 09:38	
2-Butanone (MEK)	ug/L	<0.59	10.0	07/22/13 09:38	
2-Chlorotoluene	ug/L	<0.12	1.0	07/22/13 09:38	
2-Hexanone	ug/L	<1.2	10.0	07/22/13 09:38	
4-Chlorotoluene	ug/L	<0.14	1.0	07/22/13 09:38	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	10.0	07/22/13 09:38	
Acetone	ug/L	<1.9	10.0	07/22/13 09:38	
Benzene	ug/L	<0.060	1.0	07/22/13 09:38	
Bromobenzene	ug/L	<0.10	1.0	07/22/13 09:38	
Bromochloromethane	ug/L	<0.15	1.0	07/22/13 09:38	
Bromodichloromethane	ug/L	<0.19	1.0	07/22/13 09:38	
Bromoform	ug/L	0.34J	1.0	07/22/13 09:38	
Bromomethane	ug/L	<0.16	5.0	07/22/13 09:38	
Carbon disulfide	ug/L	<0.12	5.0	07/22/13 09:38	
Carbon tetrachloride	ug/L	<0.18	1.0	07/22/13 09:38	
Chlorobenzene	ug/L	<0.21	1.0	07/22/13 09:38	
Chloroethane	ug/L	<0.15	1.0	07/22/13 09:38	
Chloroform	ug/L	<0.14	1.0	07/22/13 09:38	
Chloromethane	ug/L	<0.080	1.0	07/22/13 09:38	
cis-1,2-Dichloroethene	ug/L	<0.080	1.0	07/22/13 09:38	
cis-1,3-Dichloropropene	ug/L	<0.14	1.0	07/22/13 09:38	
Dibromochloromethane	ug/L	<0.21	1.0	07/22/13 09:38	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

METHOD BLANK: 1223715

Matrix: Water

Associated Lab Samples: 60149288001, 60149288002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	<0.18	1.0	07/22/13 09:38	
Dichlorodifluoromethane	ug/L	<0.21	1.0	07/22/13 09:38	
Ethylbenzene	ug/L	<0.18	1.0	07/22/13 09:38	
Hexachloro-1,3-butadiene	ug/L	<0.18	1.0	07/22/13 09:38	
Isopropylbenzene (Cumene)	ug/L	<0.070	1.0	07/22/13 09:38	
Methyl-tert-butyl ether	ug/L	<0.060	1.0	07/22/13 09:38	
Methylene chloride	ug/L	<0.15	1.0	07/22/13 09:38	
n-Butylbenzene	ug/L	<0.10	1.0	07/22/13 09:38	
n-Propylbenzene	ug/L	<0.10	1.0	07/22/13 09:38	
Naphthalene	ug/L	<0.16	10.0	07/22/13 09:38	
p-Isopropyltoluene	ug/L	<0.10	1.0	07/22/13 09:38	
sec-Butylbenzene	ug/L	<0.050	1.0	07/22/13 09:38	
Styrene	ug/L	<0.12	1.0	07/22/13 09:38	
tert-Butylbenzene	ug/L	<0.34	1.0	07/22/13 09:38	
Tetrachloroethene	ug/L	<0.10	1.0	07/22/13 09:38	
Toluene	ug/L	<0.17	1.0	07/22/13 09:38	
trans-1,2-Dichloroethene	ug/L	<0.20	1.0	07/22/13 09:38	
trans-1,3-Dichloropropene	ug/L	<0.12	1.0	07/22/13 09:38	
Trichloroethene	ug/L	<0.17	1.0	07/22/13 09:38	
Trichlorofluoromethane	ug/L	<0.34	1.0	07/22/13 09:38	
Vinyl chloride	ug/L	<0.13	1.0	07/22/13 09:38	
Xylene (Total)	ug/L	<0.42	3.0	07/22/13 09:38	
1,2-Dichloroethane-d4 (S)	%	107	80-120	07/22/13 09:38	
4-Bromofluorobenzene (S)	%	100	80-120	07/22/13 09:38	
Dibromofluoromethane (S)	%	102	80-120	07/22/13 09:38	
Toluene-d8 (S)	%	101	80-120	07/22/13 09:38	

LABORATORY CONTROL SAMPLE: 1223716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	21.1	106	79-121	
1,1,1-Trichloroethane	ug/L	20	19.7	99	75-124	
1,1,2,2-Tetrachloroethane	ug/L	20	21.1	105	73-120	
1,1,2-Trichloroethane	ug/L	20	20.4	102	76-120	
1,1-Dichloroethane	ug/L	20	19.7	99	73-120	
1,1-Dichloroethene	ug/L	20	18.7	94	70-127	
1,1-Dichloropropene	ug/L	20	20.4	102	79-124	
1,2,3-Trichlorobenzene	ug/L	20	21.6	108	68-130	
1,2,3-Trichloropropane	ug/L	20	22.4	112	72-124	
1,2,4-Trichlorobenzene	ug/L	20	21.2	106	73-125	
1,2,4-Trimethylbenzene	ug/L	20	20.2	101	76-120	
1,2-Dibromo-3-chloropropane	ug/L	20	21.4	107	68-126	
1,2-Dibromoethane (EDB)	ug/L	20	21.0	105	79-121	
1,2-Dichlorobenzene	ug/L	20	20.8	104	79-120	
1,2-Dichloroethane	ug/L	20	20.9	105	72-122	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

LABORATORY CONTROL SAMPLE: 1223716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethene (Total)	ug/L	40	38.9	97	77-120	
1,2-Dichloropropane	ug/L	20	19.7	99	77-120	
1,3,5-Trimethylbenzene	ug/L	20	20.2	101	75-120	
1,3-Dichlorobenzene	ug/L	20	19.9	100	80-120	
1,3-Dichloropropane	ug/L	20	19.9	99	76-120	
1,4-Dichlorobenzene	ug/L	20	20.3	101	80-120	
2,2-Dichloropropane	ug/L	20	20.5	103	52-135	
2-Butanone (MEK)	ug/L	100	118	118	69-124	
2-Chlorotoluene	ug/L	20	20.3	101	78-120	
2-Hexanone	ug/L	100	102	102	70-125	
4-Chlorotoluene	ug/L	20	19.7	98	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	105	105	72-123	
Acetone	ug/L	100	89.8	90	60-126	
Benzene	ug/L	20	19.4	97	73-122	
Bromobenzene	ug/L	20	20.7	104	79-120	
Bromochloromethane	ug/L	20	18.0	90	76-125	
Bromodichloromethane	ug/L	20	20.2	101	73-120	
Bromoform	ug/L	20	19.1	96	74-120	
Bromomethane	ug/L	20	12.9	65	40-146	
Carbon disulfide	ug/L	20	17.7	89	62-125	
Carbon tetrachloride	ug/L	20	21.5	108	73-125	
Chlorobenzene	ug/L	20	20.0	100	80-120	
Chloroethane	ug/L	20	17.8	89	56-159	
Chloroform	ug/L	20	19.2	96	76-120	
Chloromethane	ug/L	20	15.4	77	40-148	
cis-1,2-Dichloroethene	ug/L	20	19.4	97	69-120	
cis-1,3-Dichloropropene	ug/L	20	20.2	101	76-120	
Dibromochloromethane	ug/L	20	20.7	104	79-121	
Dibromomethane	ug/L	20	19.7	98	77-120	
Dichlorodifluoromethane	ug/L	20	13.8	69	40-141	
Ethylbenzene	ug/L	20	19.9	100	76-123	
Hexachloro-1,3-butadiene	ug/L	20	19.7	99	69-125	
Isopropylbenzene (Cumene)	ug/L	20	21.4	107	80-130	
Methyl-tert-butyl ether	ug/L	20	22.4	112	67-128	
Methylene chloride	ug/L	20	19.4	97	71-123	
n-Butylbenzene	ug/L	20	21.2	106	77-124	
n-Propylbenzene	ug/L	20	20.0	100	78-120	
Naphthalene	ug/L	20	21.5	107	64-127	
p-Isopropyltoluene	ug/L	20	20.3	102	78-120	
sec-Butylbenzene	ug/L	20	20.6	103	77-122	
Styrene	ug/L	20	19.4	97	79-120	
tert-Butylbenzene	ug/L	20	20.6	103	76-123	
Tetrachloroethene	ug/L	20	19.6	98	79-122	
Toluene	ug/L	20	19.5	97	76-122	
trans-1,2-Dichloroethene	ug/L	20	19.4	97	78-126	
trans-1,3-Dichloropropene	ug/L	20	21.3	107	79-124	
Trichloroethene	ug/L	20	18.1	91	76-120	
Trichlorofluoromethane	ug/L	20	18.2	91	69-133	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

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LABORATORY CONTROL SAMPLE: 1223716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	20	16.0	80	57-140	
Xylene (Total)	ug/L	60	58.9	98	76-122	
1,2-Dichloroethane-d4 (S)	%			109	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Dibromofluoromethane (S)	%			101	80-120	
Toluene-d8 (S)	%			99	80-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

QC Batch: WET/42470

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149288001

METHOD BLANK: 1223421

Matrix: Water

Associated Lab Samples: 60149288001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	07/25/13 14:36	

LABORATORY CONTROL SAMPLE: 1223422

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	169	85	85-115	

SAMPLE DUPLICATE: 1223424

Parameter	Units	60149284001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	511	542	6	17	

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## QUALIFIERS

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: MSV/55071

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 72 HR BIO

Pace Project No.: 60149288

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149288001	72-HR B10	EPA 5030B/8260	MSV/55071		
60149288002	TRIP BLANK	EPA 5030B/8260	MSV/55071		
60149288001	72-HR B10	SM 5210B	WET/42470	SM 5210B	WET/42552

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Sample Condition Upon Receipt

WO#: 60149288



60149288

Client Name: Barr

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2/10

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 1.1  
Temperature should be above freezing to 6°C

Date and initials of person examining contents: PV 7/20/13

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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>PV 7/20/13</u>
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Includes date/time/ID/analyses Matrix:	<u>WT</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: <u>VOA</u> coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased): <u>Cover</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: \_\_\_\_\_

Date: 7/20/13



July 29, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 96-HR BIO  
Pace Project No.: 60149330

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 22, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149330001	96-HR BIO	Water	07/20/13 15:00	07/22/13 12:55
60149330002	TRIP BLANK	Water	07/20/13 08:00	07/22/13 12:55

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149330001	96-HR BIO	EPA 5030B/8260	JKL	70
		SM 5210B	NDL	1
60149330002	TRIP BLANK	EPA 5030B/8260	JKL	70

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

**Sample: 96-HR BIO**      **Lab ID: 60149330001**      Collected: 07/20/13 15:00      Received: 07/22/13 12:55      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Acetone	<b>34900</b>	ug/L	2000	376	200		07/23/13 12:20	67-64-1	
Benzene	< <b>12.0</b>	ug/L	200	12.0	200		07/23/13 12:20	71-43-2	
Bromobenzene	< <b>20.0</b>	ug/L	200	20.0	200		07/23/13 12:20	108-86-1	
Bromochloromethane	< <b>30.0</b>	ug/L	200	30.0	200		07/23/13 12:20	74-97-5	
Bromodichloromethane	< <b>38.0</b>	ug/L	200	38.0	200		07/23/13 12:20	75-27-4	
Bromoform	< <b>14.0</b>	ug/L	200	14.0	200		07/23/13 12:20	75-25-2	
Bromomethane	< <b>32.0</b>	ug/L	1000	32.0	200		07/23/13 12:20	74-83-9	
2-Butanone (MEK)	<b>12600</b>	ug/L	2000	118	200		07/23/13 12:20	78-93-3	
n-Butylbenzene	< <b>20.0</b>	ug/L	200	20.0	200		07/23/13 12:20	104-51-8	
sec-Butylbenzene	< <b>10.0</b>	ug/L	200	10.0	200		07/23/13 12:20	135-98-8	
tert-Butylbenzene	< <b>68.0</b>	ug/L	200	68.0	200		07/23/13 12:20	98-06-6	
Carbon disulfide	< <b>24.0</b>	ug/L	1000	24.0	200		07/23/13 12:20	75-15-0	
Carbon tetrachloride	< <b>36.0</b>	ug/L	200	36.0	200		07/23/13 12:20	56-23-5	
Chlorobenzene	< <b>42.0</b>	ug/L	200	42.0	200		07/23/13 12:20	108-90-7	
Chloroethane	< <b>30.0</b>	ug/L	200	30.0	200		07/23/13 12:20	75-00-3	
Chloroform	< <b>28.0</b>	ug/L	200	28.0	200		07/23/13 12:20	67-66-3	
Chloromethane	< <b>16.0</b>	ug/L	200	16.0	200		07/23/13 12:20	74-87-3	
2-Chlorotoluene	< <b>24.0</b>	ug/L	200	24.0	200		07/23/13 12:20	95-49-8	
4-Chlorotoluene	< <b>28.0</b>	ug/L	200	28.0	200		07/23/13 12:20	106-43-4	
1,2-Dibromo-3-chloropropane	< <b>118</b>	ug/L	500	118	200		07/23/13 12:20	96-12-8	
Dibromochloromethane	< <b>42.0</b>	ug/L	200	42.0	200		07/23/13 12:20	124-48-1	L2
1,2-Dibromoethane (EDB)	< <b>34.0</b>	ug/L	200	34.0	200		07/23/13 12:20	106-93-4	
Dibromomethane	< <b>36.0</b>	ug/L	200	36.0	200		07/23/13 12:20	74-95-3	
1,2-Dichlorobenzene	< <b>10.0</b>	ug/L	200	10.0	200		07/23/13 12:20	95-50-1	
1,3-Dichlorobenzene	< <b>14.0</b>	ug/L	200	14.0	200		07/23/13 12:20	541-73-1	
1,4-Dichlorobenzene	< <b>12.0</b>	ug/L	200	12.0	200		07/23/13 12:20	106-46-7	
Dichlorodifluoromethane	< <b>42.0</b>	ug/L	200	42.0	200		07/23/13 12:20	75-71-8	
1,1-Dichloroethane	< <b>10.0</b>	ug/L	200	10.0	200		07/23/13 12:20	75-34-3	
1,2-Dichloroethane	< <b>24.0</b>	ug/L	200	24.0	200		07/23/13 12:20	107-06-2	
1,2-Dichloroethene (Total)	< <b>56.0</b>	ug/L	200	56.0	200		07/23/13 12:20	540-59-0	
1,1-Dichloroethene	< <b>40.0</b>	ug/L	200	40.0	200		07/23/13 12:20	75-35-4	
cis-1,2-Dichloroethene	< <b>16.0</b>	ug/L	200	16.0	200		07/23/13 12:20	156-59-2	
trans-1,2-Dichloroethene	< <b>40.0</b>	ug/L	200	40.0	200		07/23/13 12:20	156-60-5	
1,2-Dichloropropane	< <b>32.0</b>	ug/L	200	32.0	200		07/23/13 12:20	78-87-5	
1,3-Dichloropropane	< <b>34.0</b>	ug/L	200	34.0	200		07/23/13 12:20	142-28-9	
2,2-Dichloropropane	< <b>38.0</b>	ug/L	200	38.0	200		07/23/13 12:20	594-20-7	
1,1-Dichloropropene	< <b>18.0</b>	ug/L	200	18.0	200		07/23/13 12:20	563-58-6	
cis-1,3-Dichloropropene	< <b>28.0</b>	ug/L	200	28.0	200		07/23/13 12:20	10061-01-5	
trans-1,3-Dichloropropene	< <b>24.0</b>	ug/L	200	24.0	200		07/23/13 12:20	10061-02-6	
Ethylbenzene	< <b>36.0</b>	ug/L	200	36.0	200		07/23/13 12:20	100-41-4	
Hexachloro-1,3-butadiene	<b>66.1J</b>	ug/L	200	36.0	200		07/23/13 12:20	87-68-3	
2-Hexanone	< <b>238</b>	ug/L	2000	238	200		07/23/13 12:20	591-78-6	
Isopropylbenzene (Cumene)	< <b>14.0</b>	ug/L	200	14.0	200		07/23/13 12:20	98-82-8	
p-Isopropyltoluene	<b>339</b>	ug/L	200	20.0	200		07/23/13 12:20	99-87-6	
Methylene chloride	<b>96.5J</b>	ug/L	200	30.0	200		07/23/13 12:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	< <b>84.0</b>	ug/L	2000	84.0	200		07/23/13 12:20	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

**Sample: 96-HR BIO**      **Lab ID: 60149330001**      Collected: 07/20/13 15:00      Received: 07/22/13 12:55      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Methyl-tert-butyl ether	<12.0	ug/L	200	12.0	200		07/23/13 12:20	1634-04-4	
Naphthalene	321J	ug/L	2000	32.0	200		07/23/13 12:20	91-20-3	
n-Propylbenzene	<20.0	ug/L	200	20.0	200		07/23/13 12:20	103-65-1	
Styrene	<24.0	ug/L	200	24.0	200		07/23/13 12:20	100-42-5	
1,1,1,2-Tetrachloroethane	<30.0	ug/L	200	30.0	200		07/23/13 12:20	630-20-6	
1,1,2,2-Tetrachloroethane	<30.0	ug/L	200	30.0	200		07/23/13 12:20	79-34-5	
Tetrachloroethene	<20.0	ug/L	200	20.0	200		07/23/13 12:20	127-18-4	
Toluene	<34.0	ug/L	200	34.0	200		07/23/13 12:20	108-88-3	
1,2,3-Trichlorobenzene	<24.0	ug/L	200	24.0	200		07/23/13 12:20	87-61-6	
1,2,4-Trichlorobenzene	<20.0	ug/L	200	20.0	200		07/23/13 12:20	120-82-1	
1,1,1-Trichloroethane	<22.0	ug/L	200	22.0	200		07/23/13 12:20	71-55-6	
1,1,2-Trichloroethane	<40.0	ug/L	200	40.0	200		07/23/13 12:20	79-00-5	
Trichloroethene	<34.0	ug/L	200	34.0	200		07/23/13 12:20	79-01-6	
Trichlorofluoromethane	<68.0	ug/L	200	68.0	200		07/23/13 12:20	75-69-4	
1,2,3-Trichloropropane	<38.0	ug/L	500	38.0	200		07/23/13 12:20	96-18-4	
1,2,4-Trimethylbenzene	59.7J	ug/L	200	18.0	200		07/23/13 12:20	95-63-6	B
1,3,5-Trimethylbenzene	<20.0	ug/L	200	20.0	200		07/23/13 12:20	108-67-8	
Vinyl chloride	<26.0	ug/L	200	26.0	200		07/23/13 12:20	75-01-4	
Xylene (Total)	<84.0	ug/L	600	84.0	200		07/23/13 12:20	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	92	%	80-120		200		07/23/13 12:20	460-00-4	D3
Dibromofluoromethane (S)	107	%	80-120		200		07/23/13 12:20	1868-53-7	
1,2-Dichloroethane-d4 (S)	89	%	80-120		200		07/23/13 12:20	17060-07-0	
Toluene-d8 (S)	101	%	80-120		200		07/23/13 12:20	2037-26-5	
Preservation pH	7.0		0.10	0.10	200		07/23/13 12:20		
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B      Preparation Method: SM 5210B							
BOD, 5 day	30700	mg/L	2.0	2.0	1	07/22/13 14:33	07/27/13 11:01		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

Sample: **TRIP BLANK** Lab ID: **60149330002** Collected: 07/20/13 08:00 Received: 07/22/13 12:55 Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Acetone	<1.9	ug/L	10.0	1.9	1		07/23/13 12:35	67-64-1	
Benzene	<0.060	ug/L	1.0	0.060	1		07/23/13 12:35	71-43-2	
Bromobenzene	<0.10	ug/L	1.0	0.10	1		07/23/13 12:35	108-86-1	
Bromochloromethane	<0.15	ug/L	1.0	0.15	1		07/23/13 12:35	74-97-5	
Bromodichloromethane	<0.19	ug/L	1.0	0.19	1		07/23/13 12:35	75-27-4	
Bromoform	<0.070	ug/L	1.0	0.070	1		07/23/13 12:35	75-25-2	
Bromomethane	<0.16	ug/L	5.0	0.16	1		07/23/13 12:35	74-83-9	
2-Butanone (MEK)	<0.59	ug/L	10.0	0.59	1		07/23/13 12:35	78-93-3	
n-Butylbenzene	<0.10	ug/L	1.0	0.10	1		07/23/13 12:35	104-51-8	
sec-Butylbenzene	<0.050	ug/L	1.0	0.050	1		07/23/13 12:35	135-98-8	
tert-Butylbenzene	<0.34	ug/L	1.0	0.34	1		07/23/13 12:35	98-06-6	
Carbon disulfide	<0.12	ug/L	5.0	0.12	1		07/23/13 12:35	75-15-0	
Carbon tetrachloride	<0.18	ug/L	1.0	0.18	1		07/23/13 12:35	56-23-5	
Chlorobenzene	<0.21	ug/L	1.0	0.21	1		07/23/13 12:35	108-90-7	
Chloroethane	<0.15	ug/L	1.0	0.15	1		07/23/13 12:35	75-00-3	
Chloroform	<0.14	ug/L	1.0	0.14	1		07/23/13 12:35	67-66-3	
Chloromethane	<0.080	ug/L	1.0	0.080	1		07/23/13 12:35	74-87-3	
2-Chlorotoluene	<0.12	ug/L	1.0	0.12	1		07/23/13 12:35	95-49-8	
4-Chlorotoluene	<0.14	ug/L	1.0	0.14	1		07/23/13 12:35	106-43-4	
1,2-Dibromo-3-chloropropane	<0.59	ug/L	2.5	0.59	1		07/23/13 12:35	96-12-8	
Dibromochloromethane	<0.21	ug/L	1.0	0.21	1		07/23/13 12:35	124-48-1	L2
1,2-Dibromoethane (EDB)	<0.17	ug/L	1.0	0.17	1		07/23/13 12:35	106-93-4	
Dibromomethane	<0.18	ug/L	1.0	0.18	1		07/23/13 12:35	74-95-3	
1,2-Dichlorobenzene	<0.050	ug/L	1.0	0.050	1		07/23/13 12:35	95-50-1	
1,3-Dichlorobenzene	<0.070	ug/L	1.0	0.070	1		07/23/13 12:35	541-73-1	
1,4-Dichlorobenzene	<0.060	ug/L	1.0	0.060	1		07/23/13 12:35	106-46-7	
Dichlorodifluoromethane	<0.21	ug/L	1.0	0.21	1		07/23/13 12:35	75-71-8	
1,1-Dichloroethane	<0.050	ug/L	1.0	0.050	1		07/23/13 12:35	75-34-3	
1,2-Dichloroethane	<0.12	ug/L	1.0	0.12	1		07/23/13 12:35	107-06-2	
1,2-Dichloroethene (Total)	<0.28	ug/L	1.0	0.28	1		07/23/13 12:35	540-59-0	
1,1-Dichloroethene	<0.20	ug/L	1.0	0.20	1		07/23/13 12:35	75-35-4	
cis-1,2-Dichloroethene	<0.080	ug/L	1.0	0.080	1		07/23/13 12:35	156-59-2	
trans-1,2-Dichloroethene	<0.20	ug/L	1.0	0.20	1		07/23/13 12:35	156-60-5	
1,2-Dichloropropane	<0.16	ug/L	1.0	0.16	1		07/23/13 12:35	78-87-5	
1,3-Dichloropropane	<0.17	ug/L	1.0	0.17	1		07/23/13 12:35	142-28-9	
2,2-Dichloropropane	<0.19	ug/L	1.0	0.19	1		07/23/13 12:35	594-20-7	
1,1-Dichloropropene	<0.090	ug/L	1.0	0.090	1		07/23/13 12:35	563-58-6	
cis-1,3-Dichloropropene	<0.14	ug/L	1.0	0.14	1		07/23/13 12:35	10061-01-5	
trans-1,3-Dichloropropene	<0.12	ug/L	1.0	0.12	1		07/23/13 12:35	10061-02-6	
Ethylbenzene	<0.18	ug/L	1.0	0.18	1		07/23/13 12:35	100-41-4	
Hexachloro-1,3-butadiene	<0.18	ug/L	1.0	0.18	1		07/23/13 12:35	87-68-3	
2-Hexanone	<1.2	ug/L	10.0	1.2	1		07/23/13 12:35	591-78-6	
Isopropylbenzene (Cumene)	<0.070	ug/L	1.0	0.070	1		07/23/13 12:35	98-82-8	
p-Isopropyltoluene	<0.10	ug/L	1.0	0.10	1		07/23/13 12:35	99-87-6	
Methylene chloride	<0.15	ug/L	1.0	0.15	1		07/23/13 12:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	<0.42	ug/L	10.0	0.42	1		07/23/13 12:35	108-10-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

**Sample: TRIP BLANK**      **Lab ID: 60149330002**      Collected: 07/20/13 08:00      Received: 07/22/13 12:55      Matrix: Water

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
<b>8260 MSV</b>		Analytical Method: EPA 5030B/8260							
Methyl-tert-butyl ether	<0.060	ug/L	1.0	0.060	1		07/23/13 12:35	1634-04-4	
Naphthalene	0.17J	ug/L	10.0	0.16	1		07/23/13 12:35	91-20-3	
n-Propylbenzene	<0.10	ug/L	1.0	0.10	1		07/23/13 12:35	103-65-1	
Styrene	<0.12	ug/L	1.0	0.12	1		07/23/13 12:35	100-42-5	
1,1,1,2-Tetrachloroethane	<0.15	ug/L	1.0	0.15	1		07/23/13 12:35	630-20-6	
1,1,2,2-Tetrachloroethane	<0.15	ug/L	1.0	0.15	1		07/23/13 12:35	79-34-5	
Tetrachloroethene	<0.10	ug/L	1.0	0.10	1		07/23/13 12:35	127-18-4	
Toluene	<0.17	ug/L	1.0	0.17	1		07/23/13 12:35	108-88-3	
1,2,3-Trichlorobenzene	<0.12	ug/L	1.0	0.12	1		07/23/13 12:35	87-61-6	
1,2,4-Trichlorobenzene	0.11J	ug/L	1.0	0.10	1		07/23/13 12:35	120-82-1	
1,1,1-Trichloroethane	<0.11	ug/L	1.0	0.11	1		07/23/13 12:35	71-55-6	
1,1,2-Trichloroethane	<0.20	ug/L	1.0	0.20	1		07/23/13 12:35	79-00-5	
Trichloroethene	<0.17	ug/L	1.0	0.17	1		07/23/13 12:35	79-01-6	
Trichlorofluoromethane	<0.34	ug/L	1.0	0.34	1		07/23/13 12:35	75-69-4	
1,2,3-Trichloropropane	<0.19	ug/L	2.5	0.19	1		07/23/13 12:35	96-18-4	
1,2,4-Trimethylbenzene	0.19J	ug/L	1.0	0.090	1		07/23/13 12:35	95-63-6	B
1,3,5-Trimethylbenzene	<0.10	ug/L	1.0	0.10	1		07/23/13 12:35	108-67-8	
Vinyl chloride	<0.13	ug/L	1.0	0.13	1		07/23/13 12:35	75-01-4	
Xylene (Total)	<0.42	ug/L	3.0	0.42	1		07/23/13 12:35	1330-20-7	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102 %		80-120		1		07/23/13 12:35	460-00-4	
Dibromofluoromethane (S)	105 %		80-120		1		07/23/13 12:35	1868-53-7	
1,2-Dichloroethane-d4 (S)	101 %		80-120		1		07/23/13 12:35	17060-07-0	
Toluene-d8 (S)	102 %		80-120		1		07/23/13 12:35	2037-26-5	
Preservation pH	7.0		0.10	0.10	1		07/23/13 12:35		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

QC Batch: MSV/55098

Analysis Method: EPA 5030B/8260

QC Batch Method: EPA 5030B/8260

Analysis Description: 8260 MSV Water 7 day

Associated Lab Samples: 60149330001, 60149330002

METHOD BLANK: 1224187

Matrix: Water

Associated Lab Samples: 60149330001, 60149330002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.15	1.0	07/23/13 10:35	
1,1,1-Trichloroethane	ug/L	<0.11	1.0	07/23/13 10:35	
1,1,2,2-Tetrachloroethane	ug/L	<0.15	1.0	07/23/13 10:35	
1,1,2-Trichloroethane	ug/L	<0.20	1.0	07/23/13 10:35	
1,1-Dichloroethane	ug/L	<0.050	1.0	07/23/13 10:35	
1,1-Dichloroethene	ug/L	<0.20	1.0	07/23/13 10:35	
1,1-Dichloropropene	ug/L	<0.090	1.0	07/23/13 10:35	
1,2,3-Trichlorobenzene	ug/L	<0.12	1.0	07/23/13 10:35	
1,2,3-Trichloropropane	ug/L	<0.19	2.5	07/23/13 10:35	
1,2,4-Trichlorobenzene	ug/L	<0.10	1.0	07/23/13 10:35	
1,2,4-Trimethylbenzene	ug/L	0.64J	1.0	07/23/13 10:35	
1,2-Dibromo-3-chloropropane	ug/L	<0.59	2.5	07/23/13 10:35	
1,2-Dibromoethane (EDB)	ug/L	<0.17	1.0	07/23/13 10:35	
1,2-Dichlorobenzene	ug/L	<0.050	1.0	07/23/13 10:35	
1,2-Dichloroethane	ug/L	<0.12	1.0	07/23/13 10:35	
1,2-Dichloroethene (Total)	ug/L	<0.28	1.0	07/23/13 10:35	
1,2-Dichloropropane	ug/L	<0.16	1.0	07/23/13 10:35	
1,3,5-Trimethylbenzene	ug/L	0.12J	1.0	07/23/13 10:35	
1,3-Dichlorobenzene	ug/L	<0.070	1.0	07/23/13 10:35	
1,3-Dichloropropane	ug/L	<0.17	1.0	07/23/13 10:35	
1,4-Dichlorobenzene	ug/L	<0.060	1.0	07/23/13 10:35	
2,2-Dichloropropane	ug/L	<0.19	1.0	07/23/13 10:35	
2-Butanone (MEK)	ug/L	<0.59	10.0	07/23/13 10:35	
2-Chlorotoluene	ug/L	<0.12	1.0	07/23/13 10:35	
2-Hexanone	ug/L	<1.2	10.0	07/23/13 10:35	
4-Chlorotoluene	ug/L	<0.14	1.0	07/23/13 10:35	
4-Methyl-2-pentanone (MIBK)	ug/L	<0.42	10.0	07/23/13 10:35	
Acetone	ug/L	<1.9	10.0	07/23/13 10:35	
Benzene	ug/L	<0.060	1.0	07/23/13 10:35	
Bromobenzene	ug/L	<0.10	1.0	07/23/13 10:35	
Bromochloromethane	ug/L	<0.15	1.0	07/23/13 10:35	
Bromodichloromethane	ug/L	<0.19	1.0	07/23/13 10:35	
Bromoform	ug/L	<0.070	1.0	07/23/13 10:35	
Bromomethane	ug/L	<0.16	5.0	07/23/13 10:35	
Carbon disulfide	ug/L	<0.12	5.0	07/23/13 10:35	
Carbon tetrachloride	ug/L	<0.18	1.0	07/23/13 10:35	
Chlorobenzene	ug/L	<0.21	1.0	07/23/13 10:35	
Chloroethane	ug/L	<0.15	1.0	07/23/13 10:35	
Chloroform	ug/L	<0.14	1.0	07/23/13 10:35	
Chloromethane	ug/L	<0.080	1.0	07/23/13 10:35	
cis-1,2-Dichloroethene	ug/L	<0.080	1.0	07/23/13 10:35	
cis-1,3-Dichloropropene	ug/L	<0.14	1.0	07/23/13 10:35	
Dibromochloromethane	ug/L	<0.21	1.0	07/23/13 10:35	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

METHOD BLANK: 1224187

Matrix: Water

Associated Lab Samples: 60149330001, 60149330002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Dibromomethane	ug/L	<0.18	1.0	07/23/13 10:35	
Dichlorodifluoromethane	ug/L	<0.21	1.0	07/23/13 10:35	
Ethylbenzene	ug/L	<0.18	1.0	07/23/13 10:35	
Hexachloro-1,3-butadiene	ug/L	<0.18	1.0	07/23/13 10:35	
Isopropylbenzene (Cumene)	ug/L	<0.070	1.0	07/23/13 10:35	
Methyl-tert-butyl ether	ug/L	<0.060	1.0	07/23/13 10:35	
Methylene chloride	ug/L	<0.15	1.0	07/23/13 10:35	
n-Butylbenzene	ug/L	0.15J	1.0	07/23/13 10:35	
n-Propylbenzene	ug/L	<0.10	1.0	07/23/13 10:35	
Naphthalene	ug/L	<0.16	10.0	07/23/13 10:35	
p-Isopropyltoluene	ug/L	<0.10	1.0	07/23/13 10:35	
sec-Butylbenzene	ug/L	<0.050	1.0	07/23/13 10:35	
Styrene	ug/L	<0.12	1.0	07/23/13 10:35	
tert-Butylbenzene	ug/L	<0.34	1.0	07/23/13 10:35	
Tetrachloroethene	ug/L	<0.10	1.0	07/23/13 10:35	
Toluene	ug/L	0.21J	1.0	07/23/13 10:35	
trans-1,2-Dichloroethene	ug/L	<0.20	1.0	07/23/13 10:35	
trans-1,3-Dichloropropene	ug/L	<0.12	1.0	07/23/13 10:35	
Trichloroethene	ug/L	<0.17	1.0	07/23/13 10:35	
Trichlorofluoromethane	ug/L	<0.34	1.0	07/23/13 10:35	
Vinyl chloride	ug/L	<0.13	1.0	07/23/13 10:35	
Xylene (Total)	ug/L	<0.42	3.0	07/23/13 10:35	
1,2-Dichloroethane-d4 (S)	%	101	80-120	07/23/13 10:35	
4-Bromofluorobenzene (S)	%	98	80-120	07/23/13 10:35	
Dibromofluoromethane (S)	%	102	80-120	07/23/13 10:35	
Toluene-d8 (S)	%	101	80-120	07/23/13 10:35	

LABORATORY CONTROL SAMPLE: 1224188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	20	16.7	84	79-121	
1,1,1-Trichloroethane	ug/L	20	17.9	90	75-124	
1,1,2,2-Tetrachloroethane	ug/L	20	18.6	93	73-120	
1,1,2-Trichloroethane	ug/L	20	16.5	83	76-120	
1,1-Dichloroethane	ug/L	20	16.5	83	73-120	
1,1-Dichloroethene	ug/L	20	18.8	94	70-127	
1,1-Dichloropropene	ug/L	20	18.3	91	79-124	
1,2,3-Trichlorobenzene	ug/L	20	18.1	90	68-130	
1,2,3-Trichloropropane	ug/L	20	17.1	86	72-124	
1,2,4-Trichlorobenzene	ug/L	20	18.4	92	73-125	
1,2,4-Trimethylbenzene	ug/L	20	17.4	87	76-120	
1,2-Dibromo-3-chloropropane	ug/L	20	16.3	82	68-126	
1,2-Dibromoethane (EDB)	ug/L	20	18.0	90	79-121	
1,2-Dichlorobenzene	ug/L	20	17.3	87	79-120	
1,2-Dichloroethane	ug/L	20	18.2	91	72-122	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

LABORATORY CONTROL SAMPLE: 1224188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2-Dichloroethene (Total)	ug/L	40	36.0	90	77-120	
1,2-Dichloropropane	ug/L	20	18.3	91	77-120	
1,3,5-Trimethylbenzene	ug/L	20	17.8	89	75-120	
1,3-Dichlorobenzene	ug/L	20	17.8	89	80-120	
1,3-Dichloropropane	ug/L	20	16.3	82	76-120	
1,4-Dichlorobenzene	ug/L	20	17.4	87	80-120	
2,2-Dichloropropane	ug/L	20	18.4	92	52-135	
2-Butanone (MEK)	ug/L	100	90.9	91	69-124	
2-Chlorotoluene	ug/L	20	17.8	89	78-120	
2-Hexanone	ug/L	100	80.1	80	70-125	
4-Chlorotoluene	ug/L	20	17.9	90	80-120	
4-Methyl-2-pentanone (MIBK)	ug/L	100	87.9	88	72-123	
Acetone	ug/L	100	93.1	93	60-126	
Benzene	ug/L	20	16.9	84	73-122	
Bromobenzene	ug/L	20	17.6	88	79-120	
Bromochloromethane	ug/L	20	17.3	87	76-125	
Bromodichloromethane	ug/L	20	16.8	84	73-120	
Bromoform	ug/L	20	14.9	74	74-120	
Bromomethane	ug/L	20	17.8	89	40-146	
Carbon disulfide	ug/L	20	16.5	82	62-125	
Carbon tetrachloride	ug/L	20	17.7	89	73-125	
Chlorobenzene	ug/L	20	16.7	83	80-120	
Chloroethane	ug/L	20	17.1	86	56-159	
Chloroform	ug/L	20	16.6	83	76-120	
Chloromethane	ug/L	20	16.4	82	40-148	
cis-1,2-Dichloroethene	ug/L	20	18.0	90	69-120	
cis-1,3-Dichloropropene	ug/L	20	16.3	81	76-120	
Dibromochloromethane	ug/L	20	15.6	78	79-121 L0	
Dibromomethane	ug/L	20	17.3	87	77-120	
Dichlorodifluoromethane	ug/L	20	12.1	60	40-141	
Ethylbenzene	ug/L	20	17.1	86	76-123	
Hexachloro-1,3-butadiene	ug/L	20	17.8	89	69-125	
Isopropylbenzene (Cumene)	ug/L	20	18.3	91	80-130	
Methyl-tert-butyl ether	ug/L	20	17.4	87	67-128	
Methylene chloride	ug/L	20	17.9	90	71-123	
n-Butylbenzene	ug/L	20	19.2	96	77-124	
n-Propylbenzene	ug/L	20	17.2	86	78-120	
Naphthalene	ug/L	20	16.9	85	64-127	
p-Isopropyltoluene	ug/L	20	18.2	91	78-120	
sec-Butylbenzene	ug/L	20	18.6	93	77-122	
Styrene	ug/L	20	16.7	84	79-120	
tert-Butylbenzene	ug/L	20	18.3	92	76-123	
Tetrachloroethene	ug/L	20	16.9	84	79-122	
Toluene	ug/L	20	17.0	85	76-122	
trans-1,2-Dichloroethene	ug/L	20	17.9	90	78-126	
trans-1,3-Dichloropropene	ug/L	20	17.3	87	79-124	
Trichloroethene	ug/L	20	16.0	80	76-120	
Trichlorofluoromethane	ug/L	20	16.3	82	69-133	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

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LABORATORY CONTROL SAMPLE: 1224188

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	20	16.3	81	57-140	
Xylene (Total)	ug/L	60	49.2	82	76-122	
1,2-Dichloroethane-d4 (S)	%			115	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Dibromofluoromethane (S)	%			107	80-120	
Toluene-d8 (S)	%			101	80-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

QC Batch: WET/42487

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149330001

METHOD BLANK: 1223920

Matrix: Water

Associated Lab Samples: 60149330001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	07/27/13 10:54	

LABORATORY CONTROL SAMPLE: 1223921

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	185	93	85-115	

SAMPLE DUPLICATE: 1223922

Parameter	Units	60149331001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	36900	34600	6	17	

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## QUALIFIERS

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: MSV/55098

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

L0 Analyte recovery in the laboratory control sample (LCS) was outside QC limits.

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 96-HR BIO

Pace Project No.: 60149330

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<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149330001	96-HR BIO	EPA 5030B/8260	MSV/55098		
60149330002	TRIP BLANK	EPA 5030B/8260	MSV/55098		
60149330001	96-HR BIO	SM 5210B	WET/42487	SM 5210B	WET/42586

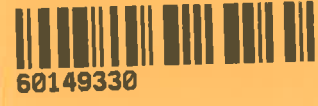
### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO# : 60149330



Optional
Proj Due Date:
Proj Name:

Client Name: Barr Eng.

Courier: Fed Ex UPS USPS Client Commercial Pace Other X reads

Tracking #: Pace Shipping Label Used? Yes No

Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Foam None Other

Thermometer Used: T-113 / T-194 Type of Ice: Ice Blue None Samples received on ice, cooling process has begun.

Cooler Temperature: 1.3

Date and initials of person examining contents: KC 7/22/13

Temperature should be above freezing to 6°C

Table with 17 rows of checklist items including Chain of Custody, Short Hold Time analyses, Rush Turn Around Time, and Project sampled in USDA Regulated Area.

Client Notification/ Resolution: Copy COC to Client? Y N Field Data Required? Y N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: [Signature]

Date: 7/22/13



July 29, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-019  
Pace Project No.: 60149331

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 22, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-019

Pace Project No.: 60149331

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-019

Pace Project No.: 60149331

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149331001	316-019	Water	07/21/13 08:43	07/22/13 12:55

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-019

Pace Project No.: 60149331

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149331001	316-019	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-019

Pace Project No.: 60149331

Sample: 316-019	Lab ID: 60149331001	Collected: 07/21/13 08:43	Received: 07/22/13 12:55	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>36900</b>	mg/L	2.0	1	07/22/13 14:34	07/27/13 11:02		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149331

QC Batch:	WET/42487	Analysis Method:	SM 5210B
QC Batch Method:	SM 5210B	Analysis Description:	5210B BOD, 5 day
Associated Lab Samples:	60149331001		

METHOD BLANK: 1223920 Matrix: Water

Associated Lab Samples: 60149331001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/27/13 10:54	

LABORATORY CONTROL SAMPLE: 1223921

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	185	93	85-115	

SAMPLE DUPLICATE: 1223922

Parameter	Units	60149331001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	36900	34600	6	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-019

Pace Project No.: 60149331

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-019

Pace Project No.: 60149331

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149331001	316-019	SM 5210B	WET/42487	SM 5210B	WET/42586

## REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149331



Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Web Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 4.3 <sup>vs 7/22/13</sup> ~~4.2~~ <sub>4.3</sub>

Date and initials of person examining contents: KE 7/22/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BSD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y N Field Data Required? Y N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/22/13





July 29, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-019  
Pace Project No.: 60149332

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 22, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

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Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149332001	316-019	Water	07/21/13 08:43	07/22/13 12:55
60149332002	TRIP BLANK	Water	07/21/13 08:00	07/22/13 12:55

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149332001	316-019	EPA 200.7	TDS	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60149332002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

**Sample: 316-019**      **Lab ID: 60149332001**      Collected: 07/21/13 08:43      Received: 07/22/13 12:55      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**200.7 Metals, Total**

Analytical Method: EPA 200.7      Preparation Method: EPA 200.7

Aluminum	6810	ug/L	150	2	07/23/13 15:00	07/24/13 10:38	7429-90-5	
Antimony	61.7	ug/L	50.0	5	07/23/13 15:00	07/24/13 10:46	7440-36-0	
Arsenic	732	ug/L	50.0	5	07/23/13 15:00	07/24/13 10:46	7440-38-2	
Beryllium	ND	ug/L	2.0	2	07/23/13 15:00	07/24/13 10:38	7440-41-7	D3
Cadmium	ND	ug/L	25.0	5	07/23/13 15:00	07/24/13 10:46	7440-43-9	D3
Chromium	272	ug/L	25.0	5	07/23/13 15:00	07/24/13 10:46	7440-47-3	
Cobalt	40.7	ug/L	25.0	5	07/23/13 15:00	07/24/13 10:46	7440-48-4	
Copper	ND	ug/L	50.0	5	07/23/13 15:00	07/24/13 10:46	7440-50-8	D3
Iron	836000	ug/L	100	2	07/23/13 15:00	07/24/13 10:38	7439-89-6	
Lead	148	ug/L	25.0	5	07/23/13 15:00	07/24/13 10:46	7439-92-1	
Nickel	128	ug/L	25.0	5	07/23/13 15:00	07/24/13 10:46	7440-02-0	
Selenium	110	ug/L	75.0	5	07/23/13 15:00	07/24/13 10:46	7782-49-2	
Silver	ND	ug/L	35.0	5	07/23/13 15:00	07/24/13 10:46	7440-22-4	D3
Thallium	ND	ug/L	100	5	07/23/13 15:00	07/24/13 10:46	7440-28-0	D3
Zinc	16800	ug/L	1000	20	07/23/13 15:00	07/24/13 10:49	7440-66-6	

**200.7 Metals, Dissolved (LF)**

Analytical Method: EPA 200.7      Preparation Method: EPA 200.7

Aluminum, Dissolved	3910	ug/L	150	2	07/24/13 16:15	07/25/13 15:00	7429-90-5	
Antimony, Dissolved	45.1	ug/L	20.0	2	07/24/13 16:15	07/25/13 15:00	7440-36-0	
Arsenic, Dissolved	569	ug/L	20.0	2	07/24/13 16:15	07/25/13 15:00	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	5	07/24/13 16:15	07/25/13 15:14	7440-41-7	D3
Cadmium, Dissolved	ND	ug/L	10.0	2	07/24/13 16:15	07/25/13 15:00	7440-43-9	D3
Chromium, Dissolved	216	ug/L	25.0	5	07/24/13 16:15	07/25/13 15:14	7440-47-3	
Cobalt, Dissolved	41.7	ug/L	10.0	2	07/24/13 16:15	07/25/13 15:00	7440-48-4	D9
Copper, Dissolved	ND	ug/L	20.0	2	07/24/13 16:15	07/25/13 15:00	7440-50-8	D3
Iron, Dissolved	542000	ug/L	100	2	07/24/13 16:15	07/25/13 15:00	7439-89-6	M1
Lead, Dissolved	73.5	ug/L	10.0	2	07/24/13 16:15	07/25/13 15:00	7439-92-1	
Nickel, Dissolved	102	ug/L	10.0	2	07/24/13 16:15	07/25/13 15:00	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	5	07/24/13 16:15	07/25/13 15:14	7782-49-2	D3
Silver, Dissolved	ND	ug/L	14.0	2	07/24/13 16:15	07/25/13 15:00	7440-22-4	D3,M1, R1
Thallium, Dissolved	ND	ug/L	100	5	07/24/13 16:15	07/25/13 15:14	7440-28-0	D3
Zinc, Dissolved	15700	ug/L	1000	20	07/24/13 16:15	07/25/13 15:34	7440-66-6	M1,R1

**245.1 Mercury**

Analytical Method: EPA 245.1      Preparation Method: EPA 245.1

Mercury	0.81	ug/L	0.20	1	07/22/13 14:30	07/23/13 10:05	7439-97-6	
---------	------	------	------	---	----------------	----------------	-----------	--

**245.1 Mercury, Dissolved (LF)**

Analytical Method: EPA 245.1      Preparation Method: EPA 245.1

Mercury, Dissolved	ND	ug/L	0.20	1	07/25/13 10:00	07/25/13 14:14	7439-97-6	
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**625 MSSV**

Analytical Method: EPA 625      Preparation Method: EPA 625

Acenaphthene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	83-32-9	
Acenaphthylene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	208-96-8	
Anthracene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	120-12-7	
Benzidine	ND	ug/L	10000	20	07/23/13 00:00	07/24/13 15:30	92-87-5	
Benzo(a)anthracene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	56-55-3	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

**Sample: 316-019**      **Lab ID: 60149332001**      Collected: 07/21/13 08:43      Received: 07/22/13 12:55      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625    Preparation Method: EPA 625						
Benzo(a)pyrene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	50-32-8	
Benzo(b)fluoranthene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	101-55-3	
Butylbenzylphthalate	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1200	20	07/23/13 00:00	07/24/13 15:30	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1200	20	07/23/13 00:00	07/24/13 15:30	39638-32-9	
2-Chloronaphthalene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	91-58-7	
2-Chlorophenol	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	7005-72-3	
Chrysene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	4000	20	07/23/13 00:00	07/24/13 15:30	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	120-83-2	
Diethylphthalate	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	105-67-9	
Dimethylphthalate	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	131-11-3	
Di-n-butylphthalate	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	20	07/23/13 00:00	07/24/13 15:30	534-52-1	
2,4-Dinitrophenol	ND	ug/L	10000	20	07/23/13 00:00	07/24/13 15:30	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	1200	20	07/23/13 00:00	07/24/13 15:30	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	606-20-2	
Di-n-octylphthalate	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	117-81-7	
Fluoranthene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	206-44-0	
Fluorene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	87-68-3	
Hexachlorobenzene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	77-47-4	
Hexachloroethane	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	193-39-5	
Isophorone	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	78-59-1	
Naphthalene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	91-20-3	
Nitrobenzene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	98-95-3	
2-Nitrophenol	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	88-75-5	
4-Nitrophenol	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	86-30-6	
Pentachlorophenol	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	87-86-5	
Phenanthrene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	85-01-8	
Phenol	<b>9380</b>	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	108-95-2	
Pyrene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1000	20	07/23/13 00:00	07/24/13 15:30	120-82-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

Sample: 316-019		Lab ID: 60149332001	Collected: 07/21/13 08:43	Received: 07/22/13 12:55	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/23/13 00:00	07/24/13 15:30	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/23/13 00:00	07/24/13 15:30	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/23/13 00:00	07/24/13 15:30	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/23/13 00:00	07/24/13 15:30	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/23/13 00:00	07/24/13 15:30	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/23/13 00:00	07/24/13 15:30	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/23/13 00:00	07/24/13 15:30	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/24/13 19:19	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/24/13 19:19	75-27-4	
Bromoform	ND ug/L		200	200		07/24/13 19:19	75-25-2	
Bromomethane	ND ug/L		1000	200		07/24/13 19:19	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/24/13 19:19	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/24/13 19:19	108-90-7	
Chloroethane	ND ug/L		200	200		07/24/13 19:19	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/24/13 19:19	110-75-8	
Chloroform	ND ug/L		200	200		07/24/13 19:19	67-66-3	
Chloromethane	ND ug/L		200	200		07/24/13 19:19	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/24/13 19:19	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/24/13 19:19	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/24/13 19:19	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/24/13 19:19	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/24/13 19:19	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/24/13 19:19	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/24/13 19:19	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/24/13 19:19	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/24/13 19:19	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/24/13 19:19	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/24/13 19:19	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/24/13 19:19	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/24/13 19:19	100-41-4	
Methylene chloride	ND ug/L		200	200		07/24/13 19:19	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/24/13 19:19	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/24/13 19:19	127-18-4	
Toluene	ND ug/L		200	200		07/24/13 19:19	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/24/13 19:19	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/24/13 19:19	79-00-5	
Trichloroethene	ND ug/L		200	200		07/24/13 19:19	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/24/13 19:19	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/24/13 19:19	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/24/13 19:19	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102 %		80-120	200		07/24/13 19:19	1868-53-7	D3
4-Bromofluorobenzene (S)	98 %		80-120	200		07/24/13 19:19	460-00-4	
Toluene-d8 (S)	97 %		80-120	200		07/24/13 19:19	2037-26-5	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

<b>Sample: 316-019</b>		<b>Lab ID: 60149332001</b>	Collected: 07/21/13 08:43	Received: 07/22/13 12:55	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	104 %		80-120	200		07/24/13 19:19	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	200		07/24/13 19:19		
<b>HEM, Oil and Grease</b>		Analytical Method: EPA 1664A						
Oil and Grease	<b>459</b> mg/L		5.0	1		07/23/13 06:55		
<b>1664 SGT-HEM, TPH</b>		Analytical Method: EPA 1664A						
Total Petroleum Hydrocarbons	<b>7.1</b> mg/L		5.0	1		07/29/13 12:40		
<b>2540D Total Suspended Solids</b>		Analytical Method: SM 2540D						
Total Suspended Solids	<b>2920</b> mg/L		5.0	1		07/23/13 08:21		
<b>4500H+ pH, Electrometric</b>		Analytical Method: SM 4500-H+B						
pH at 25 Degrees C	<b>5.3</b> Std. Units		0.10	1		07/23/13 15:20		H6
<b>350.1 Ammonia</b>		Analytical Method: EPA 350.1						
Nitrogen, Ammonia	<b>690</b> mg/L		20.0	200		07/23/13 12:36	7664-41-7	
<b>410.4 COD</b>		Analytical Method: EPA 410.4						
Chemical Oxygen Demand	<b>60800</b> mg/L		5000	500		07/23/13 14:33		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

Sample: TRIP BLANK		Lab ID: 60149332002	Collected: 07/21/13 08:00	Received: 07/22/13 12:55	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/24/13 16:50	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/24/13 16:50	75-27-4	
Bromoform	ND ug/L		1.0	1		07/24/13 16:50	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/24/13 16:50	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/24/13 16:50	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/24/13 16:50	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/24/13 16:50	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/24/13 16:50	110-75-8	
Chloroform	ND ug/L		1.0	1		07/24/13 16:50	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/24/13 16:50	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/24/13 16:50	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 16:50	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 16:50	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 16:50	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/24/13 16:50	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/24/13 16:50	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/24/13 16:50	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/24/13 16:50	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/24/13 16:50	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/24/13 16:50	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/24/13 16:50	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/24/13 16:50	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/24/13 16:50	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/24/13 16:50	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/24/13 16:50	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/24/13 16:50	127-18-4	
Toluene	ND ug/L		1.0	1		07/24/13 16:50	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/24/13 16:50	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/24/13 16:50	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/24/13 16:50	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/24/13 16:50	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/24/13 16:50	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/24/13 16:50	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	98 %		80-120	1		07/24/13 16:50	1868-53-7	
4-Bromofluorobenzene (S)	97 %		80-120	1		07/24/13 16:50	460-00-4	
Toluene-d8 (S)	99 %		80-120	1		07/24/13 16:50	2037-26-5	
1,2-Dichloroethane-d4 (S)	94 %		80-120	1		07/24/13 16:50	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/24/13 16:50		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

QC Batch: MERP/7533 Analysis Method: EPA 245.1  
 QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury  
 Associated Lab Samples: 60149332001

METHOD BLANK: 1223929 Matrix: Water

Associated Lab Samples: 60149332001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/23/13 09:50	

LABORATORY CONTROL SAMPLE: 1223930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1223931 1223932

Parameter	Units	60149304001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury	ug/L	ND	5	5	5	4.8	4.1	96	81	70-130	17	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

QC Batch:	MERP/7541	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60149332001		

METHOD BLANK: 1225486 Matrix: Water  
Associated Lab Samples: 60149332001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/25/13 13:41	

LABORATORY CONTROL SAMPLE: 1225487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.4	87	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1225488 1225489

Parameter	Units	60149481003 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
			Spike Conc.	Conc.	Spike Conc.	Conc.						
Mercury, Dissolved	ug/L	ND	5	5	4.3	5.2	85	102	70-130	18	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019  
Pace Project No.: 60149332

QC Batch: MPRP/23581 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60149332001

METHOD BLANK: 1224309 Matrix: Water  
Associated Lab Samples: 60149332001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/24/13 10:23	
Antimony	ug/L	ND	10.0	07/24/13 10:23	
Arsenic	ug/L	ND	10.0	07/24/13 10:23	
Beryllium	ug/L	ND	1.0	07/24/13 10:23	
Cadmium	ug/L	ND	5.0	07/24/13 10:23	
Chromium	ug/L	ND	5.0	07/24/13 10:23	
Cobalt	ug/L	ND	5.0	07/24/13 10:23	
Copper	ug/L	ND	10.0	07/24/13 10:23	
Iron	ug/L	ND	50.0	07/24/13 10:23	
Lead	ug/L	ND	5.0	07/24/13 10:23	
Nickel	ug/L	ND	5.0	07/24/13 10:23	
Selenium	ug/L	ND	15.0	07/24/13 10:23	
Silver	ug/L	ND	7.0	07/24/13 10:23	
Thallium	ug/L	ND	20.0	07/24/13 10:23	
Zinc	ug/L	ND	50.0	07/24/13 10:23	

LABORATORY CONTROL SAMPLE: 1224310

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10100	101	85-115	
Antimony	ug/L	1000	1030	103	85-115	
Arsenic	ug/L	1000	969	97	85-115	
Beryllium	ug/L	1000	994	99	85-115	
Cadmium	ug/L	1000	992	99	85-115	
Chromium	ug/L	1000	983	98	85-115	
Cobalt	ug/L	1000	1030	103	85-115	
Copper	ug/L	1000	1010	101	85-115	
Iron	ug/L	10000	9780	98	85-115	
Lead	ug/L	1000	1020	102	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1020	102	85-115	
Silver	ug/L	500	491	98	85-115	
Thallium	ug/L	1000	1040	104	85-115	
Zinc	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1224311 1224312

Parameter	Units	60149362001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum	ug/L	ND	10000	10000	10500	10400	105	104	70-130	0	8

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

Parameter	60149362001		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony	ug/L	ND	1000	1000	1040	1040	104	104	70-130	1	7		
Arsenic	ug/L	ND	1000	1000	985	979	98	98	70-130	1	10		
Beryllium	ug/L	ND	1000	1000	987	983	99	98	70-130	0	7		
Cadmium	ug/L	ND	1000	1000	1000	991	100	99	70-130	1	10		
Chromium	ug/L	1.2J	1000	1000	969	969	97	97	70-130	0	10		
Cobalt	ug/L	ND	1000	1000	1000	996	100	100	70-130	1	6		
Copper	ug/L	3.0J	1000	1000	1030	1020	102	101	70-130	1	11		
Iron	ug/L	1010	10000	10000	10700	10800	97	97	70-130	0	10		
Lead	ug/L	ND	1000	1000	993	990	99	99	70-130	0	10		
Nickel	ug/L	ND	1000	1000	998	992	100	99	70-130	1	10		
Selenium	ug/L	ND	1000	1000	1020	1010	102	101	70-130	0	10		
Silver	ug/L	ND	500	500	493	492	98	98	70-130	0	10		
Thallium	ug/L	ND	1000	1000	1020	1020	102	102	70-130	0	6		
Zinc	ug/L	7.8J	1000	1000	978	974	97	97	70-130	0	11		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019  
Pace Project No.: 60149332

QC Batch: MPRP/23606 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60149332001

METHOD BLANK: 1225178 Matrix: Water  
Associated Lab Samples: 60149332001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/25/13 14:54	
Antimony, Dissolved	ug/L	ND	10.0	07/25/13 14:54	
Arsenic, Dissolved	ug/L	ND	10.0	07/25/13 14:54	
Beryllium, Dissolved	ug/L	ND	1.0	07/25/13 14:54	
Cadmium, Dissolved	ug/L	ND	5.0	07/25/13 14:54	
Chromium, Dissolved	ug/L	ND	5.0	07/25/13 14:54	
Cobalt, Dissolved	ug/L	ND	5.0	07/25/13 14:54	
Copper, Dissolved	ug/L	ND	10.0	07/25/13 14:54	
Iron, Dissolved	ug/L	ND	50.0	07/25/13 14:54	
Lead, Dissolved	ug/L	ND	5.0	07/25/13 14:54	
Nickel, Dissolved	ug/L	ND	5.0	07/25/13 14:54	
Selenium, Dissolved	ug/L	ND	15.0	07/25/13 14:54	
Silver, Dissolved	ug/L	ND	7.0	07/25/13 14:54	
Thallium, Dissolved	ug/L	ND	20.0	07/25/13 14:54	
Zinc, Dissolved	ug/L	ND	50.0	07/25/13 14:54	

LABORATORY CONTROL SAMPLE: 1225179

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9600	96	85-115	
Antimony, Dissolved	ug/L	1000	972	97	85-115	
Arsenic, Dissolved	ug/L	1000	900	90	85-115	
Beryllium, Dissolved	ug/L	1000	907	91	85-115	
Cadmium, Dissolved	ug/L	1000	932	93	85-115	
Chromium, Dissolved	ug/L	1000	901	90	85-115	
Cobalt, Dissolved	ug/L	1000	944	94	85-115	
Copper, Dissolved	ug/L	1000	942	94	85-115	
Iron, Dissolved	ug/L	10000	8940	89	85-115	
Lead, Dissolved	ug/L	1000	939	94	85-115	
Nickel, Dissolved	ug/L	1000	956	96	85-115	
Selenium, Dissolved	ug/L	1000	926	93	85-115	
Silver, Dissolved	ug/L	500	466	93	85-115	
Thallium, Dissolved	ug/L	1000	976	98	85-115	
Zinc, Dissolved	ug/L	1000	905	91	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1225180 1225181

Parameter	Units	60149332001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Aluminum, Dissolved	ug/L	3910	10000	10000	13400	12900	94	90	70-130	3	8		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

Parameter	Units	60149332001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Antimony, Dissolved	ug/L	45.1	1000	1000	1000	1020	997	97	95	70-130	2	7			
Arsenic, Dissolved	ug/L	569	1000	1000	1000	1660	1600	109	103	70-130	4	10			
Beryllium, Dissolved	ug/L	ND	1000	1000	1000	878	846	88	85	70-130	4	7			
Cadmium, Dissolved	ug/L	ND	1000	1000	1000	1000	982	100	98	70-130	2	10			
Chromium, Dissolved	ug/L	216	1000	1000	1000	1090	1050	88	83	70-130	4	10			
Cobalt, Dissolved	ug/L	41.7	1000	1000	1000	865	851	82	81	70-130	2	6			
Copper, Dissolved	ug/L	ND	1000	1000	1000	980	949	98	95	70-130	3	11			
Iron, Dissolved	ug/L	542000	10000	10000	10000	557000	527000	154	-154	70-130	6	10	M1		
Lead, Dissolved	ug/L	73.5	1000	1000	1000	804	798	73	72	70-130	1	10			
Nickel, Dissolved	ug/L	102	1000	1000	1000	924	904	82	80	70-130	2	10			
Selenium, Dissolved	ug/L	ND	1000	1000	1000	1130	1090	113	109	70-130	3	10			
Silver, Dissolved	ug/L	ND	500	500	500	69.8	57.6	14	12	70-130	19	10	M1, R1		
Thallium, Dissolved	ug/L	ND	1000	1000	1000	756	738	76	74	70-130	2	6			
Zinc, Dissolved	ug/L	15700	1000	1000	1000	17400	15400	162	-33	70-130	12	11	M1, R1		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

QC Batch: MSV/55133 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149332001, 60149332002

METHOD BLANK: 1225012 Matrix: Water

Associated Lab Samples: 60149332001, 60149332002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1-Dichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichloropropane	ug/L	ND	1.0	07/24/13 15:25	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/24/13 15:25	
Benzene	ug/L	ND	1.0	07/24/13 15:25	
Bromodichloromethane	ug/L	ND	1.0	07/24/13 15:25	
Bromoform	ug/L	ND	1.0	07/24/13 15:25	
Bromomethane	ug/L	ND	5.0	07/24/13 15:25	
Carbon tetrachloride	ug/L	ND	1.0	07/24/13 15:25	
Chlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
Chloroethane	ug/L	ND	1.0	07/24/13 15:25	
Chloroform	ug/L	ND	1.0	07/24/13 15:25	
Chloromethane	ug/L	ND	1.0	07/24/13 15:25	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/24/13 15:25	
Dibromochloromethane	ug/L	ND	1.0	07/24/13 15:25	
Ethylbenzene	ug/L	ND	1.0	07/24/13 15:25	
Methylene chloride	ug/L	ND	1.0	07/24/13 15:25	
Tetrachloroethene	ug/L	ND	1.0	07/24/13 15:25	
Toluene	ug/L	ND	1.0	07/24/13 15:25	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/24/13 15:25	
Trichloroethene	ug/L	ND	1.0	07/24/13 15:25	
Trichlorofluoromethane	ug/L	ND	1.0	07/24/13 15:25	
Vinyl chloride	ug/L	ND	1.0	07/24/13 15:25	
Xylene (Total)	ug/L	ND	3.0	07/24/13 15:25	
1,2-Dichloroethane-d4 (S)	%	97	80-120	07/24/13 15:25	
4-Bromofluorobenzene (S)	%	98	80-120	07/24/13 15:25	
Toluene-d8 (S)	%	100	80-120	07/24/13 15:25	

LABORATORY CONTROL SAMPLE: 1225013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	17.9	90	71-139	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

LABORATORY CONTROL SAMPLE: 1225013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	18.9	95	59-138	
1,1,2-Trichloroethane	ug/L	20	18.2	91	69-127	
1,1-Dichloroethane	ug/L	20	17.2	86	69-126	
1,1-Dichloroethene	ug/L	20	20.6	103	65-153	
1,2-Dichlorobenzene	ug/L	20	19.6	98	66-126	
1,2-Dichloroethane	ug/L	20	18.3	91	71-129	
1,2-Dichloropropane	ug/L	20	18.8	94	66-140	
1,3-Dichlorobenzene	ug/L	20	19.9	100	63-127	
1,4-Dichlorobenzene	ug/L	20	19.7	99	68-124	
2-Chloroethylvinyl ether	ug/L	20	14.7	73	33-159	
Benzene	ug/L	20	20.3	101	73-129	
Bromodichloromethane	ug/L	20	17.4	87	63-129	
Bromoform	ug/L	20	20.3	101	52-123	
Bromomethane	ug/L	20	23.2	116	10-160	
Carbon tetrachloride	ug/L	20	19.1	96	70-140	
Chlorobenzene	ug/L	20	17.8	89	68-127	
Chloroethane	ug/L	20	16.9	84	42-160	
Chloroform	ug/L	20	17.6	88	60-120	
Chloromethane	ug/L	20	17.6	88	10-160	
cis-1,2-Dichloroethene	ug/L	20	18.5	92	70-125	
cis-1,3-Dichloropropene	ug/L	20	17.2	86	66-132	
Dibromochloromethane	ug/L	20	17.6	88	63-134	
Ethylbenzene	ug/L	20	18.4	92	66-133	
Methylene chloride	ug/L	20	20.7	104	56-135	
Tetrachloroethene	ug/L	20	20.2	101	64-143	
Toluene	ug/L	20	20.0	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	19.9	100	67-149	
trans-1,3-Dichloropropene	ug/L	20	18.7	93	66-138	
Trichloroethene	ug/L	20	17.7	88	71-130	
Trichlorofluoromethane	ug/L	20	17.5	88	58-158	
Vinyl chloride	ug/L	20	18.0	90	41-160	
Xylene (Total)	ug/L	60	60.0	100	67-130	
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1225014

Parameter	Units	60149196001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3570	89	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3660	92	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3170	79	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3330	83	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3830	96	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3550	89	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3510	88	49-155	
1,2-Dichloropropane	ug/L	ND	4000	3590	90	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

MATRIX SPIKE SAMPLE:		1225014					
Parameter	Units	60149196001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	ND	4000	3560	89	59-146	
1,4-Dichlorobenzene	ug/L	ND	4000	3620	90	18-147	
2-Chloroethylvinyl ether	ug/L	ND	4000	5810	145	10-160	
Benzene	ug/L	ND	4000	3910	98	37-151	
Bromodichloromethane	ug/L	ND	4000	3440	86	35-155	
Bromoform	ug/L	ND	4000	3680	92	45-133	
Bromomethane	ug/L	ND	4000	3550	89	10-160	
Carbon tetrachloride	ug/L	ND	4000	3650	91	70-140	
Chlorobenzene	ug/L	ND	4000	3170	79	37-153	
Chloroethane	ug/L	ND	4000	3210	80	14-160	
Chloroform	ug/L	ND	4000	3380	84	51-138	
Chloromethane	ug/L	ND	4000	3380	84	10-160	
cis-1,2-Dichloroethene	ug/L	ND	4000	3590	90	19-160	
cis-1,3-Dichloropropene	ug/L	ND	4000	3320	83	10-160	
Dibromochloromethane	ug/L	ND	4000	3400	85	53-149	
Ethylbenzene	ug/L	ND	4000	3250	81	37-154	
Methylene chloride	ug/L	ND	4000	4100	99	15-156	
Tetrachloroethene	ug/L	ND	4000	3630	91	64-148	
Toluene	ug/L	ND	4000	3850	96	47-150	
trans-1,2-Dichloroethene	ug/L	ND	4000	3760	94	54-156	
trans-1,3-Dichloropropene	ug/L	ND	4000	3470	87	17-160	
Trichloroethene	ug/L	ND	4000	3320	83	71-157	
Trichlorofluoromethane	ug/L	ND	4000	3330	83	17-160	
Vinyl chloride	ug/L	ND	4000	3290	82	10-160	
Xylene (Total)	ug/L	ND	12000	10900	91	12-153	
1,2-Dichloroethane-d4 (S)	%				100	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	D3,HS
Toluene-d8 (S)	%				101	80-120	
Preservation pH		7.0		7.0			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

QC Batch: OEXT/39428

Analysis Method: EPA 625

QC Batch Method: EPA 625

Analysis Description: 625 MSS

Associated Lab Samples: 60149332001

METHOD BLANK: 1224008

Matrix: Water

Associated Lab Samples: 60149332001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/24/13 10:52	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/24/13 10:52	
2,4-Dichlorophenol	ug/L	ND	5.0	07/24/13 10:52	
2,4-Dimethylphenol	ug/L	ND	5.0	07/24/13 10:52	
2,4-Dinitrophenol	ug/L	ND	50.0	07/24/13 10:52	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/24/13 10:52	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/24/13 10:52	
2-Chloronaphthalene	ug/L	ND	5.0	07/24/13 10:52	
2-Chlorophenol	ug/L	ND	5.0	07/24/13 10:52	
2-Nitrophenol	ug/L	ND	5.0	07/24/13 10:52	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/24/13 10:52	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/24/13 10:52	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/24/13 10:52	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/24/13 10:52	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/24/13 10:52	
4-Nitrophenol	ug/L	ND	5.0	07/24/13 10:52	
Acenaphthene	ug/L	ND	5.0	07/24/13 10:52	
Acenaphthylene	ug/L	ND	5.0	07/24/13 10:52	
Anthracene	ug/L	ND	5.0	07/24/13 10:52	
Benzidine	ug/L	ND	50.0	07/24/13 10:52	
Benzo(a)anthracene	ug/L	ND	5.0	07/24/13 10:52	
Benzo(a)pyrene	ug/L	ND	5.0	07/24/13 10:52	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/24/13 10:52	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/24/13 10:52	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/24/13 10:52	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/24/13 10:52	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/24/13 10:52	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/24/13 10:52	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/24/13 10:52	
Butylbenzylphthalate	ug/L	ND	5.0	07/24/13 10:52	
Chrysene	ug/L	ND	5.0	07/24/13 10:52	
Di-n-butylphthalate	ug/L	ND	5.0	07/24/13 10:52	
Di-n-octylphthalate	ug/L	ND	5.0	07/24/13 10:52	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/24/13 10:52	
Diethylphthalate	ug/L	ND	5.0	07/24/13 10:52	
Dimethylphthalate	ug/L	ND	5.0	07/24/13 10:52	
Fluoranthene	ug/L	ND	5.0	07/24/13 10:52	
Fluorene	ug/L	ND	5.0	07/24/13 10:52	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/24/13 10:52	
Hexachlorobenzene	ug/L	ND	5.0	07/24/13 10:52	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/24/13 10:52	
Hexachloroethane	ug/L	ND	5.0	07/24/13 10:52	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/24/13 10:52	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Project No.: 60149332

METHOD BLANK: 1224008

Matrix: Water

Associated Lab Samples: 60149332001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/24/13 10:52	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/24/13 10:52	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/24/13 10:52	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/24/13 10:52	
Naphthalene	ug/L	ND	5.0	07/24/13 10:52	
Nitrobenzene	ug/L	ND	5.0	07/24/13 10:52	
Pentachlorophenol	ug/L	ND	5.0	07/24/13 10:52	
Phenanthrene	ug/L	ND	5.0	07/24/13 10:52	
Phenol	ug/L	ND	5.0	07/24/13 10:52	
Pyrene	ug/L	ND	5.0	07/24/13 10:52	
2,4,6-Tribromophenol (S)	%	93	39-119	07/24/13 10:52	
2-Fluorobiphenyl (S)	%	91	36-120	07/24/13 10:52	
2-Fluorophenol (S)	%	43	18-120	07/24/13 10:52	
Nitrobenzene-d5 (S)	%	89	32-120	07/24/13 10:52	
Phenol-d6 (S)	%	27	12-120	07/24/13 10:52	
Terphenyl-d14 (S)	%	98	44-120	07/24/13 10:52	

LABORATORY CONTROL SAMPLE: 1224009

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.1	78	44-120	
2,4,6-Trichlorophenol	ug/L	50	42.3	85	48-120	
2,4-Dichlorophenol	ug/L	50	39.0	78	48-120	
2,4-Dimethylphenol	ug/L	50	34.5	69	37-119	
2,4-Dinitrophenol	ug/L	50	37.2J	74	15-153	
2,4-Dinitrotoluene	ug/L	50	46.3	93	54-120	
2,6-Dinitrotoluene	ug/L	50	44.5	89	52-120	
2-Chloronaphthalene	ug/L	50	41.8	84	60-118	
2-Chlorophenol	ug/L	50	34.9	70	44-120	
2-Nitrophenol	ug/L	50	41.0	82	43-120	
3,3'-Dichlorobenzidine	ug/L	50	55.2	110	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	47.5	95	31-147	
4-Bromophenylphenyl ether	ug/L	50	44.6	89	53-120	
4-Chloro-3-methylphenol	ug/L	50	37.8	76	50-120	
4-Chlorophenylphenyl ether	ug/L	50	44.4	89	54-120	
4-Nitrophenol	ug/L	50	17.2	34	10-120	
Acenaphthene	ug/L	50	42.9	86	51-120	
Acenaphthylene	ug/L	50	42.5	85	51-120	
Anthracene	ug/L	50	45.3	91	54-120	
Benzidine	ug/L	50	17J	34	1-124	
Benzo(a)anthracene	ug/L	50	45.6	91	54-120	
Benzo(a)pyrene	ug/L	50	46.4	93	54-120	
Benzo(b)fluoranthene	ug/L	50	47.9	96	57-120	
Benzo(g,h,i)perylene	ug/L	50	46.7	93	54-120	
Benzo(k)fluoranthene	ug/L	50	46.1	92	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

LABORATORY CONTROL SAMPLE: 1224009

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	40.6	81	51-120	
bis(2-Chloroethyl) ether	ug/L	50	38.4	77	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	40.4	81	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	46.3	93	51-126	
Butylbenzylphthalate	ug/L	50	46.6	93	45-129	
Chrysene	ug/L	50	47.3	95	54-120	
Di-n-butylphthalate	ug/L	50	46.5	93	57-118	
Di-n-octylphthalate	ug/L	50	46.9	94	48-130	
Dibenz(a,h)anthracene	ug/L	50	47.0	94	56-119	
Diethylphthalate	ug/L	50	44.9	90	55-114	
Dimethylphthalate	ug/L	50	44.0	88	54-112	
Fluoranthene	ug/L	50	46.7	93	56-120	
Fluorene	ug/L	50	43.8	88	59-120	
Hexachloro-1,3-butadiene	ug/L	50	38.6	77	41-116	
Hexachlorobenzene	ug/L	50	46.3	93	53-120	
Hexachlorocyclopentadiene	ug/L	100	56.9	57	31-120	
Hexachloroethane	ug/L	50	36.2	72	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	46.7	93	55-120	
Isophorone	ug/L	50	40.9	82	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	39.6	79	47-120	
N-Nitrosodimethylamine	ug/L	50	22.6	45	28-120	
N-Nitrosodiphenylamine	ug/L	50	43.9	88	53-120	
Naphthalene	ug/L	50	38.7	77	48-120	
Nitrobenzene	ug/L	50	41.3	83	47-120	
Pentachlorophenol	ug/L	50	43.8	88	43-127	
Phenanthrene	ug/L	50	45.5	91	55-120	
Phenol	ug/L	50	12.8	26	15-112	
Pyrene	ug/L	50	46.1	92	55-115	
2,4,6-Tribromophenol (S)	%			92	39-119	
2-Fluorobiphenyl (S)	%			87	36-120	
2-Fluorophenol (S)	%			38	18-120	
Nitrobenzene-d5 (S)	%			80	32-120	
Phenol-d6 (S)	%			24	12-120	
Terphenyl-d14 (S)	%			93	44-120	

MATRIX SPIKE SAMPLE: 1224010

Parameter	Units	60148973002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	42.6	85	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	45.6	91	37-121	
2,4-Dichlorophenol	ug/L	ND	50	43.8	88	39-120	
2,4-Dimethylphenol	ug/L	ND	50	35.4	71	32-119	
2,4-Dinitrophenol	ug/L	ND	50	35.7J	71	20-157	
2,4-Dinitrotoluene	ug/L	ND	50	46.3	93	39-130	
2,6-Dinitrotoluene	ug/L	ND	50	46.0	92	50-128	
2-Chloronaphthalene	ug/L	ND	50	45.4	91	60-118	
2-Chlorophenol	ug/L	ND	50	38.0	76	35-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

MATRIX SPIKE SAMPLE: 1224010		60148973002	Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Limits	Qualifiers
2-Nitrophenol	ug/L	ND	50	44.4	89	29-123	
3,3'-Dichlorobenzidine	ug/L	ND	50	50.0	100	10-160	
4,6-Dinitro-2-methylphenol	ug/L	ND	50	47.0	94	27-146	
4-Bromophenylphenyl ether	ug/L	ND	50	47.5	95	53-124	
4-Chloro-3-methylphenol	ug/L	ND	50	42.1	84	33-123	
4-Chlorophenylphenyl ether	ug/L	ND	50	45.5	91	34-125	
4-Nitrophenol	ug/L	ND	50	18.7	37	10-120	
Acenaphthene	ug/L	ND	50	44.9	90	47-120	
Acenaphthylene	ug/L	ND	50	44.3	89	33-120	
Anthracene	ug/L	ND	50	46.7	93	36-121	
Benzidine	ug/L	ND	50	1.6J	3	1-120	
Benzo(a)anthracene	ug/L	ND	50	46.3	93	37-127	
Benzo(a)pyrene	ug/L	ND	50	47.8	96	34-125	
Benzo(b)fluoranthene	ug/L	ND	50	46.0	92	37-131	
Benzo(g,h,i)perylene	ug/L	ND	50	45.4	91	35-128	
Benzo(k)fluoranthene	ug/L	ND	50	50.7	101	34-130	
bis(2-Chloroethoxy)methane	ug/L	ND	50	42.0	84	33-120	
bis(2-Chloroethyl) ether	ug/L	ND	50	42.1	84	32-120	
bis(2-Chloroisopropyl) ether	ug/L	ND	50	43.4	87	36-120	
bis(2-Ethylhexyl)phthalate	ug/L	ND	50	47.5	95	38-137	
Butylbenzylphthalate	ug/L	ND	50	47.1	94	43-136	
Chrysene	ug/L	ND	50	47.6	95	36-127	
Di-n-butylphthalate	ug/L	ND	50	48.0	96	38-118	
Di-n-octylphthalate	ug/L	ND	50	49.3	99	40-140	
Dibenz(a,h)anthracene	ug/L	ND	50	46.3	93	35-131	
Diethylphthalate	ug/L	ND	50	45.9	92	33-114	
Dimethylphthalate	ug/L	ND	50	45.5	91	34-112	
Fluoranthene	ug/L	ND	50	48.0	96	38-125	
Fluorene	ug/L	ND	50	45.6	91	59-121	
Hexachloro-1,3-butadiene	ug/L	ND	50	43.0	86	27-116	
Hexachlorobenzene	ug/L	ND	50	46.9	94	34-124	
Hexachlorocyclopentadiene	ug/L	ND	100	58.3	58	11-120	
Hexachloroethane	ug/L	ND	50	41.5	83	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	ND	50	45.9	92	38-127	
Isophorone	ug/L	ND	50	41.7	83	31-120	
N-Nitroso-di-n-propylamine	ug/L	ND	50	40.6	81	30-120	
N-Nitrosodimethylamine	ug/L	ND	50	24.5	49	29-120	
N-Nitrosodiphenylamine	ug/L	ND	50	45.4	91	10-139	
Naphthalene	ug/L	ND	50	42.2	84	32-120	
Nitrobenzene	ug/L	ND	50	43.9	88	35-128	
Pentachlorophenol	ug/L	ND	50	46.0	92	38-133	
Phenanthrene	ug/L	ND	50	47.0	94	54-120	
Phenol	ug/L	ND	50	14.3	29	13-112	
Pyrene	ug/L	ND	50	47.2	94	52-115	
2,4,6-Tribromophenol (S)	%				96	39-119	
2-Fluorobiphenyl (S)	%				94	36-120	
2-Fluorophenol (S)	%				42	18-120	
Nitrobenzene-d5 (S)	%				86	32-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

MATRIX SPIKE SAMPLE:		1224010					
Parameter	Units	60148973002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenol-d6 (S)	%				27	12-120	
Terphenyl-d14 (S)	%				98	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

QC Batch:	WET/42489	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149332001		

METHOD BLANK: 1224000 Matrix: Water

Associated Lab Samples: 60149332001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/23/13 06:52	

LABORATORY CONTROL SAMPLE: 1224001

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	35.4	88	78-114	

MATRIX SPIKE SAMPLE: 1224004

Parameter	Units	60149254005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	43	41.5	86	78-114	

SAMPLE DUPLICATE: 1224005

Parameter	Units	60149254006 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	47.4	47.9	1	18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

QC Batch: WET/42605

Analysis Method: EPA 1664A

QC Batch Method: EPA 1664A

Analysis Description: 1664 SGT-HEM, TPH

Associated Lab Samples: 60149332001

METHOD BLANK: 1227372

Matrix: Water

Associated Lab Samples: 60149332001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/29/13 12:38	

LABORATORY CONTROL SAMPLE: 1227373

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	22.5	112	64-132	

MATRIX SPIKE SAMPLE: 1227374

Parameter	Units	60149282001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	5.7	20.4	8.8	15	64-132	M1

SAMPLE DUPLICATE: 1227376

Parameter	Units	60149283001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	5.0	9.5	62	34	D6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

QC Batch: WET/42490

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60149332001

METHOD BLANK: 1224049

Matrix: Water

Associated Lab Samples: 60149332001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/23/13 08:18	

SAMPLE DUPLICATE: 1224050

Parameter	Units	60149302002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	120	124	3	25	

SAMPLE DUPLICATE: 1224051

Parameter	Units	60149302012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

QC Batch: WET/42497 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149332001

SAMPLE DUPLICATE: 1224189

Parameter	Units	60149148002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.6	5.6	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

QC Batch: WETA/25547 Analysis Method: EPA 350.1  
 QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
 Associated Lab Samples: 60149332001

METHOD BLANK: 1224114 Matrix: Water

Associated Lab Samples: 60149332001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/23/13 12:02	

LABORATORY CONTROL SAMPLE: 1224115

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 1224117

Parameter	Units	60149164002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.13	2	2.1	98	90-110	

MATRIX SPIKE SAMPLE: 1224118

Parameter	Units	60149168001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.9	95	90-110	

SAMPLE DUPLICATE: 1224116

Parameter	Units	60149148011 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	18.2	18.2	0	18	

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

QC Batch:	WETA/25536	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60149332001		

METHOD BLANK: 1223979 Matrix: Water  
Associated Lab Samples: 60149332001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/23/13 14:30	

LABORATORY CONTROL SAMPLE: 1223980

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	48.6	97	90-110	

MATRIX SPIKE SAMPLE: 1223982

Parameter	Units	60149249003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	88.0	50	133	90	90-110	

MATRIX SPIKE SAMPLE: 1223983

Parameter	Units	60149267001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	109	50	143	69	90-110	M1

SAMPLE DUPLICATE: 1223981

Parameter	Units	60149282001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	66600	62500	6	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

- D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.
- D9 Dissolved result is greater than the total. Data is within laboratory control limits.
- H6 Analysis initiated outside of the 15 minute EPA recommended holding time.
- HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
- M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- R1 RPD value was outside control limits.
- S4 Surrogate recovery not evaluated against control limits due to sample dilution.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-019

Pace Project No.: 60149332

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149332001	316-019	EPA 200.7	MPRP/23581	EPA 200.7	ICP/18521
60149332001	316-019	EPA 200.7	MPRP/23606	EPA 200.7	ICP/18531
60149332001	316-019	EPA 245.1	MERP/7533	EPA 245.1	MERC/7490
60149332001	316-019	EPA 245.1	MERP/7541	EPA 245.1	MERC/7498
60149332001	316-019	EPA 625	OEXT/39428	EPA 625	MSSV/12518
60149332001	316-019	EPA 624 Low	MSV/55133		
60149332002	TRIP BLANK	EPA 624 Low	MSV/55133		
60149332001	316-019	EPA 1664A	WET/42489		
60149332001	316-019	EPA 1664A	WET/42605		
60149332001	316-019	SM 2540D	WET/42490		
60149332001	316-019	SM 4500-H+B	WET/42497		
60149332001	316-019	EPA 350.1	WETA/25547		
60149332001	316-019	EPA 410.4	WETA/25536		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

WO#: 60149332



Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  X roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: (T-11) / T-194 Type of Ice: (Vet) Blue None  Samples received on ice, cooling process has begun.

Cooler Temperature: 4.3

Date and initials of person examining contents: KE 7/22/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>pH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial pH's ~ 4.0. Added 2.5 mL of respective preservative to each sample. Final pH's ~ 2.0
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: <u>(VOA)</u> coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>KE</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative <u>12510</u>
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	1 of 2 trip blanks
		16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/22/13



July 31, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-020  
Pace Project No.: 60149424

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Mary Jane Walls for  
Angie Brown  
Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149424001	316-020	Water	07/23/13 10:26	07/24/13 01:35
60149424002	trip blank	Water	07/23/13 10:26	07/24/13 01:35

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149424001	316-020	EPA 200.7	TDS	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60149424002	trip blank	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

Sample: 316-020	Lab ID: 60149424001	Collected: 07/23/13 10:26	Received: 07/24/13 01:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum	4380 ug/L		150	2	07/25/13 10:30	07/26/13 13:51	7429-90-5	
Antimony	ND ug/L		50.0	5	07/25/13 10:30	07/26/13 13:53	7440-36-0	D3
Arsenic	625 ug/L		50.0	5	07/25/13 10:30	07/26/13 13:53	7440-38-2	
Beryllium	ND ug/L		2.0	2	07/25/13 10:30	07/26/13 13:51	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/25/13 10:30	07/26/13 13:53	7440-43-9	D3
Chromium	213 ug/L		10.0	2	07/25/13 10:30	07/26/13 13:51	7440-47-3	
Cobalt	26.3 ug/L		25.0	5	07/25/13 10:30	07/26/13 13:53	7440-48-4	
Copper	ND ug/L		20.0	2	07/25/13 10:30	07/26/13 13:51	7440-50-8	D3
Iron	511000 ug/L		100	2	07/25/13 10:30	07/26/13 13:51	7439-89-6	
Lead	ND ug/L		100	20	07/25/13 10:30	07/26/13 13:56	7439-92-1	D3
Nickel	113 ug/L		25.0	5	07/25/13 10:30	07/26/13 13:53	7440-02-0	
Selenium	90.2 ug/L		75.0	5	07/25/13 10:30	07/26/13 13:53	7782-49-2	
Silver	ND ug/L		14.0	2	07/25/13 10:30	07/26/13 13:51	7440-22-4	D3
Thallium	ND ug/L		100	5	07/25/13 10:30	07/26/13 13:53	7440-28-0	D3
Zinc	16600 ug/L		1000	20	07/25/13 10:30	07/26/13 13:56	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum, Dissolved	3740 ug/L		150	2	07/24/13 16:15	07/25/13 15:10	7429-90-5	
Antimony, Dissolved	37.5 ug/L		20.0	2	07/24/13 16:15	07/25/13 15:10	7440-36-0	
Arsenic, Dissolved	527 ug/L		20.0	2	07/24/13 16:15	07/25/13 15:10	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/24/13 16:15	07/25/13 15:24	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		10.0	2	07/24/13 16:15	07/25/13 15:10	7440-43-9	D3
Chromium, Dissolved	201 ug/L		25.0	5	07/24/13 16:15	07/25/13 15:24	7440-47-3	
Cobalt, Dissolved	33.9 ug/L		10.0	2	07/24/13 16:15	07/25/13 15:10	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/24/13 16:15	07/25/13 15:10	7440-50-8	D3
Iron, Dissolved	484000 ug/L		100	2	07/24/13 16:15	07/25/13 15:10	7439-89-6	
Lead, Dissolved	68.9 ug/L		10.0	2	07/24/13 16:15	07/25/13 15:10	7439-92-1	
Nickel, Dissolved	92.5 ug/L		10.0	2	07/24/13 16:15	07/25/13 15:10	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/24/13 16:15	07/25/13 15:24	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/24/13 16:15	07/25/13 15:10	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/24/13 16:15	07/25/13 15:24	7440-28-0	D3
Zinc, Dissolved	15300 ug/L		1000	20	07/24/13 16:15	07/25/13 15:43	7440-66-6	
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury	2.2 ug/L		0.20	1	07/24/13 11:30	07/24/13 14:54	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND ug/L		0.20	1	07/25/13 10:00	07/25/13 14:38	7439-97-6	
<b>625 MSSV</b>								
Analytical Method: EPA 625 Preparation Method: EPA 625								
Acenaphthene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	83-32-9	
Acenaphthylene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	208-96-8	
Anthracene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	120-12-7	
Benzidine	ND ug/L		10000	20	07/25/13 00:00	07/26/13 18:22	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

Sample: 316-020	Lab ID: 60149424001	Collected: 07/23/13 10:26	Received: 07/24/13 01:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	191-24-2	
Benzo(k)fluoranthene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	101-55-3	
Butylbenzylphthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		1200	20	07/25/13 00:00	07/26/13 18:22	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		1200	20	07/25/13 00:00	07/26/13 18:22	39638-32-9	
2-Chloronaphthalene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	91-58-7	
2-Chlorophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	7005-72-3	
Chrysene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		4000	20	07/25/13 00:00	07/26/13 18:22	91-94-1	
2,4-Dichlorophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	120-83-2	
Diethylphthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	84-66-2	
2,4-Dimethylphenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	105-67-9	
Dimethylphthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	131-11-3	
Di-n-butylphthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		5000	20	07/25/13 00:00	07/26/13 18:22	534-52-1	
2,4-Dinitrophenol	ND ug/L		10000	20	07/25/13 00:00	07/26/13 18:22	51-28-5	
2,4-Dinitrotoluene	ND ug/L		1200	20	07/25/13 00:00	07/26/13 18:22	121-14-2	
2,6-Dinitrotoluene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	606-20-2	
Di-n-octylphthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	117-81-7	
Fluoranthene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	206-44-0	
Fluorene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	87-68-3	
Hexachlorobenzene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	77-47-4	
Hexachloroethane	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	193-39-5	
Isophorone	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	78-59-1	
Naphthalene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	91-20-3	
Nitrobenzene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	98-95-3	
2-Nitrophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	88-75-5	
4-Nitrophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	100-02-7	
N-Nitrosodimethylamine	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	86-30-6	
Pentachlorophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	87-86-5	
Phenanthrene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	85-01-8	
Phenol	<b>3590</b> ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	108-95-2	
Pyrene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	120-82-1	
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:22	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

Sample: 316-020	Lab ID: 60149424001	Collected: 07/23/13 10:26	Received: 07/24/13 01:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/25/13 00:00	07/26/13 18:22	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/25/13 00:00	07/26/13 18:22	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/25/13 00:00	07/26/13 18:22	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/25/13 00:00	07/26/13 18:22	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/25/13 00:00	07/26/13 18:22	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/25/13 00:00	07/26/13 18:22	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/24/13 19:40	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/24/13 19:40	75-27-4	
Bromoform	ND ug/L		200	200		07/24/13 19:40	75-25-2	
Bromomethane	ND ug/L		1000	200		07/24/13 19:40	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/24/13 19:40	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/24/13 19:40	108-90-7	
Chloroethane	ND ug/L		200	200		07/24/13 19:40	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/24/13 19:40	110-75-8	
Chloroform	ND ug/L		200	200		07/24/13 19:40	67-66-3	
Chloromethane	ND ug/L		200	200		07/24/13 19:40	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/24/13 19:40	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/24/13 19:40	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/24/13 19:40	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/24/13 19:40	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/24/13 19:40	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/24/13 19:40	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/24/13 19:40	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/24/13 19:40	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/24/13 19:40	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/24/13 19:40	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/24/13 19:40	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/24/13 19:40	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/24/13 19:40	100-41-4	
Methylene chloride	ND ug/L		200	200		07/24/13 19:40	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/24/13 19:40	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/24/13 19:40	127-18-4	
Toluene	ND ug/L		200	200		07/24/13 19:40	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/24/13 19:40	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/24/13 19:40	79-00-5	
Trichloroethene	ND ug/L		200	200		07/24/13 19:40	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/24/13 19:40	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/24/13 19:40	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/24/13 19:40	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	101 %		80-120	200		07/24/13 19:40	1868-53-7	D3
4-Bromofluorobenzene (S)	100 %		80-120	200		07/24/13 19:40	460-00-4	
Toluene-d8 (S)	99 %		80-120	200		07/24/13 19:40	2037-26-5	
1,2-Dichloroethane-d4 (S)	98 %		80-120	200		07/24/13 19:40	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

<b>Sample: 316-020</b>		<b>Lab ID: 60149424001</b>	Collected: 07/23/13 10:26	Received: 07/24/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/24/13 19:40		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>376</b>	mg/L	5.0	1		07/24/13 13:07		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	ND	mg/L	5.0	1		07/31/13 09:15		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>2420</b>	mg/L	5.0	1		07/24/13 13:29		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.3</b>	Std. Units	0.10	1		07/24/13 13:40		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>677</b>	mg/L	20.0	200		07/25/13 10:30	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>54300</b>	mg/L	5000	500		07/25/13 12:29		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

Sample: trip blank		Lab ID: 60149424002	Collected: 07/23/13 10:26	Received: 07/24/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/24/13 17:12	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/24/13 17:12	75-27-4	
Bromoform	ND ug/L		1.0	1		07/24/13 17:12	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/24/13 17:12	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/24/13 17:12	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/24/13 17:12	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/24/13 17:12	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/24/13 17:12	110-75-8	
Chloroform	ND ug/L		1.0	1		07/24/13 17:12	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/24/13 17:12	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/24/13 17:12	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 17:12	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 17:12	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/24/13 17:12	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/24/13 17:12	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/24/13 17:12	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/24/13 17:12	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/24/13 17:12	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/24/13 17:12	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/24/13 17:12	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/24/13 17:12	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/24/13 17:12	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/24/13 17:12	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/24/13 17:12	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/24/13 17:12	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/24/13 17:12	127-18-4	
Toluene	ND ug/L		1.0	1		07/24/13 17:12	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/24/13 17:12	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/24/13 17:12	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/24/13 17:12	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/24/13 17:12	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/24/13 17:12	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/24/13 17:12	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	100 %		80-120	1		07/24/13 17:12	1868-53-7	
4-Bromofluorobenzene (S)	101 %		80-120	1		07/24/13 17:12	460-00-4	
Toluene-d8 (S)	102 %		80-120	1		07/24/13 17:12	2037-26-5	
1,2-Dichloroethane-d4 (S)	96 %		80-120	1		07/24/13 17:12	17060-07-0	
Preservation pH	7.0			1		07/24/13 17:12		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

QC Batch: MERP/7538

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Associated Lab Samples: 60149424001

METHOD BLANK: 1224935

Matrix: Water

Associated Lab Samples: 60149424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/24/13 14:49	

LABORATORY CONTROL SAMPLE: 1224936

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.8	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1224937

1224938

Parameter	Units	60149148018 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury	ug/L	4.6	5	5	8.2	8.2	73	73	70-130	0	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

QC Batch:	MERP/7541	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60149424001		

METHOD BLANK: 1225486 Matrix: Water  
Associated Lab Samples: 60149424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/25/13 13:41	

LABORATORY CONTROL SAMPLE: 1225487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.4	87	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1225488 1225489

Parameter	Units	60149481003 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Mercury, Dissolved	ug/L	ND	5	5	4.3	5.2	85	102	70-130	18	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020  
Pace Project No.: 60149424

QC Batch: MPRP/23612      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60149424001

METHOD BLANK: 1225511      Matrix: Water  
Associated Lab Samples: 60149424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/26/13 13:46	
Antimony	ug/L	ND	10.0	07/26/13 13:46	
Arsenic	ug/L	ND	10.0	07/26/13 13:46	
Beryllium	ug/L	ND	1.0	07/26/13 13:46	
Cadmium	ug/L	ND	5.0	07/26/13 13:46	
Chromium	ug/L	ND	5.0	07/26/13 13:46	
Cobalt	ug/L	ND	5.0	07/26/13 13:46	
Copper	ug/L	ND	10.0	07/26/13 13:46	
Iron	ug/L	ND	50.0	07/26/13 13:46	
Lead	ug/L	ND	5.0	07/26/13 13:46	
Nickel	ug/L	ND	5.0	07/26/13 13:46	
Selenium	ug/L	ND	15.0	07/26/13 13:46	
Silver	ug/L	ND	7.0	07/26/13 13:46	
Thallium	ug/L	ND	20.0	07/26/13 13:46	
Zinc	ug/L	ND	50.0	07/26/13 13:46	

LABORATORY CONTROL SAMPLE: 1225512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9680	97	85-115	
Antimony	ug/L	1000	990	99	85-115	
Arsenic	ug/L	1000	956	96	85-115	
Beryllium	ug/L	1000	969	97	85-115	
Cadmium	ug/L	1000	977	98	85-115	
Chromium	ug/L	1000	975	98	85-115	
Cobalt	ug/L	1000	1000	100	85-115	
Copper	ug/L	1000	957	96	85-115	
Iron	ug/L	10000	9530	95	85-115	
Lead	ug/L	1000	1000	100	85-115	
Nickel	ug/L	1000	1010	101	85-115	
Selenium	ug/L	1000	967	97	85-115	
Silver	ug/L	500	487	97	85-115	
Thallium	ug/L	1000	1030	103	85-115	
Zinc	ug/L	1000	990	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1225513      1225514

Parameter	Units	60149295001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Aluminum	ug/L	32.8J	10000	10000	9860	9740	98	97	70-130	1	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1225513 1225514											
Parameter	Units	60149295001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Antimony	ug/L	<4.6	1000	1000	1020	1010	102	101	70-130	0	7
Arsenic	ug/L	<4.6	1000	1000	994	985	99	99	70-130	1	10
Beryllium	ug/L	<0.13	1000	1000	937	927	94	93	70-130	1	7
Cadmium	ug/L	<2.5	1000	1000	993	988	99	99	70-130	1	10
Chromium	ug/L	<0.62	1000	1000	968	956	97	96	70-130	1	10
Cobalt	ug/L	1.3J	1000	1000	977	970	98	97	70-130	1	6
Copper	ug/L	13.0	1000	1000	987	971	97	96	70-130	2	11
Iron	ug/L	466	10000	10000	9650	9580	92	91	70-130	1	10
Lead	ug/L	<2.4	1000	1000	982	975	98	98	70-130	1	10
Nickel	ug/L	25.8	1000	1000	1000	993	98	97	70-130	1	10
Selenium	ug/L	<4.2	1000	1000	986	979	99	98	70-130	1	10
Silver	ug/L	1.7J	500	500	492	486	98	97	70-130	1	10
Thallium	ug/L	<4.1	1000	1000	996	994	100	99	70-130	0	6
Zinc	ug/L	86.4	1000	1000	1040	1030	96	95	70-130	1	11

MATRIX SPIKE SAMPLE: 1225515								
Parameter	Units	60149295002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Aluminum	ug/L	33.2J	10000	9610	96	70-130		
Antimony	ug/L	<4.6	1000	1010	101	70-130		
Arsenic	ug/L	<4.6	1000	987	99	70-130		
Beryllium	ug/L	<0.13	1000	930	93	70-130		
Cadmium	ug/L	<2.5	1000	990	99	70-130		
Chromium	ug/L	<0.62	1000	969	97	70-130		
Cobalt	ug/L	0.64J	1000	972	97	70-130		
Copper	ug/L	85.7	1000	1050	96	70-130		
Iron	ug/L	698	10000	9840	91	70-130		
Lead	ug/L	4.2J	1000	982	98	70-130		
Nickel	ug/L	47.6	1000	1020	97	70-130		
Selenium	ug/L	<4.2	1000	997	99	70-130		
Silver	ug/L	1.7J	500	491	98	70-130		
Thallium	ug/L	<4.1	1000	989	99	70-130		
Zinc	ug/L	422	1000	1380	96	70-130		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020  
Pace Project No.: 60149424

QC Batch: MPRP/23606 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60149424001

METHOD BLANK: 1225178 Matrix: Water  
Associated Lab Samples: 60149424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/25/13 14:54	
Antimony, Dissolved	ug/L	ND	10.0	07/25/13 14:54	
Arsenic, Dissolved	ug/L	ND	10.0	07/25/13 14:54	
Beryllium, Dissolved	ug/L	ND	1.0	07/25/13 14:54	
Cadmium, Dissolved	ug/L	ND	5.0	07/25/13 14:54	
Chromium, Dissolved	ug/L	ND	5.0	07/25/13 14:54	
Cobalt, Dissolved	ug/L	ND	5.0	07/25/13 14:54	
Copper, Dissolved	ug/L	ND	10.0	07/25/13 14:54	
Iron, Dissolved	ug/L	ND	50.0	07/25/13 14:54	
Lead, Dissolved	ug/L	ND	5.0	07/25/13 14:54	
Nickel, Dissolved	ug/L	ND	5.0	07/25/13 14:54	
Selenium, Dissolved	ug/L	ND	15.0	07/25/13 14:54	
Silver, Dissolved	ug/L	ND	7.0	07/25/13 14:54	
Thallium, Dissolved	ug/L	ND	20.0	07/25/13 14:54	
Zinc, Dissolved	ug/L	ND	50.0	07/25/13 14:54	

LABORATORY CONTROL SAMPLE: 1225179

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9600	96	85-115	
Antimony, Dissolved	ug/L	1000	972	97	85-115	
Arsenic, Dissolved	ug/L	1000	900	90	85-115	
Beryllium, Dissolved	ug/L	1000	907	91	85-115	
Cadmium, Dissolved	ug/L	1000	932	93	85-115	
Chromium, Dissolved	ug/L	1000	901	90	85-115	
Cobalt, Dissolved	ug/L	1000	944	94	85-115	
Copper, Dissolved	ug/L	1000	942	94	85-115	
Iron, Dissolved	ug/L	10000	8940	89	85-115	
Lead, Dissolved	ug/L	1000	939	94	85-115	
Nickel, Dissolved	ug/L	1000	956	96	85-115	
Selenium, Dissolved	ug/L	1000	926	93	85-115	
Silver, Dissolved	ug/L	500	466	93	85-115	
Thallium, Dissolved	ug/L	1000	976	98	85-115	
Zinc, Dissolved	ug/L	1000	905	91	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1225180 1225181

Parameter	Units	60149332001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Aluminum, Dissolved	ug/L	3910	10000	10000	13400	12900	94	90	70-130	3	8		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

Parameter	Units	60149332001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec							
Antimony, Dissolved	ug/L	45.1	1000	1000	1020	997	97	95	70-130	2	7				
Arsenic, Dissolved	ug/L	569	1000	1000	1660	1600	109	103	70-130	4	10				
Beryllium, Dissolved	ug/L	ND	1000	1000	878	846	88	85	70-130	4	7				
Cadmium, Dissolved	ug/L	ND	1000	1000	1000	982	100	98	70-130	2	10				
Chromium, Dissolved	ug/L	216	1000	1000	1090	1050	88	83	70-130	4	10				
Cobalt, Dissolved	ug/L	41.7	1000	1000	865	851	82	81	70-130	2	6				
Copper, Dissolved	ug/L	ND	1000	1000	980	949	98	95	70-130	3	11				
Iron, Dissolved	ug/L	542000	10000	10000	557000	527000	154	-154	70-130	6	10	M1			
Lead, Dissolved	ug/L	73.5	1000	1000	804	798	73	72	70-130	1	10				
Nickel, Dissolved	ug/L	102	1000	1000	924	904	82	80	70-130	2	10				
Selenium, Dissolved	ug/L	ND	1000	1000	1130	1090	113	109	70-130	3	10				
Silver, Dissolved	ug/L	ND	500	500	69.8	57.6	14	12	70-130	19	10	M1, R1			
Thallium, Dissolved	ug/L	ND	1000	1000	756	738	76	74	70-130	2	6				
Zinc, Dissolved	ug/L	15700	1000	1000	17400	15400	162	-33	70-130	12	11	M1, R1			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

QC Batch: MSV/55133 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149424001, 60149424002

METHOD BLANK: 1225012 Matrix: Water

Associated Lab Samples: 60149424001, 60149424002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1-Dichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,1-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichloroethane	ug/L	ND	1.0	07/24/13 15:25	
1,2-Dichloropropane	ug/L	ND	1.0	07/24/13 15:25	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/24/13 15:25	
Benzene	ug/L	ND	1.0	07/24/13 15:25	
Bromodichloromethane	ug/L	ND	1.0	07/24/13 15:25	
Bromoform	ug/L	ND	1.0	07/24/13 15:25	
Bromomethane	ug/L	ND	5.0	07/24/13 15:25	
Carbon tetrachloride	ug/L	ND	1.0	07/24/13 15:25	
Chlorobenzene	ug/L	ND	1.0	07/24/13 15:25	
Chloroethane	ug/L	ND	1.0	07/24/13 15:25	
Chloroform	ug/L	ND	1.0	07/24/13 15:25	
Chloromethane	ug/L	ND	1.0	07/24/13 15:25	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/24/13 15:25	
Dibromochloromethane	ug/L	ND	1.0	07/24/13 15:25	
Ethylbenzene	ug/L	ND	1.0	07/24/13 15:25	
Methylene chloride	ug/L	ND	1.0	07/24/13 15:25	
Tetrachloroethene	ug/L	ND	1.0	07/24/13 15:25	
Toluene	ug/L	ND	1.0	07/24/13 15:25	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/24/13 15:25	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/24/13 15:25	
Trichloroethene	ug/L	ND	1.0	07/24/13 15:25	
Trichlorofluoromethane	ug/L	ND	1.0	07/24/13 15:25	
Vinyl chloride	ug/L	ND	1.0	07/24/13 15:25	
Xylene (Total)	ug/L	ND	3.0	07/24/13 15:25	
1,2-Dichloroethane-d4 (S)	%	97	80-120	07/24/13 15:25	
4-Bromofluorobenzene (S)	%	98	80-120	07/24/13 15:25	
Toluene-d8 (S)	%	100	80-120	07/24/13 15:25	

LABORATORY CONTROL SAMPLE: 1225013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	17.9	90	71-139	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

LABORATORY CONTROL SAMPLE: 1225013

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	18.9	95	59-138	
1,1,2-Trichloroethane	ug/L	20	18.2	91	69-127	
1,1-Dichloroethane	ug/L	20	17.2	86	69-126	
1,1-Dichloroethene	ug/L	20	20.6	103	65-153	
1,2-Dichlorobenzene	ug/L	20	19.6	98	66-126	
1,2-Dichloroethane	ug/L	20	18.3	91	71-129	
1,2-Dichloropropane	ug/L	20	18.8	94	66-140	
1,3-Dichlorobenzene	ug/L	20	19.9	100	63-127	
1,4-Dichlorobenzene	ug/L	20	19.7	99	68-124	
2-Chloroethylvinyl ether	ug/L	20	14.7	73	33-159	
Benzene	ug/L	20	20.3	101	73-129	
Bromodichloromethane	ug/L	20	17.4	87	63-129	
Bromoform	ug/L	20	20.3	101	52-123	
Bromomethane	ug/L	20	23.2	116	10-160	
Carbon tetrachloride	ug/L	20	19.1	96	70-140	
Chlorobenzene	ug/L	20	17.8	89	68-127	
Chloroethane	ug/L	20	16.9	84	42-160	
Chloroform	ug/L	20	17.6	88	60-120	
Chloromethane	ug/L	20	17.6	88	10-160	
cis-1,2-Dichloroethene	ug/L	20	18.5	92	70-125	
cis-1,3-Dichloropropene	ug/L	20	17.2	86	66-132	
Dibromochloromethane	ug/L	20	17.6	88	63-134	
Ethylbenzene	ug/L	20	18.4	92	66-133	
Methylene chloride	ug/L	20	20.7	104	56-135	
Tetrachloroethene	ug/L	20	20.2	101	64-143	
Toluene	ug/L	20	20.0	100	70-130	
trans-1,2-Dichloroethene	ug/L	20	19.9	100	67-149	
trans-1,3-Dichloropropene	ug/L	20	18.7	93	66-138	
Trichloroethene	ug/L	20	17.7	88	71-130	
Trichlorofluoromethane	ug/L	20	17.5	88	58-158	
Vinyl chloride	ug/L	20	18.0	90	41-160	
Xylene (Total)	ug/L	60	60.0	100	67-130	
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1225014

Parameter	Units	60149196001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3570	89	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3660	92	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3170	79	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3330	83	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3830	96	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3550	89	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3510	88	49-155	
1,2-Dichloropropane	ug/L	ND	4000	3590	90	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

MATRIX SPIKE SAMPLE:		1225014					
Parameter	Units	60149196001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	ND	4000	3560	89	59-146	
1,4-Dichlorobenzene	ug/L	ND	4000	3620	90	18-147	
2-Chloroethylvinyl ether	ug/L	ND	4000	5810	145	10-160	
Benzene	ug/L	ND	4000	3910	98	37-151	
Bromodichloromethane	ug/L	ND	4000	3440	86	35-155	
Bromoform	ug/L	ND	4000	3680	92	45-133	
Bromomethane	ug/L	ND	4000	3550	89	10-160	
Carbon tetrachloride	ug/L	ND	4000	3650	91	70-140	
Chlorobenzene	ug/L	ND	4000	3170	79	37-153	
Chloroethane	ug/L	ND	4000	3210	80	14-160	
Chloroform	ug/L	ND	4000	3380	84	51-138	
Chloromethane	ug/L	ND	4000	3380	84	10-160	
cis-1,2-Dichloroethene	ug/L	ND	4000	3590	90	19-160	
cis-1,3-Dichloropropene	ug/L	ND	4000	3320	83	10-160	
Dibromochloromethane	ug/L	ND	4000	3400	85	53-149	
Ethylbenzene	ug/L	ND	4000	3250	81	37-154	
Methylene chloride	ug/L	ND	4000	4100	99	15-156	
Tetrachloroethene	ug/L	ND	4000	3630	91	64-148	
Toluene	ug/L	ND	4000	3850	96	47-150	
trans-1,2-Dichloroethene	ug/L	ND	4000	3760	94	54-156	
trans-1,3-Dichloropropene	ug/L	ND	4000	3470	87	17-160	
Trichloroethene	ug/L	ND	4000	3320	83	71-157	
Trichlorofluoromethane	ug/L	ND	4000	3330	83	17-160	
Vinyl chloride	ug/L	ND	4000	3290	82	10-160	
Xylene (Total)	ug/L	ND	12000	10900	91	12-153	
1,2-Dichloroethane-d4 (S)	%				100	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	D3,HS
Toluene-d8 (S)	%				101	80-120	
Preservation pH		7.0		7.0			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020  
Pace Project No.: 60149424

QC Batch: OEXT/39478      Analysis Method: EPA 625  
QC Batch Method: EPA 625      Analysis Description: 625 MSS  
Associated Lab Samples: 60149424001

METHOD BLANK: 1225505      Matrix: Water  
Associated Lab Samples: 60149424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/26/13 14:13	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/26/13 14:13	
2,4-Dichlorophenol	ug/L	ND	5.0	07/26/13 14:13	
2,4-Dimethylphenol	ug/L	ND	5.0	07/26/13 14:13	
2,4-Dinitrophenol	ug/L	ND	50.0	07/26/13 14:13	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/26/13 14:13	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/26/13 14:13	
2-Chloronaphthalene	ug/L	ND	5.0	07/26/13 14:13	
2-Chlorophenol	ug/L	ND	5.0	07/26/13 14:13	
2-Nitrophenol	ug/L	ND	5.0	07/26/13 14:13	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/26/13 14:13	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/26/13 14:13	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/26/13 14:13	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/26/13 14:13	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/26/13 14:13	
4-Nitrophenol	ug/L	ND	5.0	07/26/13 14:13	
Acenaphthene	ug/L	ND	5.0	07/26/13 14:13	
Acenaphthylene	ug/L	ND	5.0	07/26/13 14:13	
Anthracene	ug/L	ND	5.0	07/26/13 14:13	
Benzidine	ug/L	ND	50.0	07/26/13 14:13	
Benzo(a)anthracene	ug/L	ND	5.0	07/26/13 14:13	
Benzo(a)pyrene	ug/L	ND	5.0	07/26/13 14:13	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/26/13 14:13	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/26/13 14:13	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/26/13 14:13	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/26/13 14:13	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/26/13 14:13	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/26/13 14:13	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/26/13 14:13	
Butylbenzylphthalate	ug/L	ND	5.0	07/26/13 14:13	
Chrysene	ug/L	ND	5.0	07/26/13 14:13	
Di-n-butylphthalate	ug/L	ND	5.0	07/26/13 14:13	
Di-n-octylphthalate	ug/L	ND	5.0	07/26/13 14:13	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/26/13 14:13	
Diethylphthalate	ug/L	ND	5.0	07/26/13 14:13	
Dimethylphthalate	ug/L	ND	5.0	07/26/13 14:13	
Fluoranthene	ug/L	ND	5.0	07/26/13 14:13	
Fluorene	ug/L	ND	5.0	07/26/13 14:13	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/26/13 14:13	
Hexachlorobenzene	ug/L	ND	5.0	07/26/13 14:13	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/26/13 14:13	
Hexachloroethane	ug/L	ND	5.0	07/26/13 14:13	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/26/13 14:13	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Project No.: 60149424

METHOD BLANK: 1225505

Matrix: Water

Associated Lab Samples: 60149424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/26/13 14:13	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/26/13 14:13	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/26/13 14:13	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/26/13 14:13	
Naphthalene	ug/L	ND	5.0	07/26/13 14:13	
Nitrobenzene	ug/L	ND	5.0	07/26/13 14:13	
Pentachlorophenol	ug/L	ND	5.0	07/26/13 14:13	
Phenanthrene	ug/L	ND	5.0	07/26/13 14:13	
Phenol	ug/L	ND	5.0	07/26/13 14:13	
Pyrene	ug/L	ND	5.0	07/26/13 14:13	
2,4,6-Tribromophenol (S)	%	84	39-119	07/26/13 14:13	
2-Fluorobiphenyl (S)	%	77	36-120	07/26/13 14:13	
2-Fluorophenol (S)	%	47	18-120	07/26/13 14:13	
Nitrobenzene-d5 (S)	%	72	32-120	07/26/13 14:13	
Phenol-d6 (S)	%	30	12-120	07/26/13 14:13	
Terphenyl-d14 (S)	%	83	44-120	07/26/13 14:13	

LABORATORY CONTROL SAMPLE: 1225506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	43.6	87	44-120	
2,4,6-Trichlorophenol	ug/L	50	46.1	92	48-120	
2,4-Dichlorophenol	ug/L	50	45.2	90	48-120	
2,4-Dimethylphenol	ug/L	50	40.9	82	37-119	
2,4-Dinitrophenol	ug/L	50	39.2J	78	15-153	
2,4-Dinitrotoluene	ug/L	50	52.2	104	54-120	
2,6-Dinitrotoluene	ug/L	50	49.6	99	52-120	
2-Chloronaphthalene	ug/L	50	44.9	90	60-118	
2-Chlorophenol	ug/L	50	42.0	84	44-120	
2-Nitrophenol	ug/L	50	47.6	95	43-120	
3,3'-Dichlorobenzidine	ug/L	50	62.4	125	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	53.2	106	31-147	
4-Bromophenylphenyl ether	ug/L	50	47.7	95	53-120	
4-Chloro-3-methylphenol	ug/L	50	45.0	90	50-120	
4-Chlorophenylphenyl ether	ug/L	50	46.4	93	54-120	
4-Nitrophenol	ug/L	50	20.9	42	10-120	
Acenaphthene	ug/L	50	45.3	91	51-120	
Acenaphthylene	ug/L	50	45.1	90	51-120	
Anthracene	ug/L	50	47.2	94	54-120	
Benzidine	ug/L	50	16.7J	33	1-124	
Benzo(a)anthracene	ug/L	50	46.8	94	54-120	
Benzo(a)pyrene	ug/L	50	48.0	96	54-120	
Benzo(b)fluoranthene	ug/L	50	51.2	102	57-120	
Benzo(g,h,i)perylene	ug/L	50	48.2	96	54-120	
Benzo(k)fluoranthene	ug/L	50	48.3	97	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

LABORATORY CONTROL SAMPLE: 1225506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	46.1	92	51-120	
bis(2-Chloroethyl) ether	ug/L	50	44.7	89	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	42.8	86	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	49.0	98	51-126	
Butylbenzylphthalate	ug/L	50	49.2	98	45-129	
Chrysene	ug/L	50	47.5	95	54-120	
Di-n-butylphthalate	ug/L	50	49.0	98	57-118	
Di-n-octylphthalate	ug/L	50	49.8	100	48-130	
Dibenz(a,h)anthracene	ug/L	50	48.6	97	56-119	
Diethylphthalate	ug/L	50	47.8	96	55-114	
Dimethylphthalate	ug/L	50	47.3	95	54-112	
Fluoranthene	ug/L	50	48.9	98	56-120	
Fluorene	ug/L	50	46.0	92	59-120	
Hexachloro-1,3-butadiene	ug/L	50	44.9	90	41-116	
Hexachlorobenzene	ug/L	50	47.6	95	53-120	
Hexachlorocyclopentadiene	ug/L	100	73.4	73	31-120	
Hexachloroethane	ug/L	50	41.3	83	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	48.2	96	55-120	
Isophorone	ug/L	50	45.7	91	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	46.0	92	47-120	
N-Nitrosodimethylamine	ug/L	50	28.7	57	28-120	
N-Nitrosodiphenylamine	ug/L	50	46.5	93	53-120	
Naphthalene	ug/L	50	44.0	88	48-120	
Nitrobenzene	ug/L	50	46.7	93	47-120	
Pentachlorophenol	ug/L	50	48.0	96	43-127	
Phenanthrene	ug/L	50	46.8	94	55-120	
Phenol	ug/L	50	18.8	38	15-112	
Pyrene	ug/L	50	49.4	99	55-115	
2,4,6-Tribromophenol (S)	%			96	39-119	
2-Fluorobiphenyl (S)	%			91	36-120	
2-Fluorophenol (S)	%			52	18-120	
Nitrobenzene-d5 (S)	%			87	32-120	
Phenol-d6 (S)	%			36	12-120	
Terphenyl-d14 (S)	%			95	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

QC Batch:	WET/42522	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149424001		

METHOD BLANK: 1225079 Matrix: Water

Associated Lab Samples: 60149424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/24/13 13:06	

LABORATORY CONTROL SAMPLE: 1225080

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	39.2	98	78-114	

MATRIX SPIKE SAMPLE: 1225081

Parameter	Units	60149467001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40	42.5	102	78-114	

SAMPLE DUPLICATE: 1225082

Parameter	Units	60149467002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	8.4	8.0	5	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

QC Batch:	WET/42632	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60149424001		

METHOD BLANK: 1228227 Matrix: Water

Associated Lab Samples: 60149424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/31/13 09:13	

LABORATORY CONTROL SAMPLE: 1228228

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.4	107	64-132	

MATRIX SPIKE SAMPLE: 1228229

Parameter	Units	60149213001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	10.3	20.6	54.8	216	64-132	M1

SAMPLE DUPLICATE: 1228231

Parameter	Units	60149229001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	4.1J	6.7		34	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

QC Batch: WET/42523

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60149424001

METHOD BLANK: 1225093

Matrix: Water

Associated Lab Samples: 60149424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/24/13 13:27	

SAMPLE DUPLICATE: 1225094

Parameter	Units	60149484001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	539	546	1	25	

SAMPLE DUPLICATE: 1225095

Parameter	Units	60149394001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	4180	4240	1	25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

QC Batch: WET/42519 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149424001

SAMPLE DUPLICATE: 1225073

Parameter	Units	60149467001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.2	8.3	1	5	H6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

QC Batch:	WETA/25575	Analysis Method:	EPA 350.1
QC Batch Method:	EPA 350.1	Analysis Description:	350.1 Ammonia
Associated Lab Samples:	60149424001		

METHOD BLANK: 1225343 Matrix: Water  
Associated Lab Samples: 60149424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/25/13 10:17	

LABORATORY CONTROL SAMPLE: 1225344

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 1225345

Parameter	Units	60149418002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.28	2	2.5	110	90-110	

MATRIX SPIKE SAMPLE: 1225346

Parameter	Units	60149419002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.3	113	90-110	M1

SAMPLE DUPLICATE: 1225347

Parameter	Units	60149421001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	2.8	2.8	0	18	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

QC Batch: WETA/25572      Analysis Method: EPA 410.4  
 QC Batch Method: EPA 410.4      Analysis Description: 410.4 COD  
 Associated Lab Samples: 60149424001

METHOD BLANK: 1225150      Matrix: Water

Associated Lab Samples: 60149424001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/25/13 12:27	

LABORATORY CONTROL SAMPLE: 1225151

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	51.4	103	90-110	

MATRIX SPIKE SAMPLE: 1225153

Parameter	Units	60149484001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	33.7	50	85.2	103	90-110	

MATRIX SPIKE SAMPLE: 1225154

Parameter	Units	60149484002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	24.0	50	70.4	93	90-110	

SAMPLE DUPLICATE: 1225152

Parameter	Units	60149424001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	54300	55300	2	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39478

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-020

Pace Project No.: 60149424

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149424001	316-020	EPA 200.7	MPRP/23612	EPA 200.7	ICP/18535
60149424001	316-020	EPA 200.7	MPRP/23606	EPA 200.7	ICP/18531
60149424001	316-020	EPA 245.1	MERP/7538	EPA 245.1	MERC/7495
60149424001	316-020	EPA 245.1	MERP/7541	EPA 245.1	MERC/7498
60149424001	316-020	EPA 625	OEXT/39478	EPA 625	MSSV/12531
60149424001	316-020	EPA 624 Low	MSV/55133		
60149424002	trip blank	EPA 624 Low	MSV/55133		
60149424001	316-020	EPA 1664A	WET/42522		
60149424001	316-020	EPA 1664A	WET/42632		
60149424001	316-020	SM 2540D	WET/42523		
60149424001	316-020	SM 4500-H+B	WET/42519		
60149424001	316-020	EPA 350.1	WETA/25575		
60149424001	316-020	EPA 410.4	WETA/25572		

### REPORT OF LABORATORY ANALYSIS

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WO#: 60149424



60149424



Sample Condition Upon Receipt

Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  X roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 3.5

Date and initials of person examining contents: KE 7/24/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. pH
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. Initial pH's ~ 5.0. Added 2.5 mL of respective preservative to get a final pH ~ 2.0-2.5 for each.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: <u>VOA</u> coliform, TOC, <u>D&amp;G</u> , WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed: <u>KE</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative: <u>12510</u>
Pace Trip Blank lot # (if purchased): <u>Jun 3</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/24/13





July 29, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-020  
Pace Project No.: 60149425

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 24, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-020

Pace Project No.: 60149425

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

---

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

### SAMPLE SUMMARY

Project: BRIDGETON LF 316-020

Pace Project No.: 60149425

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149425001	316-020	Water	07/23/13 10:26	07/24/13 01:35

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-020

Pace Project No.: 60149425

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149425001	316-020	SM 5210B	NDL	1

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-020

Pace Project No.: 60149425

Sample: 316-020	Lab ID: 60149425001	Collected: 07/23/13 10:26	Received: 07/24/13 01:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>29100</b>	mg/L	2.0	1	07/24/13 10:41	07/29/13 10:43		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-020

Pace Project No.: 60149425

QC Batch: WET/42516

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149425001

METHOD BLANK: 1224682

Matrix: Water

Associated Lab Samples: 60149425001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/29/13 09:44	

LABORATORY CONTROL SAMPLE: 1224683

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	190	96	85-115	

SAMPLE DUPLICATE: 1224685

Parameter	Units	60149414001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	2.2	2.5	15	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-020

Pace Project No.: 60149425

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-020

Pace Project No.: 60149425

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149425001	316-020	SM 5210B	WET/42516	SM 5210B	WET/42595

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

WO#: 60149425



Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  X roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 3.5

Date and initials of person examining contents: KE 7/24/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y  N  Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/24/13



July 31, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-021  
Pace Project No.: 60149527

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 25, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Mary Jane Walls for  
Angie Brown  
Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-021

Pace Project No.: 60149527

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

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Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-021

Pace Project No.: 60149527

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149527001	316-021	Water	07/24/13 09:43	07/25/13 01:35

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-021

Pace Project No.: 60149527

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149527001	316-021	SM 5210B	JML	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-021

Pace Project No.: 60149527

Sample: 316-021	Lab ID: 60149527001	Collected: 07/24/13 09:43	Received: 07/25/13 01:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>31700</b>	mg/L	2.0	1	07/25/13 14:20	07/30/13 14:05		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149527

QC Batch: WET/42544

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149527001

METHOD BLANK: 1225673

Matrix: Water

Associated Lab Samples: 60149527001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/30/13 10:26	

LABORATORY CONTROL SAMPLE: 1225674

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	190	96	85-115	

SAMPLE DUPLICATE: 1225675

Parameter	Units	60149523001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	609	676	11	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-021

Pace Project No.: 60149527

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-021

Pace Project No.: 60149527

---

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149527001	316-021	SM 5210B	WET/42544	SM 5210B	WET/42630

## REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149527



Client Name: Ball Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Yes Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 2.7

Date and initials of person examining contents: KE 7/25/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 7/25/13



August 01, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-021  
Pace Project No.: 60149528

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 25, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Mary Jane Walls for  
Angie Brown  
Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149528001	316-021	Water	07/24/13 09:43	07/25/13 01:35
60149528002	TRIP BLANK	Water	07/24/13 09:43	07/25/13 01:35

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149528001	316-021	EPA 200.7	TDS	15
		EPA 200.7	TDS	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	JKL	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60149528002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

Sample: 316-021		Lab ID: 60149528001	Collected: 07/24/13 09:43	Received: 07/25/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	7960 ug/L		150	2	07/25/13 10:30	07/26/13 14:29	7429-90-5	
Antimony	61.6 ug/L		50.0	5	07/25/13 10:30	07/26/13 14:32	7440-36-0	
Arsenic	838 ug/L		50.0	5	07/25/13 10:30	07/26/13 14:32	7440-38-2	
Beryllium	ND ug/L		2.0	2	07/25/13 10:30	07/26/13 14:29	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	07/25/13 10:30	07/26/13 14:32	7440-43-9	D3
Chromium	283 ug/L		25.0	5	07/25/13 10:30	07/26/13 14:32	7440-47-3	
Cobalt	35.5 ug/L		25.0	5	07/25/13 10:30	07/26/13 14:32	7440-48-4	
Copper	ND ug/L		50.0	5	07/25/13 10:30	07/26/13 14:32	7440-50-8	D3
Iron	883000 ug/L		100	2	07/25/13 10:30	07/26/13 14:29	7439-89-6	
Lead	237 ug/L		25.0	5	07/25/13 10:30	07/26/13 14:32	7439-92-1	
Nickel	146 ug/L		25.0	5	07/25/13 10:30	07/26/13 14:32	7440-02-0	
Selenium	112 ug/L		75.0	5	07/25/13 10:30	07/26/13 14:32	7782-49-2	
Silver	ND ug/L		35.0	5	07/25/13 10:30	07/26/13 14:32	7440-22-4	D3
Thallium	ND ug/L		100	5	07/25/13 10:30	07/26/13 14:32	7440-28-0	D3
Zinc	16800 ug/L		1000	20	07/25/13 10:30	07/26/13 14:34	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	3930 ug/L		150	2	07/25/13 15:00	07/26/13 15:10	7429-90-5	
Antimony, Dissolved	ND ug/L		50.0	5	07/25/13 15:00	07/26/13 15:13	7440-36-0	D3,R1
Arsenic, Dissolved	638 ug/L		50.0	5	07/25/13 15:00	07/26/13 15:13	7440-38-2	
Beryllium, Dissolved	ND ug/L		2.0	2	07/25/13 15:00	07/26/13 15:10	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		25.0	5	07/25/13 15:00	07/26/13 15:13	7440-43-9	D3
Chromium, Dissolved	205 ug/L		10.0	2	07/25/13 15:00	07/26/13 15:10	7440-47-3	
Cobalt, Dissolved	ND ug/L		25.0	5	07/25/13 15:00	07/26/13 15:13	7440-48-4	D3
Copper, Dissolved	ND ug/L		20.0	2	07/25/13 15:00	07/26/13 15:10	7440-50-8	D3
Iron, Dissolved	574000 ug/L		1000	20	07/25/13 15:00	07/29/13 09:36	7439-89-6	M1
Lead, Dissolved	55.4 ug/L		25.0	5	07/25/13 15:00	07/26/13 15:13	7439-92-1	
Nickel, Dissolved	112 ug/L		25.0	5	07/25/13 15:00	07/26/13 15:13	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	07/25/13 15:00	07/26/13 15:13	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/25/13 15:00	07/26/13 15:10	7440-22-4	D3,M1, R1
Thallium, Dissolved	ND ug/L		100	5	07/25/13 15:00	07/26/13 15:13	7440-28-0	D3
Zinc, Dissolved	13500 ug/L		1000	20	07/25/13 15:00	07/26/13 15:15	7440-66-6	M1
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	1.0 ug/L		0.20	1	07/25/13 10:00	07/25/13 13:24	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	07/29/13 13:30	07/30/13 12:03	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	83-32-9	
Acenaphthylene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	208-96-8	
Anthracene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	120-12-7	
Benzidine	ND ug/L		10000	20	07/25/13 00:00	07/26/13 18:43	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	56-55-3	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

Sample: 316-021	Lab ID: 60149528001	Collected: 07/24/13 09:43	Received: 07/25/13 01:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(a)pyrene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	50-32-8	
Benzo(b)fluoranthene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	205-99-2	
Benzo(g,h,i)perylene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	191-24-2	
Benzo(k)fluoranthene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	207-08-9	
4-Bromophenylphenyl ether	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	101-55-3	
Butylbenzylphthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	85-68-7	
4-Chloro-3-methylphenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	59-50-7	
bis(2-Chloroethoxy)methane	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	111-91-1	
bis(2-Chloroethyl) ether	ND ug/L		1200	20	07/25/13 00:00	07/26/13 18:43	111-44-4	
bis(2-Chloroisopropyl) ether	ND ug/L		1200	20	07/25/13 00:00	07/26/13 18:43	39638-32-9	
2-Chloronaphthalene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	91-58-7	
2-Chlorophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	95-57-8	
4-Chlorophenylphenyl ether	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	7005-72-3	
Chrysene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	218-01-9	
Dibenz(a,h)anthracene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	53-70-3	
3,3'-Dichlorobenzidine	ND ug/L		4000	20	07/25/13 00:00	07/26/13 18:43	91-94-1	
2,4-Dichlorophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	120-83-2	
Diethylphthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	84-66-2	
2,4-Dimethylphenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	105-67-9	
Dimethylphthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	131-11-3	
Di-n-butylphthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	84-74-2	
4,6-Dinitro-2-methylphenol	ND ug/L		5000	20	07/25/13 00:00	07/26/13 18:43	534-52-1	
2,4-Dinitrophenol	ND ug/L		10000	20	07/25/13 00:00	07/26/13 18:43	51-28-5	
2,4-Dinitrotoluene	ND ug/L		1200	20	07/25/13 00:00	07/26/13 18:43	121-14-2	
2,6-Dinitrotoluene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	606-20-2	
Di-n-octylphthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	117-84-0	
bis(2-Ethylhexyl)phthalate	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	117-81-7	
Fluoranthene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	206-44-0	
Fluorene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	86-73-7	
Hexachloro-1,3-butadiene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	87-68-3	
Hexachlorobenzene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	118-74-1	
Hexachlorocyclopentadiene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	77-47-4	
Hexachloroethane	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	67-72-1	
Indeno(1,2,3-cd)pyrene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	193-39-5	
Isophorone	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	78-59-1	
Naphthalene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	91-20-3	
Nitrobenzene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	98-95-3	
2-Nitrophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	88-75-5	
4-Nitrophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	100-02-7	
N-Nitrosodimethylamine	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	62-75-9	
N-Nitroso-di-n-propylamine	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	621-64-7	
N-Nitrosodiphenylamine	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	86-30-6	
Pentachlorophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	87-86-5	
Phenanthrene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	85-01-8	
Phenol	<b>5140</b> ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	108-95-2	
Pyrene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	129-00-0	
1,2,4-Trichlorobenzene	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	120-82-1	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

Sample: 316-021		Lab ID: 60149528001	Collected: 07/24/13 09:43	Received: 07/25/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
2,4,6-Trichlorophenol	ND ug/L		1000	20	07/25/13 00:00	07/26/13 18:43	88-06-2	
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	07/25/13 00:00	07/26/13 18:43	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	07/25/13 00:00	07/26/13 18:43	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	07/25/13 00:00	07/26/13 18:43	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	07/25/13 00:00	07/26/13 18:43	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	07/25/13 00:00	07/26/13 18:43	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	07/25/13 00:00	07/26/13 18:43	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/25/13 15:50	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/25/13 15:50	75-27-4	
Bromoform	ND ug/L		200	200		07/25/13 15:50	75-25-2	
Bromomethane	ND ug/L		1000	200		07/25/13 15:50	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/25/13 15:50	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/25/13 15:50	108-90-7	
Chloroethane	ND ug/L		200	200		07/25/13 15:50	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/25/13 15:50	110-75-8	
Chloroform	ND ug/L		200	200		07/25/13 15:50	67-66-3	
Chloromethane	ND ug/L		200	200		07/25/13 15:50	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/25/13 15:50	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/25/13 15:50	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/25/13 15:50	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/25/13 15:50	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/25/13 15:50	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/25/13 15:50	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/25/13 15:50	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/25/13 15:50	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/25/13 15:50	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/25/13 15:50	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/25/13 15:50	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/25/13 15:50	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/25/13 15:50	100-41-4	
Methylene chloride	ND ug/L		200	200		07/25/13 15:50	75-09-2	
1,1,1,2-Tetrachloroethane	ND ug/L		200	200		07/25/13 15:50	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/25/13 15:50	127-18-4	
Toluene	ND ug/L		200	200		07/25/13 15:50	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/25/13 15:50	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/25/13 15:50	79-00-5	
Trichloroethene	ND ug/L		200	200		07/25/13 15:50	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/25/13 15:50	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/25/13 15:50	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/25/13 15:50	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	102 %		80-120	200		07/25/13 15:50	1868-53-7	D3
4-Bromofluorobenzene (S)	99 %		80-120	200		07/25/13 15:50	460-00-4	
Toluene-d8 (S)	102 %		80-120	200		07/25/13 15:50	2037-26-5	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

<b>Sample: 316-021</b>		<b>Lab ID: 60149528001</b>	Collected: 07/24/13 09:43	Received: 07/25/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
<b>Surrogates</b>								
1,2-Dichloroethane-d4 (S)	95 %		80-120	200		07/25/13 15:50	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	200		07/25/13 15:50		
<b>HEM, Oil and Grease</b>		Analytical Method: EPA 1664A						
Oil and Grease	<b>426</b> mg/L		5.0	1		07/26/13 08:05		
<b>1664 SGT-HEM, TPH</b>		Analytical Method: EPA 1664A						
Total Petroleum Hydrocarbons	ND mg/L		5.0	1		07/31/13 09:15		
<b>2540D Total Suspended Solids</b>		Analytical Method: SM 2540D						
Total Suspended Solids	<b>2000</b> mg/L		5.0	1		07/26/13 08:31		
<b>4500H+ pH, Electrometric</b>		Analytical Method: SM 4500-H+B						
pH at 25 Degrees C	<b>5.4</b> Std. Units		0.10	1		07/26/13 12:08		H6
<b>350.1 Ammonia</b>		Analytical Method: EPA 350.1						
Nitrogen, Ammonia	<b>695</b> mg/L		20.0	200		07/29/13 12:51	7664-41-7	
<b>410.4 COD</b>		Analytical Method: EPA 410.4						
Chemical Oxygen Demand	<b>56500</b> mg/L		5000	500		07/30/13 08:11		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

Sample: TRIP BLANK		Lab ID: 60149528002	Collected: 07/24/13 09:43	Received: 07/25/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/25/13 16:11	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/25/13 16:11	75-27-4	
Bromoform	ND ug/L		1.0	1		07/25/13 16:11	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/25/13 16:11	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/25/13 16:11	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/25/13 16:11	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/25/13 16:11	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/25/13 16:11	110-75-8	
Chloroform	ND ug/L		1.0	1		07/25/13 16:11	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/25/13 16:11	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/25/13 16:11	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/25/13 16:11	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/25/13 16:11	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/25/13 16:11	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/25/13 16:11	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/25/13 16:11	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/25/13 16:11	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/25/13 16:11	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/25/13 16:11	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/25/13 16:11	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/25/13 16:11	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/25/13 16:11	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/25/13 16:11	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/25/13 16:11	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/25/13 16:11	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/25/13 16:11	127-18-4	
Toluene	ND ug/L		1.0	1		07/25/13 16:11	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/25/13 16:11	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/25/13 16:11	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/25/13 16:11	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/25/13 16:11	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/25/13 16:11	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/25/13 16:11	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	98 %		80-120	1		07/25/13 16:11	1868-53-7	
4-Bromofluorobenzene (S)	99 %		80-120	1		07/25/13 16:11	460-00-4	
Toluene-d8 (S)	102 %		80-120	1		07/25/13 16:11	2037-26-5	
1,2-Dichloroethane-d4 (S)	93 %		80-120	1		07/25/13 16:11	17060-07-0	
Preservation pH	7.0		1.0	1		07/25/13 16:11		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

QC Batch:	MERP/7540	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60149528001		

METHOD BLANK: 1225481 Matrix: Water  
Associated Lab Samples: 60149528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/25/13 12:55	

LABORATORY CONTROL SAMPLE: 1225482

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1225483 1225484

Parameter	Units	60149481003 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	ug/L	ND	5	5	4.8	4.8	94	95	70-130	1	20	

MATRIX SPIKE SAMPLE: 1225485

Parameter	Units	60149481004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	4.7	93	70-130	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

QC Batch: MERP/7551

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury - Dissolved

Associated Lab Samples: 60149528001

METHOD BLANK: 1227397

Matrix: Water

Associated Lab Samples: 60149528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	07/30/13 11:59	

LABORATORY CONTROL SAMPLE: 1227398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.5	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1227399 1227400

Parameter	Units	60149777002 Result	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
			Spike Conc.	Conc.	Result	Result	% Rec	% Rec					
Mercury, Dissolved	ug/L	ND	5	5	4.2	4.0	83	78	70-130	5	20		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021  
Pace Project No.: 60149528

QC Batch: MPRP/23612      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60149528001

METHOD BLANK: 1225511      Matrix: Water  
Associated Lab Samples: 60149528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/26/13 13:46	
Antimony	ug/L	ND	10.0	07/26/13 13:46	
Arsenic	ug/L	ND	10.0	07/26/13 13:46	
Beryllium	ug/L	ND	1.0	07/26/13 13:46	
Cadmium	ug/L	ND	5.0	07/26/13 13:46	
Chromium	ug/L	ND	5.0	07/26/13 13:46	
Cobalt	ug/L	ND	5.0	07/26/13 13:46	
Copper	ug/L	ND	10.0	07/26/13 13:46	
Iron	ug/L	ND	50.0	07/26/13 13:46	
Lead	ug/L	ND	5.0	07/26/13 13:46	
Nickel	ug/L	ND	5.0	07/26/13 13:46	
Selenium	ug/L	ND	15.0	07/26/13 13:46	
Silver	ug/L	ND	7.0	07/26/13 13:46	
Thallium	ug/L	ND	20.0	07/26/13 13:46	
Zinc	ug/L	ND	50.0	07/26/13 13:46	

LABORATORY CONTROL SAMPLE: 1225512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9680	97	85-115	
Antimony	ug/L	1000	990	99	85-115	
Arsenic	ug/L	1000	956	96	85-115	
Beryllium	ug/L	1000	969	97	85-115	
Cadmium	ug/L	1000	977	98	85-115	
Chromium	ug/L	1000	975	98	85-115	
Cobalt	ug/L	1000	1000	100	85-115	
Copper	ug/L	1000	957	96	85-115	
Iron	ug/L	10000	9530	95	85-115	
Lead	ug/L	1000	1000	100	85-115	
Nickel	ug/L	1000	1010	101	85-115	
Selenium	ug/L	1000	967	97	85-115	
Silver	ug/L	500	487	97	85-115	
Thallium	ug/L	1000	1030	103	85-115	
Zinc	ug/L	1000	990	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1225513      1225514

Parameter	Units	60149295001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Spike Conc.	MSD Result						
Aluminum	ug/L	32.8J	10000	9860	10000	9740	98	97	70-130	1	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1225513 1225514												
Parameter	Units	60149295001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD
Antimony	ug/L	<4.6	1000	1000	1000	1020	1010	102	101	70-130	0	7
Arsenic	ug/L	<4.6	1000	1000	1000	994	985	99	99	70-130	1	10
Beryllium	ug/L	<0.13	1000	1000	1000	937	927	94	93	70-130	1	7
Cadmium	ug/L	<2.5	1000	1000	1000	993	988	99	99	70-130	1	10
Chromium	ug/L	<0.62	1000	1000	1000	968	956	97	96	70-130	1	10
Cobalt	ug/L	1.3J	1000	1000	1000	977	970	98	97	70-130	1	6
Copper	ug/L	13.0	1000	1000	1000	987	971	97	96	70-130	2	11
Iron	ug/L	466	10000	10000	10000	9650	9580	92	91	70-130	1	10
Lead	ug/L	<2.4	1000	1000	1000	982	975	98	98	70-130	1	10
Nickel	ug/L	25.8	1000	1000	1000	1000	993	98	97	70-130	1	10
Selenium	ug/L	<4.2	1000	1000	1000	986	979	99	98	70-130	1	10
Silver	ug/L	1.7J	500	500	500	492	486	98	97	70-130	1	10
Thallium	ug/L	<4.1	1000	1000	1000	996	994	100	99	70-130	0	6
Zinc	ug/L	86.4	1000	1000	1000	1040	1030	96	95	70-130	1	11

MATRIX SPIKE SAMPLE: 1225515								
Parameter	Units	60149295002	Spike	MS	MS	% Rec	Qualifiers	
		Result	Conc.	Result	% Rec	Limits		
Aluminum	ug/L	33.2J	10000	9610	96	70-130		
Antimony	ug/L	<4.6	1000	1010	101	70-130		
Arsenic	ug/L	<4.6	1000	987	99	70-130		
Beryllium	ug/L	<0.13	1000	930	93	70-130		
Cadmium	ug/L	<2.5	1000	990	99	70-130		
Chromium	ug/L	<0.62	1000	969	97	70-130		
Cobalt	ug/L	0.64J	1000	972	97	70-130		
Copper	ug/L	85.7	1000	1050	96	70-130		
Iron	ug/L	698	10000	9840	91	70-130		
Lead	ug/L	4.2J	1000	982	98	70-130		
Nickel	ug/L	47.6	1000	1020	97	70-130		
Selenium	ug/L	<4.2	1000	997	99	70-130		
Silver	ug/L	1.7J	500	491	98	70-130		
Thallium	ug/L	<4.1	1000	989	99	70-130		
Zinc	ug/L	422	1000	1380	96	70-130		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021  
Pace Project No.: 60149528

QC Batch: MPRP/23620 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60149528001

METHOD BLANK: 1225893 Matrix: Water  
Associated Lab Samples: 60149528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	07/26/13 15:06	
Antimony, Dissolved	ug/L	ND	10.0	07/26/13 15:06	
Arsenic, Dissolved	ug/L	ND	10.0	07/26/13 15:06	
Beryllium, Dissolved	ug/L	ND	1.0	07/26/13 15:06	
Cadmium, Dissolved	ug/L	ND	5.0	07/26/13 15:06	
Chromium, Dissolved	ug/L	ND	5.0	07/26/13 15:06	
Cobalt, Dissolved	ug/L	ND	5.0	07/26/13 15:06	
Copper, Dissolved	ug/L	ND	10.0	07/26/13 15:06	
Iron, Dissolved	ug/L	ND	50.0	07/29/13 09:32	
Lead, Dissolved	ug/L	ND	5.0	07/26/13 15:06	
Nickel, Dissolved	ug/L	ND	5.0	07/26/13 15:06	
Selenium, Dissolved	ug/L	ND	15.0	07/26/13 15:06	
Silver, Dissolved	ug/L	ND	7.0	07/26/13 15:06	
Thallium, Dissolved	ug/L	ND	20.0	07/26/13 15:06	
Zinc, Dissolved	ug/L	ND	50.0	07/26/13 15:06	

LABORATORY CONTROL SAMPLE: 1225894

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9980	100	85-115	
Antimony, Dissolved	ug/L	1000	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	990	99	85-115	
Beryllium, Dissolved	ug/L	1000	952	95	85-115	
Cadmium, Dissolved	ug/L	1000	1020	102	85-115	
Chromium, Dissolved	ug/L	1000	984	98	85-115	
Cobalt, Dissolved	ug/L	1000	1030	103	85-115	
Copper, Dissolved	ug/L	1000	979	98	85-115	
Iron, Dissolved	ug/L	10000	9680	97	85-115	
Lead, Dissolved	ug/L	1000	1030	103	85-115	
Nickel, Dissolved	ug/L	1000	1030	103	85-115	
Selenium, Dissolved	ug/L	1000	1000	100	85-115	
Silver, Dissolved	ug/L	500	498	100	85-115	
Thallium, Dissolved	ug/L	1000	1070	107	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1225895 1225896

Parameter	Units	60149528001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Aluminum, Dissolved	ug/L	3930	10000	10000	10000	13900	14100	99	102	70-130	2	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

Parameter	Units	1225895		1225896		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		60149528001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Antimony, Dissolved	ug/L	ND	1000	1000	1020	1100	98	106	70-130	8	7	R1	
Arsenic, Dissolved	ug/L	638	1000	1000	1680	1730	104	109	70-130	3	10		
Beryllium, Dissolved	ug/L	ND	1000	1000	835	827	84	83	70-130	1	7		
Cadmium, Dissolved	ug/L	ND	1000	1000	1040	1060	104	105	70-130	2	10		
Chromium, Dissolved	ug/L	205	1000	1000	1070	1090	87	88	70-130	2	10		
Cobalt, Dissolved	ug/L	ND	1000	1000	958	964	93	94	70-130	1	6		
Copper, Dissolved	ug/L	ND	1000	1000	1060	1080	106	108	70-130	2	11		
Iron, Dissolved	ug/L	574000	10000	10000	537000	555000	-364	-186	70-130	3	10	M1	
Lead, Dissolved	ug/L	55.4	1000	1000	950	940	90	88	70-130	1	10		
Nickel, Dissolved	ug/L	112	1000	1000	1020	1020	90	90	70-130	0	10		
Selenium, Dissolved	ug/L	ND	1000	1000	1220	1260	118	121	70-130	3	10		
Silver, Dissolved	ug/L	ND	500	500	63.2	554	12	110	70-130	159	10	M1, R1	
Thallium, Dissolved	ug/L	ND	1000	1000	791	787	79	79	70-130	1	6		
Zinc, Dissolved	ug/L	13500	1000	1000	13600	13700	7	20	70-130	1	11	M1	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

QC Batch: MSV/55157 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149528001, 60149528002

METHOD BLANK: 1225546 Matrix: Water

Associated Lab Samples: 60149528001, 60149528002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/25/13 13:00	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/25/13 13:00	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/25/13 13:00	
1,1-Dichloroethane	ug/L	ND	1.0	07/25/13 13:00	
1,1-Dichloroethene	ug/L	ND	1.0	07/25/13 13:00	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/25/13 13:00	
1,2-Dichloroethane	ug/L	ND	1.0	07/25/13 13:00	
1,2-Dichloropropane	ug/L	ND	1.0	07/25/13 13:00	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/25/13 13:00	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/25/13 13:00	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/25/13 13:00	
Benzene	ug/L	ND	1.0	07/25/13 13:00	
Bromodichloromethane	ug/L	ND	1.0	07/25/13 13:00	
Bromoform	ug/L	ND	1.0	07/25/13 13:00	
Bromomethane	ug/L	ND	5.0	07/25/13 13:00	
Carbon tetrachloride	ug/L	ND	1.0	07/25/13 13:00	
Chlorobenzene	ug/L	ND	1.0	07/25/13 13:00	
Chloroethane	ug/L	ND	1.0	07/25/13 13:00	
Chloroform	ug/L	ND	1.0	07/25/13 13:00	
Chloromethane	ug/L	ND	1.0	07/25/13 13:00	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/25/13 13:00	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/25/13 13:00	
Dibromochloromethane	ug/L	ND	1.0	07/25/13 13:00	
Ethylbenzene	ug/L	ND	1.0	07/25/13 13:00	
Methylene chloride	ug/L	ND	1.0	07/25/13 13:00	
Tetrachloroethene	ug/L	ND	1.0	07/25/13 13:00	
Toluene	ug/L	ND	1.0	07/25/13 13:00	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/25/13 13:00	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/25/13 13:00	
Trichloroethene	ug/L	ND	1.0	07/25/13 13:00	
Trichlorofluoromethane	ug/L	ND	1.0	07/25/13 13:00	
Vinyl chloride	ug/L	ND	1.0	07/25/13 13:00	
Xylene (Total)	ug/L	ND	3.0	07/25/13 13:00	
1,2-Dichloroethane-d4 (S)	%	96	80-120	07/25/13 13:00	
4-Bromofluorobenzene (S)	%	98	80-120	07/25/13 13:00	
Toluene-d8 (S)	%	97	80-120	07/25/13 13:00	

LABORATORY CONTROL SAMPLE: 1225547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	16.1	80	71-139	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

LABORATORY CONTROL SAMPLE: 1225547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	19.6	98	59-138	
1,1,2-Trichloroethane	ug/L	20	15.7	78	69-127	
1,1-Dichloroethane	ug/L	20	14.6	73	69-126	
1,1-Dichloroethene	ug/L	20	19.6	98	65-153	
1,2-Dichlorobenzene	ug/L	20	19.1	95	66-126	
1,2-Dichloroethane	ug/L	20	16.2	81	71-129	
1,2-Dichloropropane	ug/L	20	15.6	78	66-140	
1,3-Dichlorobenzene	ug/L	20	19.1	96	63-127	
1,4-Dichlorobenzene	ug/L	20	19.3	97	68-124	
2-Chloroethylvinyl ether	ug/L	20	14.5	73	33-159	
Benzene	ug/L	20	17.9	90	73-129	
Bromodichloromethane	ug/L	20	15.9	79	63-129	
Bromoform	ug/L	20	17.9	90	52-123	
Bromomethane	ug/L	20	21.3	106	10-160	
Carbon tetrachloride	ug/L	20	17.0	85	70-140	
Chlorobenzene	ug/L	20	15.8	79	68-127	
Chloroethane	ug/L	20	17.8	89	42-160	
Chloroform	ug/L	20	14.9	75	60-120	
Chloromethane	ug/L	20	21.3	107	10-160	
cis-1,2-Dichloroethene	ug/L	20	16.5	83	70-125	
cis-1,3-Dichloropropene	ug/L	20	15.0	75	66-132	
Dibromochloromethane	ug/L	20	16.3	82	63-134	
Ethylbenzene	ug/L	20	16.4	82	66-133	
Methylene chloride	ug/L	20	17.9	90	56-135	
Tetrachloroethene	ug/L	20	18.0	90	64-143	
Toluene	ug/L	20	17.9	90	70-130	
trans-1,2-Dichloroethene	ug/L	20	18.1	90	67-149	
trans-1,3-Dichloropropene	ug/L	20	17.1	86	66-138	
Trichloroethene	ug/L	20	15.7	78	71-130	
Trichlorofluoromethane	ug/L	20	18.3	91	58-158	
Vinyl chloride	ug/L	20	19.8	99	41-160	
Xylene (Total)	ug/L	60	53.6	89	67-130	
1,2-Dichloroethane-d4 (S)	%			95	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1225548

Parameter	Units	60149528001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3750	94	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3870	97	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3550	89	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3550	89	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4620	115	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3980	99	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3670	92	49-155	
1,2-Dichloropropane	ug/L	ND	4000	3730	93	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

MATRIX SPIKE SAMPLE:		1225548					
Parameter	Units	60149528001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	ND	4000	3900	97	59-146	
1,4-Dichlorobenzene	ug/L	ND	4000	3950	98	18-147	
2-Chloroethylvinyl ether	ug/L	ND	4000	4470	112	10-160	
Benzene	ug/L	ND	4000	4230	106	37-151	
Bromodichloromethane	ug/L	ND	4000	3530	88	35-155	
Bromoform	ug/L	ND	4000	3970	99	45-133	
Bromomethane	ug/L	ND	4000	3990	100	10-160	
Carbon tetrachloride	ug/L	ND	4000	3880	97	70-140	
Chlorobenzene	ug/L	ND	4000	3590	90	37-153	
Chloroethane	ug/L	ND	4000	4060	102	14-160	
Chloroform	ug/L	ND	4000	3560	89	51-138	
Chloromethane	ug/L	ND	4000	4760	119	10-160	
cis-1,2-Dichloroethene	ug/L	ND	4000	3810	95	19-160	
cis-1,3-Dichloropropene	ug/L	ND	4000	3400	85	10-160	
Dibromochloromethane	ug/L	ND	4000	3670	92	53-149	
Ethylbenzene	ug/L	ND	4000	3690	92	37-154	
Methylene chloride	ug/L	ND	4000	4380	108	15-156	
Tetrachloroethene	ug/L	ND	4000	4050	101	64-148	
Toluene	ug/L	ND	4000	4120	103	47-150	
trans-1,2-Dichloroethene	ug/L	ND	4000	4240	106	54-156	
trans-1,3-Dichloropropene	ug/L	ND	4000	3830	96	17-160	
Trichloroethene	ug/L	ND	4000	3410	85	71-157	
Trichlorofluoromethane	ug/L	ND	4000	4150	104	17-160	
Vinyl chloride	ug/L	ND	4000	4420	110	10-160	
Xylene (Total)	ug/L	ND	12000	12000	100	12-153	
1,2-Dichloroethane-d4 (S)	%				100	80-120	
4-Bromofluorobenzene (S)	%				97	80-120	
Toluene-d8 (S)	%				98	80-120	
Preservation pH		7.0		7.0			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

QC Batch: OEXT/39478

Analysis Method: EPA 625

QC Batch Method: EPA 625

Analysis Description: 625 MSS

Associated Lab Samples: 60149528001

METHOD BLANK: 1225505

Matrix: Water

Associated Lab Samples: 60149528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/26/13 14:13	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/26/13 14:13	
2,4-Dichlorophenol	ug/L	ND	5.0	07/26/13 14:13	
2,4-Dimethylphenol	ug/L	ND	5.0	07/26/13 14:13	
2,4-Dinitrophenol	ug/L	ND	50.0	07/26/13 14:13	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/26/13 14:13	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/26/13 14:13	
2-Chloronaphthalene	ug/L	ND	5.0	07/26/13 14:13	
2-Chlorophenol	ug/L	ND	5.0	07/26/13 14:13	
2-Nitrophenol	ug/L	ND	5.0	07/26/13 14:13	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/26/13 14:13	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/26/13 14:13	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/26/13 14:13	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/26/13 14:13	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/26/13 14:13	
4-Nitrophenol	ug/L	ND	5.0	07/26/13 14:13	
Acenaphthene	ug/L	ND	5.0	07/26/13 14:13	
Acenaphthylene	ug/L	ND	5.0	07/26/13 14:13	
Anthracene	ug/L	ND	5.0	07/26/13 14:13	
Benzidine	ug/L	ND	50.0	07/26/13 14:13	
Benzo(a)anthracene	ug/L	ND	5.0	07/26/13 14:13	
Benzo(a)pyrene	ug/L	ND	5.0	07/26/13 14:13	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/26/13 14:13	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/26/13 14:13	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/26/13 14:13	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/26/13 14:13	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/26/13 14:13	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/26/13 14:13	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/26/13 14:13	
Butylbenzylphthalate	ug/L	ND	5.0	07/26/13 14:13	
Chrysene	ug/L	ND	5.0	07/26/13 14:13	
Di-n-butylphthalate	ug/L	ND	5.0	07/26/13 14:13	
Di-n-octylphthalate	ug/L	ND	5.0	07/26/13 14:13	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/26/13 14:13	
Diethylphthalate	ug/L	ND	5.0	07/26/13 14:13	
Dimethylphthalate	ug/L	ND	5.0	07/26/13 14:13	
Fluoranthene	ug/L	ND	5.0	07/26/13 14:13	
Fluorene	ug/L	ND	5.0	07/26/13 14:13	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/26/13 14:13	
Hexachlorobenzene	ug/L	ND	5.0	07/26/13 14:13	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/26/13 14:13	
Hexachloroethane	ug/L	ND	5.0	07/26/13 14:13	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/26/13 14:13	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

METHOD BLANK: 1225505

Matrix: Water

Associated Lab Samples: 60149528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/26/13 14:13	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/26/13 14:13	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/26/13 14:13	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/26/13 14:13	
Naphthalene	ug/L	ND	5.0	07/26/13 14:13	
Nitrobenzene	ug/L	ND	5.0	07/26/13 14:13	
Pentachlorophenol	ug/L	ND	5.0	07/26/13 14:13	
Phenanthrene	ug/L	ND	5.0	07/26/13 14:13	
Phenol	ug/L	ND	5.0	07/26/13 14:13	
Pyrene	ug/L	ND	5.0	07/26/13 14:13	
2,4,6-Tribromophenol (S)	%	84	39-119	07/26/13 14:13	
2-Fluorobiphenyl (S)	%	77	36-120	07/26/13 14:13	
2-Fluorophenol (S)	%	47	18-120	07/26/13 14:13	
Nitrobenzene-d5 (S)	%	72	32-120	07/26/13 14:13	
Phenol-d6 (S)	%	30	12-120	07/26/13 14:13	
Terphenyl-d14 (S)	%	83	44-120	07/26/13 14:13	

LABORATORY CONTROL SAMPLE: 1225506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	43.6	87	44-120	
2,4,6-Trichlorophenol	ug/L	50	46.1	92	48-120	
2,4-Dichlorophenol	ug/L	50	45.2	90	48-120	
2,4-Dimethylphenol	ug/L	50	40.9	82	37-119	
2,4-Dinitrophenol	ug/L	50	39.2J	78	15-153	
2,4-Dinitrotoluene	ug/L	50	52.2	104	54-120	
2,6-Dinitrotoluene	ug/L	50	49.6	99	52-120	
2-Chloronaphthalene	ug/L	50	44.9	90	60-118	
2-Chlorophenol	ug/L	50	42.0	84	44-120	
2-Nitrophenol	ug/L	50	47.6	95	43-120	
3,3'-Dichlorobenzidine	ug/L	50	62.4	125	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	53.2	106	31-147	
4-Bromophenylphenyl ether	ug/L	50	47.7	95	53-120	
4-Chloro-3-methylphenol	ug/L	50	45.0	90	50-120	
4-Chlorophenylphenyl ether	ug/L	50	46.4	93	54-120	
4-Nitrophenol	ug/L	50	20.9	42	10-120	
Acenaphthene	ug/L	50	45.3	91	51-120	
Acenaphthylene	ug/L	50	45.1	90	51-120	
Anthracene	ug/L	50	47.2	94	54-120	
Benzidine	ug/L	50	16.7J	33	1-124	
Benzo(a)anthracene	ug/L	50	46.8	94	54-120	
Benzo(a)pyrene	ug/L	50	48.0	96	54-120	
Benzo(b)fluoranthene	ug/L	50	51.2	102	57-120	
Benzo(g,h,i)perylene	ug/L	50	48.2	96	54-120	
Benzo(k)fluoranthene	ug/L	50	48.3	97	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

LABORATORY CONTROL SAMPLE: 1225506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	46.1	92	51-120	
bis(2-Chloroethyl) ether	ug/L	50	44.7	89	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	42.8	86	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	49.0	98	51-126	
Butylbenzylphthalate	ug/L	50	49.2	98	45-129	
Chrysene	ug/L	50	47.5	95	54-120	
Di-n-butylphthalate	ug/L	50	49.0	98	57-118	
Di-n-octylphthalate	ug/L	50	49.8	100	48-130	
Dibenz(a,h)anthracene	ug/L	50	48.6	97	56-119	
Diethylphthalate	ug/L	50	47.8	96	55-114	
Dimethylphthalate	ug/L	50	47.3	95	54-112	
Fluoranthene	ug/L	50	48.9	98	56-120	
Fluorene	ug/L	50	46.0	92	59-120	
Hexachloro-1,3-butadiene	ug/L	50	44.9	90	41-116	
Hexachlorobenzene	ug/L	50	47.6	95	53-120	
Hexachlorocyclopentadiene	ug/L	100	73.4	73	31-120	
Hexachloroethane	ug/L	50	41.3	83	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	48.2	96	55-120	
Isophorone	ug/L	50	45.7	91	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	46.0	92	47-120	
N-Nitrosodimethylamine	ug/L	50	28.7	57	28-120	
N-Nitrosodiphenylamine	ug/L	50	46.5	93	53-120	
Naphthalene	ug/L	50	44.0	88	48-120	
Nitrobenzene	ug/L	50	46.7	93	47-120	
Pentachlorophenol	ug/L	50	48.0	96	43-127	
Phenanthrene	ug/L	50	46.8	94	55-120	
Phenol	ug/L	50	18.8	38	15-112	
Pyrene	ug/L	50	49.4	99	55-115	
2,4,6-Tribromophenol (S)	%			96	39-119	
2-Fluorobiphenyl (S)	%			91	36-120	
2-Fluorophenol (S)	%			52	18-120	
Nitrobenzene-d5 (S)	%			87	32-120	
Phenol-d6 (S)	%			36	12-120	
Terphenyl-d14 (S)	%			95	44-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

QC Batch:	WET/42555	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149528001		

METHOD BLANK: 1226043 Matrix: Water

Associated Lab Samples: 60149528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/26/13 08:05	

LABORATORY CONTROL SAMPLE: 1226044

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	37.9	95	78-114	

MATRIX SPIKE SAMPLE: 1226047

Parameter	Units	60149517002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.8	47.9	112	78-114	

SAMPLE DUPLICATE: 1226048

Parameter	Units	60149521002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

QC Batch:	WET/42632	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60149528001		

METHOD BLANK: 1228227 Matrix: Water

Associated Lab Samples: 60149528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/31/13 09:13	

LABORATORY CONTROL SAMPLE: 1228228

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.4	107	64-132	

MATRIX SPIKE SAMPLE: 1228229

Parameter	Units	60149213001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	10.3	20.6	54.8	216	64-132	M1

SAMPLE DUPLICATE: 1228231

Parameter	Units	60149229001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	4.1J	6.7		34	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

QC Batch: WET/42563

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60149528001

METHOD BLANK: 1226152

Matrix: Water

Associated Lab Samples: 60149528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/26/13 08:29	

SAMPLE DUPLICATE: 1226153

Parameter	Units	60149511001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		25	

SAMPLE DUPLICATE: 1226154

Parameter	Units	60149505001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	188	187	1	25	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

QC Batch: WET/42571 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149528001

SAMPLE DUPLICATE: 1226341

Parameter	Units	60149484001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.0	8.1	0	5	H6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

QC Batch:	WETA/25600	Analysis Method:	EPA 350.1
QC Batch Method:	EPA 350.1	Analysis Description:	350.1 Ammonia
Associated Lab Samples:	60149528001		

METHOD BLANK: 1227214 Matrix: Water

Associated Lab Samples: 60149528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/29/13 12:35	

LABORATORY CONTROL SAMPLE: 1227215

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	106	90-110	

MATRIX SPIKE SAMPLE: 1227216

Parameter	Units	60149506002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	3.8	4	6.9	78	90-110	M1

MATRIX SPIKE SAMPLE: 1227217

Parameter	Units	60149507001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.52	2	2.6	103	90-110	

SAMPLE DUPLICATE: 1227218

Parameter	Units	60149508002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

QC Batch:	WETA/25588	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60149528001		

METHOD BLANK: 1226080 Matrix: Water  
Associated Lab Samples: 60149528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	07/30/13 08:10	

LABORATORY CONTROL SAMPLE: 1226081

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	49.6	99	90-110	

MATRIX SPIKE SAMPLE: 1226083

Parameter	Units	60149531003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	55.3	102	90-110	

MATRIX SPIKE SAMPLE: 1226084

Parameter	Units	60149531001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	55.7	50	99.2	87	90-110	M1

SAMPLE DUPLICATE: 1226082

Parameter	Units	60149528001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	56500	55600	2	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39478

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

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

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-021

Pace Project No.: 60149528

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149528001	316-021	EPA 200.7	MPRP/23612	EPA 200.7	ICP/18535
60149528001	316-021	EPA 200.7	MPRP/23620	EPA 200.7	ICP/18538
60149528001	316-021	EPA 245.1	MERP/7540	EPA 245.1	MERC/7497
60149528001	316-021	EPA 245.1	MERP/7551	EPA 245.1	MERC/7507
60149528001	316-021	EPA 625	OEXT/39478	EPA 625	MSSV/12531
60149528001	316-021	EPA 624 Low	MSV/55157		
60149528002	TRIP BLANK	EPA 624 Low	MSV/55157		
60149528001	316-021	EPA 1664A	WET/42555		
60149528001	316-021	EPA 1664A	WET/42632		
60149528001	316-021	SM 2540D	WET/42563		
60149528001	316-021	SM 4500-H+B	WET/42571		
60149528001	316-021	EPA 350.1	WETA/25600		
60149528001	316-021	EPA 410.4	WETA/25588		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149528



Client Name: Barr Eng.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  reads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194

Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 2.7

Date and initials of person examining contents: KE 7/25/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>pH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>OT</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, <u>D&amp;G</u> , WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	16. <u>4 of 5 316-021 FOOTNOT</u>
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/25/13



August 01, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-022  
Pace Project No.: 60149630

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 26, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Mary Jane Walls for  
Angie Brown  
Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-022

Pace Project No.: 60149630

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-022  
Pace Project No.: 60149630

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149630001	316-022	Water	07/25/13 09:55	07/26/13 01:00

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-022

Pace Project No.: 60149630

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149630001	316-022	SM 5210B	JML	1

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-022

Pace Project No.: 60149630

Sample: 316-022	Lab ID: 60149630001	Collected: 07/25/13 09:55	Received: 07/26/13 01:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>29400</b>	mg/L	2.0	1	07/26/13 15:38	07/31/13 14:27		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149630

QC Batch: WET/42575

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149630001

METHOD BLANK: 1226560

Matrix: Water

Associated Lab Samples: 60149630001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	07/31/13 14:17	

LABORATORY CONTROL SAMPLE: 1226561

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	177	89	85-115	

SAMPLE DUPLICATE: 1226562

Parameter	Units	60149628001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	407	288	34	17	D6

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## QUALIFIERS

Project: BRIDGETON LF 316-022

Pace Project No.: 60149630

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-022

Pace Project No.: 60149630

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Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149630001	316-022	SM 5210B	WET/42575	SM 5210B	WET/42670

## REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149630
Barcode
60149630

Client Name: Barr

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other [x] Xroad

Tracking #: Pace Shipping Label Used? Yes [ ] No [x]

Custody Seal on Cooler/Box Present: Yes [x] No [ ] Seals intact: Yes [x] No [ ]

Packing Material: Bubble Wrap [ ] Bubble Bags [ ] Foam [ ] None [ ] Other [x] ZPLC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue None [ ] Samples received on ice, cooling process has begun.

Cooler Temperature: 2.7

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:
Date and initials of person examining contents: PV 7/26/13

Table with 17 rows and 2 columns. Row 1: Chain of Custody present: [x] Yes [ ] No [ ] N/A 1. Row 2: Chain of Custody filled out: [x] Yes [ ] No [ ] N/A 2. Row 3: Chain of Custody relinquished: [x] Yes [ ] No [ ] N/A 3. Row 4: Sampler name & signature on COC: [x] Yes [ ] No [ ] N/A 4. Row 5: Samples arrived within holding time: [x] Yes [ ] No [ ] N/A 5. Row 6: Short Hold Time analyses (<72hr): [x] Yes [ ] No [ ] N/A 6. POD. Row 7: Rush Turn Around Time requested: [ ] Yes [x] No [ ] N/A 7. Row 8: Sufficient volume: [x] Yes [ ] No [ ] N/A 8. Row 9: Correct containers used: [x] Yes [ ] No [ ] N/A 9. Row 10: Pace containers used: [x] Yes [ ] No [ ] N/A 9. Row 11: Containers intact: [x] Yes [ ] No [ ] N/A 10. Row 12: Unpreserved 5035A soils frozen w/in 48hrs? [ ] Yes [ ] No [x] N/A 11. Row 13: Filtered volume received for dissolved tests? [ ] Yes [ ] No [x] N/A 12. Row 14: Sample labels match COC: [x] Yes [ ] No [ ] N/A 13. Includes date/time/ID/analyses Matrix: WT. Row 15: All containers needing preservation have been checked. [ ] Yes [ ] No [x] N/A 14. Row 16: All containers needing preservation are found to be in compliance with EPA recommendation. [ ] Yes [ ] No [x] N/A 14. Row 17: Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics [ ] Yes [x] No Initial when completed Lot # of added preservative. Row 18: Trip Blank present: [ ] Yes [ ] No [x] N/A 15. Row 19: Pace Trip Blank lot # (if purchased): 15. Row 20: Headspace in VOA vials (>6mm): [ ] Yes [ ] No [x] N/A 16. Row 21: Project sampled in USDA Regulated Area: [ ] Yes [ ] No [x] N/A 17. List State:

Client Notification/ Resolution: Copy COC to Client? Y [ ] N [x] Field Data Required? Y [ ] N [x]

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: [Signature]

Date: 7/25/12



August 02, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-022  
Pace Project No.: 60149631

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 26, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149631001	316-022	Water	07/25/13 09:55	07/26/13 01:00
60149631002	TRIP BLANK	Water	07/25/13 09:55	07/26/13 01:00

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149631001	316-022	EPA 200.7	TDS	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	AAM	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	JML	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60149631002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

Sample: 316-022	Lab ID: 60149631001	Collected: 07/25/13 09:55	Received: 07/26/13 01:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum	8930	ug/L	150	2	07/26/13 15:15	07/31/13 13:14	7429-90-5	
Antimony	ND	ug/L	50.0	5	07/26/13 15:15	07/31/13 13:17	7440-36-0	D3
Arsenic	758	ug/L	50.0	5	07/26/13 15:15	07/31/13 13:17	7440-38-2	
Beryllium	ND	ug/L	2.0	2	07/26/13 15:15	07/31/13 13:14	7440-41-7	D3
Cadmium	ND	ug/L	25.0	5	07/26/13 15:15	07/31/13 13:17	7440-43-9	D3
Chromium	268	ug/L	25.0	5	07/26/13 15:15	07/31/13 13:17	7440-47-3	
Cobalt	36.6	ug/L	25.0	5	07/26/13 15:15	07/31/13 13:17	7440-48-4	
Copper	ND	ug/L	50.0	5	07/26/13 15:15	07/31/13 13:17	7440-50-8	D3
Iron	711000	ug/L	100	2	07/26/13 15:15	07/31/13 13:14	7439-89-6	
Lead	132	ug/L	25.0	5	07/26/13 15:15	07/31/13 13:17	7439-92-1	
Nickel	151	ug/L	25.0	5	07/26/13 15:15	07/31/13 13:17	7440-02-0	
Selenium	85.4	ug/L	75.0	5	07/26/13 15:15	07/31/13 13:17	7782-49-2	
Silver	ND	ug/L	35.0	5	07/26/13 15:15	07/31/13 13:17	7440-22-4	D3
Thallium	ND	ug/L	100	5	07/26/13 15:15	07/31/13 13:17	7440-28-0	D3
Zinc	13800	ug/L	1000	20	07/26/13 15:15	07/31/13 13:19	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum, Dissolved	3640	ug/L	150	2	07/31/13 16:30	08/01/13 12:00	7429-90-5	
Antimony, Dissolved	33.8	ug/L	20.0	2	07/31/13 16:30	08/01/13 12:00	7440-36-0	D9
Arsenic, Dissolved	545	ug/L	20.0	2	07/31/13 16:30	08/01/13 12:00	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	5	07/31/13 16:30	08/01/13 12:44	7440-41-7	D3
Cadmium, Dissolved	ND	ug/L	10.0	2	07/31/13 16:30	08/01/13 12:00	7440-43-9	D3
Chromium, Dissolved	201	ug/L	10.0	2	07/31/13 16:30	08/01/13 12:00	7440-47-3	
Cobalt, Dissolved	37.0	ug/L	10.0	2	07/31/13 16:30	08/01/13 12:00	7440-48-4	D9
Copper, Dissolved	ND	ug/L	20.0	2	07/31/13 16:30	08/01/13 12:00	7440-50-8	D3
Iron, Dissolved	506000	ug/L	100	2	07/31/13 16:30	08/01/13 12:00	7439-89-6	M1
Lead, Dissolved	48.3	ug/L	10.0	2	07/31/13 16:30	08/01/13 12:00	7439-92-1	
Nickel, Dissolved	111	ug/L	10.0	2	07/31/13 16:30	08/01/13 12:00	7440-02-0	
Selenium, Dissolved	ND	ug/L	30.0	2	07/31/13 16:30	08/01/13 12:00	7782-49-2	D3
Silver, Dissolved	ND	ug/L	14.0	2	07/31/13 16:30	08/01/13 12:00	7440-22-4	D3,M1
Thallium, Dissolved	ND	ug/L	40.0	2	07/31/13 16:30	08/01/13 12:00	7440-28-0	D3
Zinc, Dissolved	12600	ug/L	1000	20	07/31/13 16:30	08/01/13 13:25	7440-66-6	M1
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury	0.45	ug/L	0.20	1	07/29/13 13:30	07/30/13 12:28	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND	ug/L	0.20	1	08/01/13 10:30	08/01/13 13:44	7439-97-6	
<b>625 MSSV</b>								
Analytical Method: EPA 625 Preparation Method: EPA 625								
Acenaphthene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	83-32-9	
Acenaphthylene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	208-96-8	
Anthracene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	120-12-7	
Benzidine	ND	ug/L	12500	5	07/30/13 00:00	07/31/13 20:07	92-87-5	
Benzo(a)anthracene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	56-55-3	
Benzo(a)pyrene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

Sample: 316-022		Lab ID: 60149631001	Collected: 07/25/13 09:55	Received: 07/26/13 01:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	101-55-3	
Butylbenzylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1500	5	07/30/13 00:00	07/31/13 20:07	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1500	5	07/30/13 00:00	07/31/13 20:07	39638-32-9	
2-Chloronaphthalene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	91-58-7	
2-Chlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	7005-72-3	
Chrysene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	5000	5	07/30/13 00:00	07/31/13 20:07	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	120-83-2	
Diethylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	105-67-9	
Dimethylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	131-11-3	
Di-n-butylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	6250	5	07/30/13 00:00	07/31/13 20:07	534-52-1	
2,4-Dinitrophenol	ND	ug/L	12500	5	07/30/13 00:00	07/31/13 20:07	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	1500	5	07/30/13 00:00	07/31/13 20:07	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	606-20-2	
Di-n-octylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	117-81-7	
Fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	206-44-0	
Fluorene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	87-68-3	
Hexachlorobenzene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	77-47-4	
Hexachloroethane	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	193-39-5	
Isophorone	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	78-59-1	
Naphthalene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	91-20-3	
Nitrobenzene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	98-95-3	
2-Nitrophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	88-75-5	
4-Nitrophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	86-30-6	
Pentachlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	87-86-5	
Phenanthrene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	85-01-8	
Phenol	<b>16300</b>	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	108-95-2	
Pyrene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:07	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

Sample: 316-022	Lab ID: 60149631001	Collected: 07/25/13 09:55	Received: 07/26/13 01:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	5	07/30/13 00:00	07/31/13 20:07	4165-60-0	P3,S0
2-Fluorobiphenyl (S)	0 %		36-120	5	07/30/13 00:00	07/31/13 20:07	321-60-8	S0
Terphenyl-d14 (S)	0 %		44-120	5	07/30/13 00:00	07/31/13 20:07	1718-51-0	S0
Phenol-d6 (S)	0 %		12-120	5	07/30/13 00:00	07/31/13 20:07	13127-88-3	S0
2-Fluorophenol (S)	0 %		18-120	5	07/30/13 00:00	07/31/13 20:07	367-12-4	S0
2,4,6-Tribromophenol (S)	0 %		39-119	5	07/30/13 00:00	07/31/13 20:07	118-79-6	S0
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/31/13 10:58	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/31/13 10:58	75-27-4	
Bromoform	ND ug/L		200	200		07/31/13 10:58	75-25-2	
Bromomethane	ND ug/L		1000	200		07/31/13 10:58	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/31/13 10:58	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/31/13 10:58	108-90-7	
Chloroethane	ND ug/L		200	200		07/31/13 10:58	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/31/13 10:58	110-75-8	
Chloroform	ND ug/L		200	200		07/31/13 10:58	67-66-3	
Chloromethane	ND ug/L		200	200		07/31/13 10:58	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/31/13 10:58	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/31/13 10:58	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/31/13 10:58	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/31/13 10:58	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/31/13 10:58	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/31/13 10:58	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/31/13 10:58	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/31/13 10:58	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/31/13 10:58	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/31/13 10:58	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/31/13 10:58	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/31/13 10:58	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/31/13 10:58	100-41-4	
Methylene chloride	ND ug/L		200	200		07/31/13 10:58	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/31/13 10:58	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/31/13 10:58	127-18-4	
Toluene	ND ug/L		200	200		07/31/13 10:58	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/31/13 10:58	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/31/13 10:58	79-00-5	
Trichloroethene	ND ug/L		200	200		07/31/13 10:58	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/31/13 10:58	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/31/13 10:58	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/31/13 10:58	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	94 %		80-120	200		07/31/13 10:58	1868-53-7	D3
4-Bromofluorobenzene (S)	101 %		80-120	200		07/31/13 10:58	460-00-4	
Toluene-d8 (S)	96 %		80-120	200		07/31/13 10:58	2037-26-5	
1,2-Dichloroethane-d4 (S)	96 %		80-120	200		07/31/13 10:58	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

<b>Sample: 316-022</b>		<b>Lab ID: 60149631001</b>	Collected: 07/25/13 09:55	Received: 07/26/13 01:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/31/13 10:58		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>368</b>	mg/L	5.0	1		07/29/13 07:49		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>6.5</b>	mg/L	5.0	1		07/31/13 09:16		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>3040</b>	mg/L	5.0	1		07/26/13 13:46		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.5</b>	Std. Units	0.10	1		07/27/13 10:00		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>714</b>	mg/L	20.0	200		07/29/13 13:22	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>53900</b>	mg/L	5000	500		08/01/13 06:43		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

Sample: TRIP BLANK		Lab ID: 60149631002	Collected: 07/25/13 09:55	Received: 07/26/13 01:00	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND	ug/L	1.0	1		07/31/13 10:37	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		07/31/13 10:37	75-27-4	
Bromoform	ND	ug/L	1.0	1		07/31/13 10:37	75-25-2	
Bromomethane	ND	ug/L	5.0	1		07/31/13 10:37	74-83-9	
Carbon tetrachloride	ND	ug/L	1.0	1		07/31/13 10:37	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		07/31/13 10:37	108-90-7	
Chloroethane	ND	ug/L	1.0	1		07/31/13 10:37	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		07/31/13 10:37	110-75-8	
Chloroform	ND	ug/L	1.0	1		07/31/13 10:37	67-66-3	
Chloromethane	ND	ug/L	1.0	1		07/31/13 10:37	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		07/31/13 10:37	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		07/31/13 10:37	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		07/31/13 10:37	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		07/31/13 10:37	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		07/31/13 10:37	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		07/31/13 10:37	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		07/31/13 10:37	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		07/31/13 10:37	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		07/31/13 10:37	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		07/31/13 10:37	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		07/31/13 10:37	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		07/31/13 10:37	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		07/31/13 10:37	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		07/31/13 10:37	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		07/31/13 10:37	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		07/31/13 10:37	127-18-4	
Toluene	ND	ug/L	1.0	1		07/31/13 10:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		07/31/13 10:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		07/31/13 10:37	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		07/31/13 10:37	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		07/31/13 10:37	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		07/31/13 10:37	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		07/31/13 10:37	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	95 %		80-120	1		07/31/13 10:37	1868-53-7	
4-Bromofluorobenzene (S)	108 %		80-120	1		07/31/13 10:37	460-00-4	
Toluene-d8 (S)	101 %		80-120	1		07/31/13 10:37	2037-26-5	
1,2-Dichloroethane-d4 (S)	83 %		80-120	1		07/31/13 10:37	17060-07-0	
Preservation pH	7.0		1.0	1		07/31/13 10:37		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022  
Pace Project No.: 60149631

QC Batch: MERP/7550 Analysis Method: EPA 245.1  
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury  
Associated Lab Samples: 60149631001

METHOD BLANK: 1227392 Matrix: Water  
Associated Lab Samples: 60149631001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/30/13 12:21	

LABORATORY CONTROL SAMPLE: 1227393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.4	87	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1227394 1227395

Parameter	Units	60149604002		MS		MSD		MS		MSD		% Rec		Max	
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual		
Mercury	ug/L	1.2	5	5	5	5.3	5.0	81	76	70-130	5	20			

MATRIX SPIKE SAMPLE: 1227396

Parameter	Units	60149777002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	4.1	80	70-130	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

QC Batch:	MERP/7558	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60149631001		

METHOD BLANK: 1228981 Matrix: Water  
Associated Lab Samples: 60149631001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	08/01/13 13:39	

LABORATORY CONTROL SAMPLE: 1228982

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228983 1228984

Parameter	Units	60149693001 Result	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
			Spike Conc.	Conc.	Result	Result	% Rec	% Rec					
Mercury, Dissolved	ug/L	ND	5	5	2.8	2.3	56	46	70-130	19	20	M1	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022  
Pace Project No.: 60149631

QC Batch: MPRP/23640      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60149631001

METHOD BLANK: 1226597      Matrix: Water  
Associated Lab Samples: 60149631001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/31/13 12:11	
Antimony	ug/L	ND	10.0	07/31/13 12:11	
Arsenic	ug/L	ND	10.0	07/31/13 12:11	
Beryllium	ug/L	ND	1.0	07/31/13 12:11	
Cadmium	ug/L	ND	5.0	07/31/13 12:11	
Chromium	ug/L	ND	5.0	07/31/13 12:11	
Cobalt	ug/L	ND	5.0	07/31/13 12:11	
Copper	ug/L	ND	10.0	07/31/13 12:11	
Iron	ug/L	ND	50.0	07/31/13 12:11	
Lead	ug/L	ND	5.0	07/31/13 12:11	
Nickel	ug/L	ND	5.0	07/31/13 12:11	
Selenium	ug/L	ND	15.0	07/31/13 12:11	
Silver	ug/L	ND	7.0	07/31/13 12:11	
Thallium	ug/L	ND	20.0	07/31/13 12:11	
Zinc	ug/L	ND	50.0	07/31/13 12:11	

LABORATORY CONTROL SAMPLE: 1226598

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9440	94	85-115	
Antimony	ug/L	1000	981	98	85-115	
Arsenic	ug/L	1000	944	94	85-115	
Beryllium	ug/L	1000	969	97	85-115	
Cadmium	ug/L	1000	979	98	85-115	
Chromium	ug/L	1000	1000	100	85-115	
Cobalt	ug/L	1000	1000	100	85-115	
Copper	ug/L	1000	970	97	85-115	
Iron	ug/L	10000	9500	95	85-115	
Lead	ug/L	1000	1000	100	85-115	
Nickel	ug/L	1000	1010	101	85-115	
Selenium	ug/L	1000	968	97	85-115	
Silver	ug/L	500	444	89	85-115	
Thallium	ug/L	1000	1020	102	85-115	
Zinc	ug/L	1000	1000	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1226599      1226600

Parameter	Units	60149629001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum	ug/L	ND	10000	10000	10900	10800	108	107	70-130	0	8

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1226599 1226600											
Parameter	Units	60149629001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Antimony	ug/L	ND	1000	1000	1040	1040	101	100	70-130	1	7
Arsenic	ug/L	96.8	1000	1000	1110	1090	102	100	70-130	2	10
Beryllium	ug/L	ND	1000	1000	915	926	92	93	70-130	1	7
Cadmium	ug/L	ND	1000	1000	1000	996	100	100	70-130	1	10
Chromium	ug/L	30.5	1000	1000	951	966	92	94	70-130	2	10
Cobalt	ug/L	ND	1000	1000	980	976	96	95	70-130	0	6
Copper	ug/L	ND	1000	1000	1010	1020	99	100	70-130	1	11
Iron	ug/L	690	10000	10000	9380	9490	87	88	70-130	1	10
Lead	ug/L	ND	1000	1000	932	941	93	94	70-130	1	10
Nickel	ug/L	63.0	1000	1000	1010	1000	95	94	70-130	1	10
Selenium	ug/L	ND	1000	1000	962	973	96	97	70-130	1	10
Silver	ug/L	ND	500	500	485	491	97	98	70-130	1	10
Thallium	ug/L	ND	1000	1000	912	904	91	90	70-130	1	6
Zinc	ug/L	ND	1000	1000	926	928	93	93	70-130	0	11

MATRIX SPIKE SAMPLE: 1226601								
Parameter	Units	60149682001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Aluminum	ug/L		ND	10000	9740	97	70-130	
Antimony	ug/L		ND	1000	975	98	70-130	
Arsenic	ug/L		ND	1000	961	96	70-130	
Beryllium	ug/L		ND	1000	960	96	70-130	
Cadmium	ug/L		ND	1000	977	98	70-130	
Chromium	ug/L		ND	1000	982	98	70-130	
Cobalt	ug/L		ND	1000	985	98	70-130	
Copper	ug/L		12.6	1000	976	96	70-130	
Iron	ug/L		369	10000	9800	94	70-130	
Lead	ug/L		18.2	1000	999	98	70-130	
Nickel	ug/L		ND	1000	986	98	70-130	
Selenium	ug/L		ND	1000	955	95	70-130	
Silver	ug/L		ND	500	224	45	70-130 M1	
Thallium	ug/L		ND	1000	997	100	70-130	
Zinc	ug/L		815	1000	1770	95	70-130	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022  
Pace Project No.: 60149631

QC Batch: MPRP/23689 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60149631001

METHOD BLANK: 1228838 Matrix: Water  
Associated Lab Samples: 60149631001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	08/01/13 11:37	
Antimony, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Arsenic, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Beryllium, Dissolved	ug/L	ND	1.0	08/01/13 11:37	
Cadmium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Chromium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Cobalt, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Copper, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Iron, Dissolved	ug/L	ND	50.0	08/01/13 11:37	
Lead, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Nickel, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Selenium, Dissolved	ug/L	ND	15.0	08/01/13 11:37	
Silver, Dissolved	ug/L	ND	7.0	08/01/13 11:37	
Thallium, Dissolved	ug/L	ND	20.0	08/01/13 11:37	
Zinc, Dissolved	ug/L	ND	50.0	08/01/13 11:37	

LABORATORY CONTROL SAMPLE: 1228839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10100	101	85-115	
Antimony, Dissolved	ug/L	1000	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	974	97	85-115	
Beryllium, Dissolved	ug/L	1000	998	100	85-115	
Cadmium, Dissolved	ug/L	1000	993	99	85-115	
Chromium, Dissolved	ug/L	1000	1010	101	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	968	97	85-115	
Iron, Dissolved	ug/L	10000	10300	103	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	1000	100	85-115	
Silver, Dissolved	ug/L	500	494	99	85-115	
Thallium, Dissolved	ug/L	1000	980	98	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228840 1228841

Parameter	Units	60149631001		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Aluminum, Dissolved	ug/L	3640	10000	10000	10000	14000	13800	104	101	70-130	1	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

Parameter	60149631001		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony, Dissolved	ug/L	33.8	1000	1000	1020	1010	98	98	70-130	1	7		
Arsenic, Dissolved	ug/L	545	1000	1000	1670	1680	112	113	70-130	1	10		
Beryllium, Dissolved	ug/L	ND	1000	1000	926	916	93	92	70-130	1	7		
Cadmium, Dissolved	ug/L	ND	1000	1000	1030	1030	103	103	70-130	0	10		
Chromium, Dissolved	ug/L	201	1000	1000	1070	1030	87	83	70-130	4	10		
Cobalt, Dissolved	ug/L	37.0	1000	1000	937	927	90	89	70-130	1	6		
Copper, Dissolved	ug/L	ND	1000	1000	1010	1020	100	101	70-130	1	11		
Iron, Dissolved	ug/L	506000	10000	10000	548000	535000	418	286	70-130	2	10	M1	
Lead, Dissolved	ug/L	48.3	1000	1000	871	856	82	81	70-130	2	10		
Nickel, Dissolved	ug/L	111	1000	1000	993	981	88	87	70-130	1	10		
Selenium, Dissolved	ug/L	ND	1000	1000	1180	1190	118	119	70-130	1	10		
Silver, Dissolved	ug/L	ND	500	500	44.2	42.9	9	9	70-130	3	10	M1	
Thallium, Dissolved	ug/L	ND	1000	1000	760	740	76	74	70-130	3	6		
Zinc, Dissolved	ug/L	12600	1000	1000	14500	14000	195	148	70-130	3	11	M1	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

QC Batch: MSV/55266 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149631001, 60149631002

METHOD BLANK: 1228397 Matrix: Water

Associated Lab Samples: 60149631001, 60149631002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1-Dichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichloropropane	ug/L	ND	1.0	07/31/13 10:16	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/31/13 10:16	
Benzene	ug/L	ND	1.0	07/31/13 10:16	
Bromodichloromethane	ug/L	ND	1.0	07/31/13 10:16	
Bromoform	ug/L	ND	1.0	07/31/13 10:16	
Bromomethane	ug/L	ND	5.0	07/31/13 10:16	
Carbon tetrachloride	ug/L	ND	1.0	07/31/13 10:16	
Chlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
Chloroethane	ug/L	ND	1.0	07/31/13 10:16	
Chloroform	ug/L	ND	1.0	07/31/13 10:16	
Chloromethane	ug/L	ND	1.0	07/31/13 10:16	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/31/13 10:16	
Dibromochloromethane	ug/L	ND	1.0	07/31/13 10:16	
Ethylbenzene	ug/L	ND	1.0	07/31/13 10:16	
Methylene chloride	ug/L	ND	1.0	07/31/13 10:16	
Tetrachloroethene	ug/L	ND	1.0	07/31/13 10:16	
Toluene	ug/L	ND	1.0	07/31/13 10:16	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/31/13 10:16	
Trichloroethene	ug/L	ND	1.0	07/31/13 10:16	
Trichlorofluoromethane	ug/L	ND	1.0	07/31/13 10:16	
Vinyl chloride	ug/L	ND	1.0	07/31/13 10:16	
Xylene (Total)	ug/L	ND	3.0	07/31/13 10:16	
1,2-Dichloroethane-d4 (S)	%	95	80-120	07/31/13 10:16	
4-Bromofluorobenzene (S)	%	99	80-120	07/31/13 10:16	
Toluene-d8 (S)	%	99	80-120	07/31/13 10:16	

LABORATORY CONTROL SAMPLE: 1228398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	15.0	75	71-139	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

LABORATORY CONTROL SAMPLE: 1228398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	19.4	97	59-138	
1,1,2-Trichloroethane	ug/L	20	18.2	91	69-127	
1,1-Dichloroethane	ug/L	20	15.4	77	69-126	
1,1-Dichloroethene	ug/L	20	18.3	92	65-153	
1,2-Dichlorobenzene	ug/L	20	18.1	90	66-126	
1,2-Dichloroethane	ug/L	20	16.7	83	71-129	
1,2-Dichloropropane	ug/L	20	18.2	91	66-140	
1,3-Dichlorobenzene	ug/L	20	18.0	90	63-127	
1,4-Dichlorobenzene	ug/L	20	18.1	91	68-124	
2-Chloroethylvinyl ether	ug/L	20	13.6	68	33-159	
Benzene	ug/L	20	19.7	98	73-129	
Bromodichloromethane	ug/L	20	15.3	76	63-129	
Bromoform	ug/L	20	18.1	91	52-123	
Bromomethane	ug/L	20	20.8	104	10-160	
Carbon tetrachloride	ug/L	20	15.0	75	70-140	
Chlorobenzene	ug/L	20	16.7	84	68-127	
Chloroethane	ug/L	20	16.2	81	42-160	
Chloroform	ug/L	20	15.0	75	60-120	
Chloromethane	ug/L	20	20.6	103	10-160	
cis-1,2-Dichloroethene	ug/L	20	16.6	83	70-125	
cis-1,3-Dichloropropene	ug/L	20	16.0	80	66-132	
Dibromochloromethane	ug/L	20	15.9	79	63-134	
Ethylbenzene	ug/L	20	17.2	86	66-133	
Methylene chloride	ug/L	20	18.1	90	56-135	
Tetrachloroethene	ug/L	20	18.3	92	64-143	
Toluene	ug/L	20	18.0	90	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	67-149	
trans-1,3-Dichloropropene	ug/L	20	17.8	89	66-138	
Trichloroethene	ug/L	20	16.1	80	71-130	
Trichlorofluoromethane	ug/L	20	15.0	75	58-158	
Vinyl chloride	ug/L	20	17.9	90	41-160	
Xylene (Total)	ug/L	60	56.8	95	67-130	
1,2-Dichloroethane-d4 (S)	%			96	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			96	80-120	

MATRIX SPIKE SAMPLE: 1228399

Parameter	Units	60149631001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3730	93	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4820	121	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4030	101	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3670	92	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4250	106	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	4630	116	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3970	99	49-155	
1,2-Dichloropropane	ug/L	ND	4000	4290	107	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

MATRIX SPIKE SAMPLE:		1228399						
Parameter	Units	60149631001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
1,3-Dichlorobenzene	ug/L	ND	4000	4490	112	59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	4420	111	18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	4080	102	10-160		
Benzene	ug/L	ND	4000	4610	115	37-151		
Bromodichloromethane	ug/L	ND	4000	3740	94	35-155		
Bromoform	ug/L	ND	4000	4090	102	45-133		
Bromomethane	ug/L	ND	4000	4640	116	10-160		
Carbon tetrachloride	ug/L	ND	4000	3700	93	70-140		
Chlorobenzene	ug/L	ND	4000	4000	100	37-153		
Chloroethane	ug/L	ND	4000	3980	99	14-160		
Chloroform	ug/L	ND	4000	3610	90	51-138		
Chloromethane	ug/L	ND	4000	4960	124	10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	3890	97	19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	3900	98	10-160		
Dibromochloromethane	ug/L	ND	4000	3700	92	53-149		
Ethylbenzene	ug/L	ND	4000	4130	103	37-154		
Methylene chloride	ug/L	ND	4000	4310	107	15-156		
Tetrachloroethene	ug/L	ND	4000	4400	110	64-148		
Toluene	ug/L	ND	4000	4360	109	47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	4260	107	54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	4110	103	17-160		
Trichloroethene	ug/L	ND	4000	3730	93	71-157		
Trichlorofluoromethane	ug/L	ND	4000	3760	94	17-160		
Vinyl chloride	ug/L	ND	4000	4390	110	10-160		
Xylene (Total)	ug/L	ND	12000	13500	113	12-153		
1,2-Dichloroethane-d4 (S)	%					93	80-120	
4-Bromofluorobenzene (S)	%					101	80-120 D3	
Toluene-d8 (S)	%					96	80-120	
Preservation pH		7.0		7.0				

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

QC Batch: OEXT/39536 Analysis Method: EPA 625  
 QC Batch Method: EPA 625 Analysis Description: 625 MSS  
 Associated Lab Samples: 60149631001

METHOD BLANK: 1227555 Matrix: Water

Associated Lab Samples: 60149631001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/31/13 17:42	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dichlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dimethylphenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dinitrophenol	ug/L	ND	50.0	07/31/13 17:42	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/31/13 17:42	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/31/13 17:42	
2-Chloronaphthalene	ug/L	ND	5.0	07/31/13 17:42	
2-Chlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2-Nitrophenol	ug/L	ND	5.0	07/31/13 17:42	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/31/13 17:42	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/31/13 17:42	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/31/13 17:42	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/31/13 17:42	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/31/13 17:42	
4-Nitrophenol	ug/L	ND	5.0	07/31/13 17:42	
Acenaphthene	ug/L	ND	5.0	07/31/13 17:42	
Acenaphthylene	ug/L	ND	5.0	07/31/13 17:42	
Anthracene	ug/L	ND	5.0	07/31/13 17:42	
Benzidine	ug/L	ND	50.0	07/31/13 17:42	
Benzo(a)anthracene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(a)pyrene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/31/13 17:42	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/31/13 17:42	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/31/13 17:42	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/31/13 17:42	
Butylbenzylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Chrysene	ug/L	ND	5.0	07/31/13 17:42	
Di-n-butylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Di-n-octylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/31/13 17:42	
Diethylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Dimethylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
Fluorene	ug/L	ND	5.0	07/31/13 17:42	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/31/13 17:42	
Hexachlorobenzene	ug/L	ND	5.0	07/31/13 17:42	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/31/13 17:42	
Hexachloroethane	ug/L	ND	5.0	07/31/13 17:42	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/31/13 17:42	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Project No.: 60149631

METHOD BLANK: 1227555

Matrix: Water

Associated Lab Samples: 60149631001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/31/13 17:42	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/31/13 17:42	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/31/13 17:42	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/31/13 17:42	
Naphthalene	ug/L	ND	5.0	07/31/13 17:42	
Nitrobenzene	ug/L	ND	5.0	07/31/13 17:42	
Pentachlorophenol	ug/L	ND	5.0	07/31/13 17:42	
Phenanthrene	ug/L	ND	5.0	07/31/13 17:42	
Phenol	ug/L	ND	5.0	07/31/13 17:42	
Pyrene	ug/L	ND	5.0	07/31/13 17:42	
2,4,6-Tribromophenol (S)	%	74	39-119	07/31/13 17:42	
2-Fluorobiphenyl (S)	%	68	36-120	07/31/13 17:42	
2-Fluorophenol (S)	%	43	18-120	07/31/13 17:42	
Nitrobenzene-d5 (S)	%	66	32-120	07/31/13 17:42	
Phenol-d6 (S)	%	30	12-120	07/31/13 17:42	
Terphenyl-d14 (S)	%	74	44-120	07/31/13 17:42	

LABORATORY CONTROL SAMPLE: 1227556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	34.9	70	44-120	
2,4,6-Trichlorophenol	ug/L	50	35.5	71	48-120	
2,4-Dichlorophenol	ug/L	50	35.3	71	48-120	
2,4-Dimethylphenol	ug/L	50	32.6	65	37-119	
2,4-Dinitrophenol	ug/L	50	37.4J	75	15-153	
2,4-Dinitrotoluene	ug/L	50	39.7	79	54-120	
2,6-Dinitrotoluene	ug/L	50	38.2	76	52-120	
2-Chloronaphthalene	ug/L	50	35.3	71	60-118	
2-Chlorophenol	ug/L	50	33.2	66	44-120	
2-Nitrophenol	ug/L	50	38.2	76	43-120	
3,3'-Dichlorobenzidine	ug/L	50	52.7	105	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	41.4	83	31-147	
4-Bromophenylphenyl ether	ug/L	50	37.2	74	53-120	
4-Chloro-3-methylphenol	ug/L	50	36.0	72	50-120	
4-Chlorophenylphenyl ether	ug/L	50	36.4	73	54-120	
4-Nitrophenol	ug/L	50	15.6	31	10-120	
Acenaphthene	ug/L	50	35.7	71	51-120	
Acenaphthylene	ug/L	50	35.8	72	51-120	
Anthracene	ug/L	50	36.2	72	54-120	
Benzidine	ug/L	50	33.8J	68	1-124	
Benzo(a)anthracene	ug/L	50	37.1	74	54-120	
Benzo(a)pyrene	ug/L	50	37.9	76	54-120	
Benzo(b)fluoranthene	ug/L	50	36.0	72	57-120	
Benzo(g,h,i)perylene	ug/L	50	36.4	73	54-120	
Benzo(k)fluoranthene	ug/L	50	38.7	77	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

LABORATORY CONTROL SAMPLE: 1227556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	35.6	71	51-120	
bis(2-Chloroethyl) ether	ug/L	50	35.5	71	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	34.6	69	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	38.7	77	51-126	
Butylbenzylphthalate	ug/L	50	39.1	78	45-129	
Chrysene	ug/L	50	37.5	75	54-120	
Di-n-butylphthalate	ug/L	50	38.4	77	57-118	
Di-n-octylphthalate	ug/L	50	39.1	78	48-130	
Dibenz(a,h)anthracene	ug/L	50	36.3	73	56-119	
Diethylphthalate	ug/L	50	37.2	74	55-114	
Dimethylphthalate	ug/L	50	36.5	73	54-112	
Fluoranthene	ug/L	50	37.3	75	56-120	
Fluorene	ug/L	50	36.4	73	59-120	
Hexachloro-1,3-butadiene	ug/L	50	35.1	70	41-116	
Hexachlorobenzene	ug/L	50	37.4	75	53-120	
Hexachlorocyclopentadiene	ug/L	100	58.0	58	31-120	
Hexachloroethane	ug/L	50	32.9	66	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	36.4	73	55-120	
Isophorone	ug/L	50	36.0	72	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	35.6	71	47-120	
N-Nitrosodimethylamine	ug/L	50	25.4	51	28-120	
N-Nitrosodiphenylamine	ug/L	50	36.1	72	53-120	
Naphthalene	ug/L	50	35.3	71	48-120	
Nitrobenzene	ug/L	50	36.7	73	47-120	
Pentachlorophenol	ug/L	50	38.7	77	43-127	
Phenanthrene	ug/L	50	36.4	73	55-120	
Phenol	ug/L	50	14.9	30	15-112	
Pyrene	ug/L	50	38.2	76	55-115	
2,4,6-Tribromophenol (S)	%			77	39-119	
2-Fluorobiphenyl (S)	%			72	36-120	
2-Fluorophenol (S)	%			42	18-120	
Nitrobenzene-d5 (S)	%			71	32-120	
Phenol-d6 (S)	%			29	12-120	
Terphenyl-d14 (S)	%			78	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

QC Batch:	WET/42581	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149631001		

METHOD BLANK: 1227154 Matrix: Water

Associated Lab Samples: 60149631001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/29/13 07:48	

LABORATORY CONTROL SAMPLE: 1227155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	37.4	94	78-114	

MATRIX SPIKE SAMPLE: 1227156

Parameter	Units	60149629001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	7.5	42.1	47.2	94	78-114	

SAMPLE DUPLICATE: 1227158

Parameter	Units	60149614002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

QC Batch:	WET/42632	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60149631001		

METHOD BLANK: 1228227 Matrix: Water

Associated Lab Samples: 60149631001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/31/13 09:13	

LABORATORY CONTROL SAMPLE: 1228228

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.4	107	64-132	

MATRIX SPIKE SAMPLE: 1228229

Parameter	Units	60149213001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	10.3	20.6	54.8	216	64-132	M1

SAMPLE DUPLICATE: 1228231

Parameter	Units	60149229001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	4.1J	6.7		34	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

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QC Batch:	WET/42572	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60149631001		

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METHOD BLANK: 1226442 Matrix: Water

Associated Lab Samples: 60149631001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/26/13 13:45	

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SAMPLE DUPLICATE: 1226443

Parameter	Units	60149647001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		25	

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SAMPLE DUPLICATE: 1226444

Parameter	Units	60149562003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	88.8	79.0	12	25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

QC Batch: WET/42577 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149631001

SAMPLE DUPLICATE: 1226912

Parameter	Units	60149535001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.0	8.0	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022  
Pace Project No.: 60149631

QC Batch: WETA/25601      Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1      Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60149631001

METHOD BLANK: 1227223      Matrix: Water  
Associated Lab Samples: 60149631001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/29/13 13:08	

LABORATORY CONTROL SAMPLE: 1227224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 1227225

Parameter	Units	60149621001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1.4	2	3.3	93	90-110	

MATRIX SPIKE SAMPLE: 1227226

Parameter	Units	60149622005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	100	90-110	

SAMPLE DUPLICATE: 1227227

Parameter	Units	60149625004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

QC Batch:	WETA/25620	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60149631001		

METHOD BLANK: 1227951 Matrix: Water

Associated Lab Samples: 60149631001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	08/01/13 06:42	

LABORATORY CONTROL SAMPLE: 1227952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	51.6	103	90-110	

MATRIX SPIKE SAMPLE: 1227954

Parameter	Units	60149614002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	42.3	50	91.5	98	90-110	

MATRIX SPIKE SAMPLE: 1227955

Parameter	Units	60149668001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	16.6	50	67.6	102	90-110	

SAMPLE DUPLICATE: 1227953

Parameter	Units	60149631001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	53900	53800	0	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39536

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D9 Dissolved result is greater than the total. Data is within laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

S0 Surrogate recovery outside laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-022

Pace Project No.: 60149631

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149631001	316-022	EPA 200.7	MPRP/23640	EPA 200.7	ICP/18552
60149631001	316-022	EPA 200.7	MPRP/23689	EPA 200.7	ICP/18580
60149631001	316-022	EPA 245.1	MERP/7550	EPA 245.1	MERC/7508
60149631001	316-022	EPA 245.1	MERP/7558	EPA 245.1	MERC/7515
60149631001	316-022	EPA 625	OEXT/39536	EPA 625	MSSV/12544
60149631001	316-022	EPA 624 Low	MSV/55266		
60149631002	TRIP BLANK	EPA 624 Low	MSV/55266		
60149631001	316-022	EPA 1664A	WET/42581		
60149631001	316-022	EPA 1664A	WET/42632		
60149631001	316-022	SM 2540D	WET/42572		
60149631001	316-022	SM 4500-H+B	WET/42577		
60149631001	316-022	EPA 350.1	WETA/25601		
60149631001	316-022	EPA 410.4	WETA/25620		

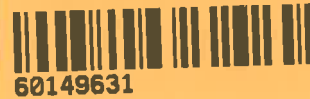
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Sample Condition Upon Receipt

WO#: 60149631



Client Name: Barr

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.7  
Temperature should be above freezing to 6°C

Date and initials of person examining contents: PV 7/26/13

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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>pH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Includes date/time/ID/analyses Matrix: <u>WT</u>		
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>Added 2.5 ml of Hno3 to BP3N pH 6.0/14.0</u> <u>Added 2.0 ml of H2SO4 to BP38 pH 6.0/1.5</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
Exceptions: <u>VOA</u> , coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>PV</u> Lot # of added preservative <u>12510</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased): <u>COVER</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/26/13



August 05, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-023  
Pace Project No.: 60149736

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 27, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149736001	316-023	Water	07/26/13 13:23	07/27/13 00:50
60149736002	TRIP BLANK	Water	07/26/13 13:23	07/27/13 00:50

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149736001	316-023	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	AAM	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	JML	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60149736002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

Sample: 316-023		Lab ID: 60149736001	Collected: 07/26/13 13:23	Received: 07/27/13 00:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	8770 ug/L		150	2	07/29/13 15:30	07/31/13 17:41	7429-90-5	
Antimony	40.8 ug/L		20.0	2	07/29/13 15:30	07/31/13 17:41	7440-36-0	
Arsenic	705 ug/L		20.0	2	07/29/13 15:30	07/31/13 17:41	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/29/13 15:30	07/31/13 17:58	7440-41-7	D3
Cadmium	15.8 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:41	7440-43-9	
Chromium	285 ug/L		25.0	5	07/29/13 15:30	07/31/13 17:58	7440-47-3	
Cobalt	51.7 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:41	7440-48-4	
Copper	ND ug/L		20.0	2	07/29/13 15:30	07/31/13 17:41	7440-50-8	D3
Iron	901000 ug/L		100	2	07/29/13 15:30	07/31/13 17:41	7439-89-6	
Lead	180 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:41	7439-92-1	
Nickel	124 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:41	7440-02-0	
Selenium	ND ug/L		75.0	5	07/29/13 15:30	07/31/13 17:58	7782-49-2	D3
Silver	ND ug/L		14.0	2	07/29/13 15:30	07/31/13 17:41	7440-22-4	
Thallium	ND ug/L		100	5	07/29/13 15:30	07/31/13 17:58	7440-28-0	D3
Zinc	16100 ug/L		1000	20	07/29/13 15:30	07/31/13 18:08	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	3850 ug/L		150	2	07/31/13 16:30	08/01/13 12:10	7429-90-5	
Antimony, Dissolved	43.8 ug/L		20.0	2	07/31/13 16:30	08/01/13 12:10	7440-36-0	D9
Arsenic, Dissolved	606 ug/L		20.0	2	07/31/13 16:30	08/01/13 12:10	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/31/13 16:30	08/01/13 12:55	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		10.0	2	07/31/13 16:30	08/01/13 12:10	7440-43-9	D3
Chromium, Dissolved	218 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:10	7440-47-3	
Cobalt, Dissolved	39.1 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:10	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/31/13 16:30	08/01/13 12:10	7440-50-8	D3
Iron, Dissolved	523000 ug/L		100	2	07/31/13 16:30	08/01/13 12:10	7439-89-6	
Lead, Dissolved	44.6 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:10	7439-92-1	
Nickel, Dissolved	109 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:10	7440-02-0	
Selenium, Dissolved	ND ug/L		30.0	2	07/31/13 16:30	08/01/13 12:10	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/31/13 16:30	08/01/13 12:10	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/31/13 16:30	08/01/13 12:55	7440-28-0	D3
Zinc, Dissolved	13500 ug/L		1000	20	07/31/13 16:30	08/01/13 13:35	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	1.7 ug/L		0.20	1	07/29/13 13:30	07/30/13 12:46	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	08/01/13 10:30	08/01/13 13:46	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		1250	5	07/30/13 00:00	07/31/13 20:28	83-32-9	
Acenaphthylene	ND ug/L		1250	5	07/30/13 00:00	07/31/13 20:28	208-96-8	
Anthracene	ND ug/L		1250	5	07/30/13 00:00	07/31/13 20:28	120-12-7	
Benzidine	ND ug/L		12500	5	07/30/13 00:00	07/31/13 20:28	92-87-5	
Benzo(a)anthracene	ND ug/L		1250	5	07/30/13 00:00	07/31/13 20:28	56-55-3	
Benzo(a)pyrene	ND ug/L		1250	5	07/30/13 00:00	07/31/13 20:28	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

**Sample: 316-023**      **Lab ID: 60149736001**      Collected: 07/26/13 13:23      Received: 07/27/13 00:50      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625    Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	101-55-3	
Butylbenzylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1500	5	07/30/13 00:00	07/31/13 20:28	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1500	5	07/30/13 00:00	07/31/13 20:28	39638-32-9	
2-Chloronaphthalene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	91-58-7	
2-Chlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	7005-72-3	
Chrysene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	5000	5	07/30/13 00:00	07/31/13 20:28	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	120-83-2	
Diethylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	105-67-9	
Dimethylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	131-11-3	
Di-n-butylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	6250	5	07/30/13 00:00	07/31/13 20:28	534-52-1	
2,4-Dinitrophenol	ND	ug/L	12500	5	07/30/13 00:00	07/31/13 20:28	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	1500	5	07/30/13 00:00	07/31/13 20:28	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	606-20-2	
Di-n-octylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	117-81-7	
Fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	206-44-0	
Fluorene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	87-68-3	
Hexachlorobenzene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	77-47-4	
Hexachloroethane	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	193-39-5	
Isophorone	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	78-59-1	
Naphthalene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	91-20-3	
Nitrobenzene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	98-95-3	
2-Nitrophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	88-75-5	
4-Nitrophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	86-30-6	
Pentachlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	87-86-5	
Phenanthrene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	85-01-8	
Phenol	<b>17800</b>	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	108-95-2	
Pyrene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:28	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

Sample: 316-023		Lab ID: 60149736001	Collected: 07/26/13 13:23	Received: 07/27/13 00:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	5	07/30/13 00:00	07/31/13 20:28	4165-60-0	P3,S0
2-Fluorobiphenyl (S)	0 %		36-120	5	07/30/13 00:00	07/31/13 20:28	321-60-8	S0
Terphenyl-d14 (S)	0 %		44-120	5	07/30/13 00:00	07/31/13 20:28	1718-51-0	S0
Phenol-d6 (S)	0 %		12-120	5	07/30/13 00:00	07/31/13 20:28	13127-88-3	S0
2-Fluorophenol (S)	0 %		18-120	5	07/30/13 00:00	07/31/13 20:28	367-12-4	S0
2,4,6-Tribromophenol (S)	0 %		39-119	5	07/30/13 00:00	07/31/13 20:28	118-79-6	S0
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/31/13 11:41	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/31/13 11:41	75-27-4	
Bromoform	ND ug/L		200	200		07/31/13 11:41	75-25-2	
Bromomethane	ND ug/L		1000	200		07/31/13 11:41	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/31/13 11:41	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/31/13 11:41	108-90-7	
Chloroethane	ND ug/L		200	200		07/31/13 11:41	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/31/13 11:41	110-75-8	
Chloroform	ND ug/L		200	200		07/31/13 11:41	67-66-3	
Chloromethane	ND ug/L		200	200		07/31/13 11:41	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/31/13 11:41	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/31/13 11:41	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/31/13 11:41	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/31/13 11:41	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/31/13 11:41	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/31/13 11:41	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/31/13 11:41	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/31/13 11:41	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/31/13 11:41	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/31/13 11:41	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/31/13 11:41	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/31/13 11:41	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/31/13 11:41	100-41-4	
Methylene chloride	ND ug/L		200	200		07/31/13 11:41	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/31/13 11:41	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/31/13 11:41	127-18-4	
Toluene	ND ug/L		200	200		07/31/13 11:41	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/31/13 11:41	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/31/13 11:41	79-00-5	
Trichloroethene	ND ug/L		200	200		07/31/13 11:41	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/31/13 11:41	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/31/13 11:41	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/31/13 11:41	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	91 %		80-120	200		07/31/13 11:41	1868-53-7	D3
4-Bromofluorobenzene (S)	100 %		80-120	200		07/31/13 11:41	460-00-4	
Toluene-d8 (S)	98 %		80-120	200		07/31/13 11:41	2037-26-5	
1,2-Dichloroethane-d4 (S)	91 %		80-120	200		07/31/13 11:41	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

<b>Sample: 316-023</b>		<b>Lab ID: 60149736001</b>	Collected: 07/26/13 13:23	Received: 07/27/13 00:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		07/31/13 11:41		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>381</b>	mg/L	5.0	1		07/29/13 07:49		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	<b>14.3</b>	mg/L	5.0	1		07/31/13 09:16		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>2660</b>	mg/L	5.0	1		07/30/13 08:23		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.5</b>	Std. Units	0.10	1		07/27/13 10:00		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>763</b>	mg/L	20.0	200		07/29/13 13:36	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>59800</b>	mg/L	5000	500		08/01/13 06:45		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

Sample: TRIP BLANK	Lab ID: 60149736002	Collected: 07/26/13 13:23	Received: 07/27/13 00:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/31/13 12:02	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/31/13 12:02	75-27-4	
Bromoform	ND ug/L		1.0	1		07/31/13 12:02	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/31/13 12:02	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/31/13 12:02	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/31/13 12:02	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/31/13 12:02	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/31/13 12:02	110-75-8	
Chloroform	ND ug/L		1.0	1		07/31/13 12:02	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/31/13 12:02	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/31/13 12:02	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/31/13 12:02	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/31/13 12:02	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/31/13 12:02	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/31/13 12:02	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/31/13 12:02	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/31/13 12:02	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/31/13 12:02	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/31/13 12:02	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/31/13 12:02	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/31/13 12:02	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/31/13 12:02	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/31/13 12:02	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/31/13 12:02	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/31/13 12:02	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/31/13 12:02	127-18-4	
Toluene	ND ug/L		1.0	1		07/31/13 12:02	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/31/13 12:02	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/31/13 12:02	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/31/13 12:02	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/31/13 12:02	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/31/13 12:02	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/31/13 12:02	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	91 %		80-120	1		07/31/13 12:02	1868-53-7	
4-Bromofluorobenzene (S)	100 %		80-120	1		07/31/13 12:02	460-00-4	
Toluene-d8 (S)	95 %		80-120	1		07/31/13 12:02	2037-26-5	
1,2-Dichloroethane-d4 (S)	92 %		80-120	1		07/31/13 12:02	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/31/13 12:02		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

QC Batch:	MERP/7550	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60149736001		

METHOD BLANK: 1227392 Matrix: Water

Associated Lab Samples: 60149736001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/30/13 12:21	

LABORATORY CONTROL SAMPLE: 1227393

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.4	87	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1227394 1227395

Parameter	Units	60149604002		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Mercury	ug/L	1.2	5	5	5.3	5.0	81	76	70-130	5	20		

MATRIX SPIKE SAMPLE: 1227396

Parameter	Units	60149777002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	4.1	80	70-130	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

QC Batch:	MERP/7558	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60149736001		

METHOD BLANK: 1228981 Matrix: Water

Associated Lab Samples: 60149736001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	08/01/13 13:39	

LABORATORY CONTROL SAMPLE: 1228982

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228983 1228984

Parameter	Units	60149693001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury, Dissolved	ug/L	ND	5	5	2.8	2.3	56	46	70-130	19	20	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023  
Pace Project No.: 60149736

QC Batch: MPRP/23654      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60149736001

METHOD BLANK: 1227456      Matrix: Water  
Associated Lab Samples: 60149736001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/31/13 16:35	
Antimony	ug/L	ND	10.0	07/31/13 16:35	
Arsenic	ug/L	ND	10.0	07/31/13 16:35	
Beryllium	ug/L	ND	1.0	07/31/13 16:35	
Cadmium	ug/L	ND	5.0	07/31/13 16:35	
Chromium	ug/L	ND	5.0	07/31/13 16:35	
Cobalt	ug/L	ND	5.0	07/31/13 16:35	
Copper	ug/L	ND	10.0	07/31/13 16:35	
Iron	ug/L	ND	50.0	07/31/13 16:35	
Lead	ug/L	ND	5.0	07/31/13 16:35	
Nickel	ug/L	ND	5.0	07/31/13 16:35	
Selenium	ug/L	ND	15.0	07/31/13 16:35	
Silver	ug/L	ND	7.0	07/31/13 16:35	
Thallium	ug/L	ND	20.0	07/31/13 16:35	
Zinc	ug/L	ND	50.0	07/31/13 16:35	

LABORATORY CONTROL SAMPLE: 1227457

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10000	100	85-115	
Antimony	ug/L	1000	1010	101	85-115	
Arsenic	ug/L	1000	972	97	85-115	
Beryllium	ug/L	1000	1000	100	85-115	
Cadmium	ug/L	1000	983	98	85-115	
Chromium	ug/L	1000	1010	101	85-115	
Cobalt	ug/L	1000	987	99	85-115	
Copper	ug/L	1000	960	96	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	994	99	85-115	
Nickel	ug/L	1000	1010	101	85-115	
Selenium	ug/L	1000	1020	102	85-115	
Silver	ug/L	500	486	97	85-115	
Thallium	ug/L	1000	966	97	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1227458      1227459

Parameter	Units	60149441002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum	ug/L	ND	10000	10000	9860	10600	99	106	70-130	8	8

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1227458 1227459												
Parameter	Units	60149441002 Result	MS		MSD		MS		MSD		Max RPD	Qual
			Spike Conc.	MSD Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits			
Antimony	ug/L	ND	1000	1000	1010	1020	101	102	70-130	0	7	
Arsenic	ug/L	ND	1000	1000	977	987	98	99	70-130	1	10	
Beryllium	ug/L	ND	1000	1000	986	1060	99	106	70-130	7	7	
Cadmium	ug/L	ND	1000	1000	987	996	99	100	70-130	1	10	
Chromium	ug/L	ND	1000	1000	1030	1050	103	105	70-130	2	10	
Cobalt	ug/L	ND	1000	1000	999	1010	100	101	70-130	1	6	
Copper	ug/L	ND	1000	1000	978	987	98	99	70-130	1	11	
Iron	ug/L	ND	10000	10000	9940	10800	99	108	70-130	8	10	
Lead	ug/L	ND	1000	1000	1000	1020	100	102	70-130	1	10	
Nickel	ug/L	ND	1000	1000	1020	1030	102	103	70-130	1	10	
Selenium	ug/L	ND	1000	1000	1010	1020	101	102	70-130	1	10	
Silver	ug/L	ND	500	500	493	503	99	100	70-130	2	10	
Thallium	ug/L	ND	1000	1000	977	987	98	99	70-130	1	6	
Zinc	ug/L	ND	1000	1000	1030	1060	103	105	70-130	2	11	

MATRIX SPIKE SAMPLE: 1227460								
Parameter	Units	60149725001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Aluminum	ug/L	24.3J	10000	9930	99	70-130		
Antimony	ug/L	ND	1000	1020	102	70-130		
Arsenic	ug/L	ND	1000	984	98	70-130		
Beryllium	ug/L	ND	1000	1000	100	70-130		
Cadmium	ug/L	ND	1000	990	99	70-130		
Chromium	ug/L	1.5J	1000	1010	101	70-130		
Cobalt	ug/L	ND	1000	978	98	70-130		
Copper	ug/L	14.5	1000	1010	100	70-130		
Iron	ug/L	102	10000	10000	99	70-130		
Lead	ug/L	ND	1000	990	99	70-130		
Nickel	ug/L	3.6J	1000	998	99	70-130		
Selenium	ug/L	ND	1000	1010	101	70-130		
Silver	ug/L	ND	500	496	99	70-130		
Thallium	ug/L	ND	1000	971	97	70-130		
Zinc	ug/L	449	1000	1420	97	70-130		

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

QC Batch:	MPRP/23689	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 Metals, Dissolved
Associated Lab Samples:	60149736001		

METHOD BLANK: 1228838 Matrix: Water

Associated Lab Samples: 60149736001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	08/01/13 11:37	
Antimony, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Arsenic, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Beryllium, Dissolved	ug/L	ND	1.0	08/01/13 11:37	
Cadmium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Chromium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Cobalt, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Copper, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Iron, Dissolved	ug/L	ND	50.0	08/01/13 11:37	
Lead, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Nickel, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Selenium, Dissolved	ug/L	ND	15.0	08/01/13 11:37	
Silver, Dissolved	ug/L	ND	7.0	08/01/13 11:37	
Thallium, Dissolved	ug/L	ND	20.0	08/01/13 11:37	
Zinc, Dissolved	ug/L	ND	50.0	08/01/13 11:37	

LABORATORY CONTROL SAMPLE: 1228839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10100	101	85-115	
Antimony, Dissolved	ug/L	1000	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	974	97	85-115	
Beryllium, Dissolved	ug/L	1000	998	100	85-115	
Cadmium, Dissolved	ug/L	1000	993	99	85-115	
Chromium, Dissolved	ug/L	1000	1010	101	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	968	97	85-115	
Iron, Dissolved	ug/L	10000	10300	103	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	1000	100	85-115	
Silver, Dissolved	ug/L	500	494	99	85-115	
Thallium, Dissolved	ug/L	1000	980	98	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228840 1228841

Parameter	Units	60149631001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum, Dissolved	ug/L	3640	10000	10000	10000	14000	13800	104	101	70-130	1	8

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

Parameter	60149631001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Antimony, Dissolved	ug/L	33.8	1000	1000	1020	1010	98	98	70-130	1	7			
Arsenic, Dissolved	ug/L	545	1000	1000	1670	1680	112	113	70-130	1	10			
Beryllium, Dissolved	ug/L	ND	1000	1000	926	916	93	92	70-130	1	7			
Cadmium, Dissolved	ug/L	ND	1000	1000	1030	1030	103	103	70-130	0	10			
Chromium, Dissolved	ug/L	201	1000	1000	1070	1030	87	83	70-130	4	10			
Cobalt, Dissolved	ug/L	37.0	1000	1000	937	927	90	89	70-130	1	6			
Copper, Dissolved	ug/L	ND	1000	1000	1010	1020	100	101	70-130	1	11			
Iron, Dissolved	ug/L	506000	10000	10000	548000	535000	418	286	70-130	2	10	M1		
Lead, Dissolved	ug/L	48.3	1000	1000	871	856	82	81	70-130	2	10			
Nickel, Dissolved	ug/L	111	1000	1000	993	981	88	87	70-130	1	10			
Selenium, Dissolved	ug/L	ND	1000	1000	1180	1190	118	119	70-130	1	10			
Silver, Dissolved	ug/L	ND	500	500	44.2	42.9	9	9	70-130	3	10	M1		
Thallium, Dissolved	ug/L	ND	1000	1000	760	740	76	74	70-130	3	6			
Zinc, Dissolved	ug/L	12600	1000	1000	14500	14000	195	148	70-130	3	11	M1		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

QC Batch: MSV/55266 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149736001, 60149736002

METHOD BLANK: 1228397 Matrix: Water

Associated Lab Samples: 60149736001, 60149736002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1-Dichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichloropropane	ug/L	ND	1.0	07/31/13 10:16	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/31/13 10:16	
Benzene	ug/L	ND	1.0	07/31/13 10:16	
Bromodichloromethane	ug/L	ND	1.0	07/31/13 10:16	
Bromoform	ug/L	ND	1.0	07/31/13 10:16	
Bromomethane	ug/L	ND	5.0	07/31/13 10:16	
Carbon tetrachloride	ug/L	ND	1.0	07/31/13 10:16	
Chlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
Chloroethane	ug/L	ND	1.0	07/31/13 10:16	
Chloroform	ug/L	ND	1.0	07/31/13 10:16	
Chloromethane	ug/L	ND	1.0	07/31/13 10:16	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/31/13 10:16	
Dibromochloromethane	ug/L	ND	1.0	07/31/13 10:16	
Ethylbenzene	ug/L	ND	1.0	07/31/13 10:16	
Methylene chloride	ug/L	ND	1.0	07/31/13 10:16	
Tetrachloroethene	ug/L	ND	1.0	07/31/13 10:16	
Toluene	ug/L	ND	1.0	07/31/13 10:16	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/31/13 10:16	
Trichloroethene	ug/L	ND	1.0	07/31/13 10:16	
Trichlorofluoromethane	ug/L	ND	1.0	07/31/13 10:16	
Vinyl chloride	ug/L	ND	1.0	07/31/13 10:16	
Xylene (Total)	ug/L	ND	3.0	07/31/13 10:16	
1,2-Dichloroethane-d4 (S)	%	95	80-120	07/31/13 10:16	
4-Bromofluorobenzene (S)	%	99	80-120	07/31/13 10:16	
Toluene-d8 (S)	%	99	80-120	07/31/13 10:16	

LABORATORY CONTROL SAMPLE: 1228398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	15.0	75	71-139	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

LABORATORY CONTROL SAMPLE: 1228398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	19.4	97	59-138	
1,1,2-Trichloroethane	ug/L	20	18.2	91	69-127	
1,1-Dichloroethane	ug/L	20	15.4	77	69-126	
1,1-Dichloroethene	ug/L	20	18.3	92	65-153	
1,2-Dichlorobenzene	ug/L	20	18.1	90	66-126	
1,2-Dichloroethane	ug/L	20	16.7	83	71-129	
1,2-Dichloropropane	ug/L	20	18.2	91	66-140	
1,3-Dichlorobenzene	ug/L	20	18.0	90	63-127	
1,4-Dichlorobenzene	ug/L	20	18.1	91	68-124	
2-Chloroethylvinyl ether	ug/L	20	13.6	68	33-159	
Benzene	ug/L	20	19.7	98	73-129	
Bromodichloromethane	ug/L	20	15.3	76	63-129	
Bromoform	ug/L	20	18.1	91	52-123	
Bromomethane	ug/L	20	20.8	104	10-160	
Carbon tetrachloride	ug/L	20	15.0	75	70-140	
Chlorobenzene	ug/L	20	16.7	84	68-127	
Chloroethane	ug/L	20	16.2	81	42-160	
Chloroform	ug/L	20	15.0	75	60-120	
Chloromethane	ug/L	20	20.6	103	10-160	
cis-1,2-Dichloroethene	ug/L	20	16.6	83	70-125	
cis-1,3-Dichloropropene	ug/L	20	16.0	80	66-132	
Dibromochloromethane	ug/L	20	15.9	79	63-134	
Ethylbenzene	ug/L	20	17.2	86	66-133	
Methylene chloride	ug/L	20	18.1	90	56-135	
Tetrachloroethene	ug/L	20	18.3	92	64-143	
Toluene	ug/L	20	18.0	90	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	67-149	
trans-1,3-Dichloropropene	ug/L	20	17.8	89	66-138	
Trichloroethene	ug/L	20	16.1	80	71-130	
Trichlorofluoromethane	ug/L	20	15.0	75	58-158	
Vinyl chloride	ug/L	20	17.9	90	41-160	
Xylene (Total)	ug/L	60	56.8	95	67-130	
1,2-Dichloroethane-d4 (S)	%			96	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			96	80-120	

MATRIX SPIKE SAMPLE: 1228399

Parameter	Units	60149631001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3730	93	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4820	121	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4030	101	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3670	92	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4250	106	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	4630	116	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3970	99	49-155	
1,2-Dichloropropane	ug/L	ND	4000	4290	107	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

MATRIX SPIKE SAMPLE:		1228399		60149631001		Spike	MS	MS	% Rec	Qualifiers
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits		
1,3-Dichlorobenzene	ug/L	ND	4000	4490	112	4490	112	59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	4420	111	4420	111	18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	4080	102	4080	102	10-160		
Benzene	ug/L	ND	4000	4610	115	4610	115	37-151		
Bromodichloromethane	ug/L	ND	4000	3740	94	3740	94	35-155		
Bromoform	ug/L	ND	4000	4090	102	4090	102	45-133		
Bromomethane	ug/L	ND	4000	4640	116	4640	116	10-160		
Carbon tetrachloride	ug/L	ND	4000	3700	93	3700	93	70-140		
Chlorobenzene	ug/L	ND	4000	4000	100	4000	100	37-153		
Chloroethane	ug/L	ND	4000	3980	99	3980	99	14-160		
Chloroform	ug/L	ND	4000	3610	90	3610	90	51-138		
Chloromethane	ug/L	ND	4000	4960	124	4960	124	10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	3890	97	3890	97	19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	3900	98	3900	98	10-160		
Dibromochloromethane	ug/L	ND	4000	3700	92	3700	92	53-149		
Ethylbenzene	ug/L	ND	4000	4130	103	4130	103	37-154		
Methylene chloride	ug/L	ND	4000	4310	107	4310	107	15-156		
Tetrachloroethene	ug/L	ND	4000	4400	110	4400	110	64-148		
Toluene	ug/L	ND	4000	4360	109	4360	109	47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	4260	107	4260	107	54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	4110	103	4110	103	17-160		
Trichloroethene	ug/L	ND	4000	3730	93	3730	93	71-157		
Trichlorofluoromethane	ug/L	ND	4000	3760	94	3760	94	17-160		
Vinyl chloride	ug/L	ND	4000	4390	110	4390	110	10-160		
Xylene (Total)	ug/L	ND	12000	13500	113	13500	113	12-153		
1,2-Dichloroethane-d4 (S)	%						93	80-120		
4-Bromofluorobenzene (S)	%						101	80-120	D3	
Toluene-d8 (S)	%						96	80-120		
Preservation pH			7.0			7.0				

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

QC Batch: OEXT/39536

Analysis Method: EPA 625

QC Batch Method: EPA 625

Analysis Description: 625 MSS

Associated Lab Samples: 60149736001

METHOD BLANK: 1227555

Matrix: Water

Associated Lab Samples: 60149736001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/31/13 17:42	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dichlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dimethylphenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dinitrophenol	ug/L	ND	50.0	07/31/13 17:42	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/31/13 17:42	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/31/13 17:42	
2-Chloronaphthalene	ug/L	ND	5.0	07/31/13 17:42	
2-Chlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2-Nitrophenol	ug/L	ND	5.0	07/31/13 17:42	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/31/13 17:42	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/31/13 17:42	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/31/13 17:42	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/31/13 17:42	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/31/13 17:42	
4-Nitrophenol	ug/L	ND	5.0	07/31/13 17:42	
Acenaphthene	ug/L	ND	5.0	07/31/13 17:42	
Acenaphthylene	ug/L	ND	5.0	07/31/13 17:42	
Anthracene	ug/L	ND	5.0	07/31/13 17:42	
Benzidine	ug/L	ND	50.0	07/31/13 17:42	
Benzo(a)anthracene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(a)pyrene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/31/13 17:42	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/31/13 17:42	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/31/13 17:42	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/31/13 17:42	
Butylbenzylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Chrysene	ug/L	ND	5.0	07/31/13 17:42	
Di-n-butylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Di-n-octylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/31/13 17:42	
Diethylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Dimethylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
Fluorene	ug/L	ND	5.0	07/31/13 17:42	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/31/13 17:42	
Hexachlorobenzene	ug/L	ND	5.0	07/31/13 17:42	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/31/13 17:42	
Hexachloroethane	ug/L	ND	5.0	07/31/13 17:42	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/31/13 17:42	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Project No.: 60149736

METHOD BLANK: 1227555

Matrix: Water

Associated Lab Samples: 60149736001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/31/13 17:42	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/31/13 17:42	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/31/13 17:42	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/31/13 17:42	
Naphthalene	ug/L	ND	5.0	07/31/13 17:42	
Nitrobenzene	ug/L	ND	5.0	07/31/13 17:42	
Pentachlorophenol	ug/L	ND	5.0	07/31/13 17:42	
Phenanthrene	ug/L	ND	5.0	07/31/13 17:42	
Phenol	ug/L	ND	5.0	07/31/13 17:42	
Pyrene	ug/L	ND	5.0	07/31/13 17:42	
2,4,6-Tribromophenol (S)	%	74	39-119	07/31/13 17:42	
2-Fluorobiphenyl (S)	%	68	36-120	07/31/13 17:42	
2-Fluorophenol (S)	%	43	18-120	07/31/13 17:42	
Nitrobenzene-d5 (S)	%	66	32-120	07/31/13 17:42	
Phenol-d6 (S)	%	30	12-120	07/31/13 17:42	
Terphenyl-d14 (S)	%	74	44-120	07/31/13 17:42	

LABORATORY CONTROL SAMPLE: 1227556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	34.9	70	44-120	
2,4,6-Trichlorophenol	ug/L	50	35.5	71	48-120	
2,4-Dichlorophenol	ug/L	50	35.3	71	48-120	
2,4-Dimethylphenol	ug/L	50	32.6	65	37-119	
2,4-Dinitrophenol	ug/L	50	37.4J	75	15-153	
2,4-Dinitrotoluene	ug/L	50	39.7	79	54-120	
2,6-Dinitrotoluene	ug/L	50	38.2	76	52-120	
2-Chloronaphthalene	ug/L	50	35.3	71	60-118	
2-Chlorophenol	ug/L	50	33.2	66	44-120	
2-Nitrophenol	ug/L	50	38.2	76	43-120	
3,3'-Dichlorobenzidine	ug/L	50	52.7	105	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	41.4	83	31-147	
4-Bromophenylphenyl ether	ug/L	50	37.2	74	53-120	
4-Chloro-3-methylphenol	ug/L	50	36.0	72	50-120	
4-Chlorophenylphenyl ether	ug/L	50	36.4	73	54-120	
4-Nitrophenol	ug/L	50	15.6	31	10-120	
Acenaphthene	ug/L	50	35.7	71	51-120	
Acenaphthylene	ug/L	50	35.8	72	51-120	
Anthracene	ug/L	50	36.2	72	54-120	
Benzidine	ug/L	50	33.8J	68	1-124	
Benzo(a)anthracene	ug/L	50	37.1	74	54-120	
Benzo(a)pyrene	ug/L	50	37.9	76	54-120	
Benzo(b)fluoranthene	ug/L	50	36.0	72	57-120	
Benzo(g,h,i)perylene	ug/L	50	36.4	73	54-120	
Benzo(k)fluoranthene	ug/L	50	38.7	77	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

LABORATORY CONTROL SAMPLE: 1227556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	35.6	71	51-120	
bis(2-Chloroethyl) ether	ug/L	50	35.5	71	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	34.6	69	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	38.7	77	51-126	
Butylbenzylphthalate	ug/L	50	39.1	78	45-129	
Chrysene	ug/L	50	37.5	75	54-120	
Di-n-butylphthalate	ug/L	50	38.4	77	57-118	
Di-n-octylphthalate	ug/L	50	39.1	78	48-130	
Dibenz(a,h)anthracene	ug/L	50	36.3	73	56-119	
Diethylphthalate	ug/L	50	37.2	74	55-114	
Dimethylphthalate	ug/L	50	36.5	73	54-112	
Fluoranthene	ug/L	50	37.3	75	56-120	
Fluorene	ug/L	50	36.4	73	59-120	
Hexachloro-1,3-butadiene	ug/L	50	35.1	70	41-116	
Hexachlorobenzene	ug/L	50	37.4	75	53-120	
Hexachlorocyclopentadiene	ug/L	100	58.0	58	31-120	
Hexachloroethane	ug/L	50	32.9	66	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	36.4	73	55-120	
Isophorone	ug/L	50	36.0	72	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	35.6	71	47-120	
N-Nitrosodimethylamine	ug/L	50	25.4	51	28-120	
N-Nitrosodiphenylamine	ug/L	50	36.1	72	53-120	
Naphthalene	ug/L	50	35.3	71	48-120	
Nitrobenzene	ug/L	50	36.7	73	47-120	
Pentachlorophenol	ug/L	50	38.7	77	43-127	
Phenanthrene	ug/L	50	36.4	73	55-120	
Phenol	ug/L	50	14.9	30	15-112	
Pyrene	ug/L	50	38.2	76	55-115	
2,4,6-Tribromophenol (S)	%			77	39-119	
2-Fluorobiphenyl (S)	%			72	36-120	
2-Fluorophenol (S)	%			42	18-120	
Nitrobenzene-d5 (S)	%			71	32-120	
Phenol-d6 (S)	%			29	12-120	
Terphenyl-d14 (S)	%			78	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

QC Batch:	WET/42581	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149736001		

METHOD BLANK: 1227154 Matrix: Water  
Associated Lab Samples: 60149736001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/29/13 07:48	

LABORATORY CONTROL SAMPLE: 1227155

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	37.4	94	78-114	

MATRIX SPIKE SAMPLE: 1227156

Parameter	Units	60149629001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	7.5	42.1	47.2	94	78-114	

SAMPLE DUPLICATE: 1227158

Parameter	Units	60149614002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

QC Batch:	WET/42632	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60149736001		

METHOD BLANK: 1228227 Matrix: Water

Associated Lab Samples: 60149736001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/31/13 09:13	

LABORATORY CONTROL SAMPLE: 1228228

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.4	107	64-132	

MATRIX SPIKE SAMPLE: 1228229

Parameter	Units	60149213001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	10.3	20.6	54.8	216	64-132	M1

SAMPLE DUPLICATE: 1228231

Parameter	Units	60149229001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	4.1J	6.7		34	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

---

QC Batch:	WET/42612	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60149736001		

---

METHOD BLANK: 1227598 Matrix: Water

Associated Lab Samples: 60149736001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/30/13 08:22	

---

SAMPLE DUPLICATE: 1227599

Parameter	Units	60149693001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	57200	58100	1	25	

---

SAMPLE DUPLICATE: 1227600

Parameter	Units	60149646001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	52.0	60.0	14	25	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

QC Batch: WET/42577 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149736001

SAMPLE DUPLICATE: 1226912

Parameter	Units	60149535001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.0	8.0	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

QC Batch: WETA/25601      Analysis Method: EPA 350.1  
 QC Batch Method: EPA 350.1      Analysis Description: 350.1 Ammonia  
 Associated Lab Samples: 60149736001

METHOD BLANK: 1227223      Matrix: Water

Associated Lab Samples: 60149736001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	07/29/13 13:08	

LABORATORY CONTROL SAMPLE: 1227224

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 1227225

Parameter	Units	60149621001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1.4	2	3.3	93	90-110	

MATRIX SPIKE SAMPLE: 1227226

Parameter	Units	60149622005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	100	90-110	

SAMPLE DUPLICATE: 1227227

Parameter	Units	60149625004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

QC Batch: WETA/25620      Analysis Method: EPA 410.4  
 QC Batch Method: EPA 410.4      Analysis Description: 410.4 COD  
 Associated Lab Samples: 60149736001

METHOD BLANK: 1227951      Matrix: Water

Associated Lab Samples: 60149736001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	08/01/13 06:42	

LABORATORY CONTROL SAMPLE: 1227952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	51.6	103	90-110	

MATRIX SPIKE SAMPLE: 1227954

Parameter	Units	60149614002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	42.3	50	91.5	98	90-110	

MATRIX SPIKE SAMPLE: 1227955

Parameter	Units	60149668001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	16.6	50	67.6	102	90-110	

SAMPLE DUPLICATE: 1227953

Parameter	Units	60149631001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	53900	53800	0	25	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39536

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D9 Dissolved result is greater than the total. Data is within laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

S0 Surrogate recovery outside laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-023

Pace Project No.: 60149736

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149736001	316-023	EPA 200.7	MPRP/23654	EPA 200.7	ICP/18559
60149736001	316-023	EPA 200.7	MPRP/23689	EPA 200.7	ICP/18580
60149736001	316-023	EPA 245.1	MERP/7550	EPA 245.1	MERC/7508
60149736001	316-023	EPA 245.1	MERP/7558	EPA 245.1	MERC/7515
60149736001	316-023	EPA 625	OEXT/39536	EPA 625	MSSV/12544
60149736001	316-023	EPA 624 Low	MSV/55266		
60149736002	TRIP BLANK	EPA 624 Low	MSV/55266		
60149736001	316-023	EPA 1664A	WET/42581		
60149736001	316-023	EPA 1664A	WET/42632		
60149736001	316-023	SM 2540D	WET/42612		
60149736001	316-023	SM 4500-H+B	WET/42577		
60149736001	316-023	EPA 350.1	WETA/25601		
60149736001	316-023	EPA 410.4	WETA/25620		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO#: 60149736**  
  
 60149736

Client Name: Barr Eng

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2PC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.  
 Cooler Temperature: 1.5 (circle one)

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: 7-27-13 BA

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.									
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. pH									
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.									
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.									
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.									
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.									
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.									
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.									
Includes date/time/ID/analyses Matrix: <u>WT</u>											
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<table border="0"> <tr><td><u>HNO3</u></td><td><u>H2SO4</u></td><td><u>Added 2.5 mL HNO3</u></td></tr> <tr><td><u>Initial 6.0</u></td><td><u>6.0</u></td><td><u>Added 2.0 mL H2SO4</u></td></tr> <tr><td><u>Final 3.5</u></td><td><u>3.5</u></td><td></td></tr> </table>	<u>HNO3</u>	<u>H2SO4</u>	<u>Added 2.5 mL HNO3</u>	<u>Initial 6.0</u>	<u>6.0</u>	<u>Added 2.0 mL H2SO4</u>	<u>Final 3.5</u>	<u>3.5</u>	
<u>HNO3</u>	<u>H2SO4</u>		<u>Added 2.5 mL HNO3</u>								
<u>Initial 6.0</u>	<u>6.0</u>	<u>Added 2.0 mL H2SO4</u>									
<u>Final 3.5</u>	<u>3.5</u>										
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A										
Exceptions: <u>VOA</u> coliform, TOC, <u>O&amp;G</u> WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>BA</u> Lot # of added preservative <u>12510</u>									
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A										
Pace Trip Blank lot # (if purchased): <u>covered</u>		15.									
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.									
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:									

Client Notification/ Resolution: Copy COC to Client? Y  N Field Data Required? Y  N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/27/13



August 05, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-023  
Pace Project No.: 60149737

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 27, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-023

Pace Project No.: 60149737

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-023

Pace Project No.: 60149737

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149737001	316-023	Water	07/26/13 13:23	07/27/13 00:50

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-023

Pace Project No.: 60149737

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149737001	316-023	SM 5210B	JML	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-023

Pace Project No.: 60149737

Sample: 316-023	Lab ID: 60149737001	Collected: 07/26/13 13:23	Received: 07/27/13 00:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>27800</b>	mg/L	2.0	1	07/27/13 12:55	08/01/13 09:08		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-023

Pace Project No.: 60149737

QC Batch: WET/42579

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149737001

METHOD BLANK: 1227061

Matrix: Water

Associated Lab Samples: 60149737001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	08/01/13 08:50	

LABORATORY CONTROL SAMPLE: 1227062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	172	87	85-115	

SAMPLE DUPLICATE: 1227063

Parameter	Units	60149724004 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	20.9	19.6	6	17	

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## QUALIFIERS

Project: BRIDGETON LF 316-023

Pace Project No.: 60149737

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-023

Pace Project No.: 60149737

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149737001	316-023	SM 5210B	WET/42579	SM 5210B	WET/42653

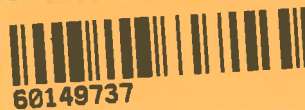
## REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149737



Client Name: Barr Eng.

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other [x] Road

Tracking #: Pace Shipping Label Used? Yes [ ] No [x]

Custody Seal on Cooler/Box Present: Yes [x] No [ ] Seals intact: Yes [x] No [ ]

Packing Material: Bubble Wrap [ ] Bubble Bags [ ] Foam [ ] None [ ] Other [x] 2PLC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue None [ ] Samples received on ice, cooling process has begun.

Cooler Temperature: 1.5 Temperature should be above freezing to 6°C

Date and initials of person examining contents: 7-27-13 BA

Table with 17 rows of inspection items and checkboxes. Items include Chain of Custody, Sampler name, Short Hold Time analyses, Containers used, etc.

Client Notification/ Resolution: Copy COC to Client? Y [ ] N [x] Field Data Required? Y [ ] N [x]

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: [Signature]

Date: [Signature]



August 05, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-024  
Pace Project No.: 60149808

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-024

Pace Project No.: 60149808

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-024

Pace Project No.: 60149808

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>Matrix</b>	<b>Date Collected</b>	<b>Date Received</b>
60149808001	316-024	Water	07/27/13 16:15	07/29/13 13:15

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-024

Pace Project No.: 60149808

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149808001	316-024	SM 5210B	AJM	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-024

Pace Project No.: 60149808

Sample: 316-024	Lab ID: 60149808001	Collected: 07/27/13 16:15	Received: 07/29/13 13:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>31600</b>	mg/L	2.0	1	07/29/13 15:27	08/03/13 13:14		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149808

QC Batch: WET/42608

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149808001

METHOD BLANK: 1227513

Matrix: Water

Associated Lab Samples: 60149808001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	08/03/13 13:11	

LABORATORY CONTROL SAMPLE: 1227514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	189	96	85-115	

SAMPLE DUPLICATE: 1227515

Parameter	Units	60149808001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	31600	33100	5	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-024

Pace Project No.: 60149808

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-024

Pace Project No.: 60149808

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149808001	316-024	SM 5210B	WET/42608	SM 5210B	WET/42704

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO# : 60149808**  
  
 60149808

Client Name: Barv

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  ZIPLOC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 1.1

Date and initials of person examining contents: pu FI 29/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BoD</u>	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.	
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.	
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Exceptions: VOA, coliform, TOC, D&C, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Pace Trip Blank lot # (if purchased):		15.	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State: _____	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: Mue for (AKB) Date: 7/30/13





August 05, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-025  
Pace Project No.: 60149809

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-025

Pace Project No.: 60149809

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

---

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-025

Pace Project No.: 60149809

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149809001	316-025	Water	07/28/13 13:20	07/29/13 13:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-025

Pace Project No.: 60149809

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149809001	316-025	SM 5210B	AJM	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-025

Pace Project No.: 60149809

Sample: 316-025	Lab ID: 60149809001	Collected: 07/28/13 13:20	Received: 07/29/13 13:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>32700</b>	mg/L	2.0	1	07/29/13 15:30	08/03/13 13:17		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149809

QC Batch: WET/42608

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149809001

METHOD BLANK: 1227513

Matrix: Water

Associated Lab Samples: 60149809001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	08/03/13 13:11	

LABORATORY CONTROL SAMPLE: 1227514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	189	96	85-115	

SAMPLE DUPLICATE: 1227515

Parameter	Units	60149808001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	31600	33100	5	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-025

Pace Project No.: 60149809

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-025

Pace Project No.: 60149809

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149809001	316-025	SM 5210B	WET/42608	SM 5210B	WET/42704

## REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO#: 60149809**



Client Name: Bart

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2 PVC

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2-3

Date and initials of person examining contents: PV H/29/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr): <u>PV 7/29/13</u>	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BoS</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature]

Date: 7/29/13



August 05, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-024  
Pace Project No.: 60149810

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149810001	316-024	Water	07/27/13 16:15	07/29/13 13:15
60149810002	TRIP BLANK	Water	07/27/13 16:15	07/29/13 13:15

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149810001	316-024	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	AAM	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60149810002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

Sample: 316-024		Lab ID: 60149810001	Collected: 07/27/13 16:15	Received: 07/29/13 13:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	6660 ug/L		150	2	07/29/13 15:30	07/31/13 17:51	7429-90-5	
Antimony	46.7 ug/L		20.0	2	07/29/13 15:30	07/31/13 17:51	7440-36-0	
Arsenic	685 ug/L		20.0	2	07/29/13 15:30	07/31/13 17:51	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/29/13 15:30	07/31/13 18:01	7440-41-7	D3
Cadmium	12.8 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:51	7440-43-9	
Chromium	278 ug/L		25.0	5	07/29/13 15:30	07/31/13 18:01	7440-47-3	
Cobalt	45.7 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:51	7440-48-4	
Copper	ND ug/L		20.0	2	07/29/13 15:30	07/31/13 17:51	7440-50-8	D3
Iron	878000 ug/L		100	2	07/29/13 15:30	07/31/13 17:51	7439-89-6	
Lead	155 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:51	7439-92-1	
Nickel	122 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:51	7440-02-0	
Selenium	ND ug/L		75.0	5	07/29/13 15:30	07/31/13 18:01	7782-49-2	D3
Silver	ND ug/L		14.0	2	07/29/13 15:30	07/31/13 17:51	7440-22-4	D3
Thallium	ND ug/L		100	5	07/29/13 15:30	07/31/13 18:01	7440-28-0	D3
Zinc	14600 ug/L		1000	20	07/29/13 15:30	07/31/13 18:12	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	3970 ug/L		150	2	07/31/13 16:30	08/01/13 12:14	7429-90-5	
Antimony, Dissolved	37.6 ug/L		20.0	2	07/31/13 16:30	08/01/13 12:14	7440-36-0	
Arsenic, Dissolved	609 ug/L		20.0	2	07/31/13 16:30	08/01/13 12:14	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/31/13 16:30	08/01/13 12:58	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		10.0	2	07/31/13 16:30	08/01/13 12:14	7440-43-9	D3
Chromium, Dissolved	224 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:14	7440-47-3	
Cobalt, Dissolved	38.2 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:14	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/31/13 16:30	08/01/13 12:14	7440-50-8	D3
Iron, Dissolved	575000 ug/L		100	2	07/31/13 16:30	08/01/13 12:14	7439-89-6	
Lead, Dissolved	56.1 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:14	7439-92-1	
Nickel, Dissolved	113 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:14	7440-02-0	
Selenium, Dissolved	ND ug/L		30.0	2	07/31/13 16:30	08/01/13 12:14	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/31/13 16:30	08/01/13 12:14	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/31/13 16:30	08/01/13 12:58	7440-28-0	D3
Zinc, Dissolved	12600 ug/L		1000	20	07/31/13 16:30	08/01/13 13:38	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	1.0 ug/L		0.20	1	07/31/13 10:45	07/31/13 14:07	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	08/01/13 10:30	08/01/13 13:53	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		1250	5	07/30/13 00:00	07/31/13 20:48	83-32-9	
Acenaphthylene	ND ug/L		1250	5	07/30/13 00:00	07/31/13 20:48	208-96-8	
Anthracene	ND ug/L		1250	5	07/30/13 00:00	07/31/13 20:48	120-12-7	
Benzidine	ND ug/L		12500	5	07/30/13 00:00	07/31/13 20:48	92-87-5	
Benzo(a)anthracene	ND ug/L		1250	5	07/30/13 00:00	07/31/13 20:48	56-55-3	
Benzo(a)pyrene	ND ug/L		1250	5	07/30/13 00:00	07/31/13 20:48	50-32-8	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

Sample: 316-024		Lab ID: 60149810001	Collected: 07/27/13 16:15	Received: 07/29/13 13:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	101-55-3	
Butylbenzylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1500	5	07/30/13 00:00	07/31/13 20:48	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1500	5	07/30/13 00:00	07/31/13 20:48	39638-32-9	
2-Chloronaphthalene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	91-58-7	
2-Chlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	7005-72-3	
Chrysene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	5000	5	07/30/13 00:00	07/31/13 20:48	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	120-83-2	
Diethylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	105-67-9	
Dimethylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	131-11-3	
Di-n-butylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	6250	5	07/30/13 00:00	07/31/13 20:48	534-52-1	
2,4-Dinitrophenol	ND	ug/L	12500	5	07/30/13 00:00	07/31/13 20:48	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	1500	5	07/30/13 00:00	07/31/13 20:48	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	606-20-2	
Di-n-octylphthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	117-81-7	
Fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	206-44-0	
Fluorene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	87-68-3	
Hexachlorobenzene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	77-47-4	
Hexachloroethane	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	193-39-5	
Isophorone	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	78-59-1	
Naphthalene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	91-20-3	
Nitrobenzene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	98-95-3	
2-Nitrophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	88-75-5	
4-Nitrophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	86-30-6	
Pentachlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	87-86-5	
Phenanthrene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	85-01-8	
Phenol	<b>18400</b>	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	108-95-2	
Pyrene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1250	5	07/30/13 00:00	07/31/13 20:48	88-06-2	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

Sample: 316-024		Lab ID: 60149810001	Collected: 07/27/13 16:15	Received: 07/29/13 13:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	5	07/30/13 00:00	07/31/13 20:48	4165-60-0	P3,S0
2-Fluorobiphenyl (S)	0 %		36-120	5	07/30/13 00:00	07/31/13 20:48	321-60-8	S0
Terphenyl-d14 (S)	0 %		44-120	5	07/30/13 00:00	07/31/13 20:48	1718-51-0	S0
Phenol-d6 (S)	0 %		12-120	5	07/30/13 00:00	07/31/13 20:48	13127-88-3	S0
2-Fluorophenol (S)	0 %		18-120	5	07/30/13 00:00	07/31/13 20:48	367-12-4	S0
2,4,6-Tribromophenol (S)	0 %		39-119	5	07/30/13 00:00	07/31/13 20:48	118-79-6	S0
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/31/13 12:23	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/31/13 12:23	75-27-4	
Bromoform	ND ug/L		200	200		07/31/13 12:23	75-25-2	
Bromomethane	ND ug/L		1000	200		07/31/13 12:23	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/31/13 12:23	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/31/13 12:23	108-90-7	
Chloroethane	ND ug/L		200	200		07/31/13 12:23	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/31/13 12:23	110-75-8	
Chloroform	ND ug/L		200	200		07/31/13 12:23	67-66-3	
Chloromethane	ND ug/L		200	200		07/31/13 12:23	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/31/13 12:23	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/31/13 12:23	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/31/13 12:23	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/31/13 12:23	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/31/13 12:23	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/31/13 12:23	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/31/13 12:23	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/31/13 12:23	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/31/13 12:23	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/31/13 12:23	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/31/13 12:23	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/31/13 12:23	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/31/13 12:23	100-41-4	
Methylene chloride	ND ug/L		200	200		07/31/13 12:23	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/31/13 12:23	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/31/13 12:23	127-18-4	
Toluene	ND ug/L		200	200		07/31/13 12:23	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/31/13 12:23	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/31/13 12:23	79-00-5	
Trichloroethene	ND ug/L		200	200		07/31/13 12:23	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/31/13 12:23	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/31/13 12:23	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/31/13 12:23	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	91 %		80-120	200		07/31/13 12:23	1868-53-7	D3
4-Bromofluorobenzene (S)	97 %		80-120	200		07/31/13 12:23	460-00-4	
Toluene-d8 (S)	94 %		80-120	200		07/31/13 12:23	2037-26-5	
1,2-Dichloroethane-d4 (S)	94 %		80-120	200		07/31/13 12:23	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

<b>Sample: 316-024</b>		<b>Lab ID: 60149810001</b>	Collected: 07/27/13 16:15	Received: 07/29/13 13:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Preservation pH	<b>7.0</b>		1.0	200		07/31/13 12:23		
<b>HEM, Oil and Grease</b>		Analytical Method: EPA 1664A						
Oil and Grease	<b>510</b>	mg/L	5.0	1		07/30/13 07:51		
<b>1664 SGT-HEM, TPH</b>		Analytical Method: EPA 1664A						
Total Petroleum Hydrocarbons	<b>5.9</b>	mg/L	5.0	1		07/31/13 09:16		
<b>2540D Total Suspended Solids</b>		Analytical Method: SM 2540D						
Total Suspended Solids	<b>1720</b>	mg/L	5.0	1		07/30/13 08:24		
<b>4500H+ pH, Electrometric</b>		Analytical Method: SM 4500-H+B						
pH at 25 Degrees C	<b>5.5</b>	Std. Units	0.10	1		07/30/13 10:12		H6
<b>350.1 Ammonia</b>		Analytical Method: EPA 350.1						
Nitrogen, Ammonia	<b>816</b>	mg/L	20.0	200		08/01/13 14:46	7664-41-7	
<b>410.4 COD</b>		Analytical Method: EPA 410.4						
Chemical Oxygen Demand	<b>59700</b>	mg/L	5000	500		08/01/13 06:45		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

Sample: TRIP BLANK		Lab ID: 60149810002	Collected: 07/27/13 16:15	Received: 07/29/13 13:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND	ug/L	1.0	1		07/31/13 13:27	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		07/31/13 13:27	75-27-4	
Bromoform	ND	ug/L	1.0	1		07/31/13 13:27	75-25-2	
Bromomethane	ND	ug/L	5.0	1		07/31/13 13:27	74-83-9	
Carbon tetrachloride	ND	ug/L	1.0	1		07/31/13 13:27	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		07/31/13 13:27	108-90-7	
Chloroethane	ND	ug/L	1.0	1		07/31/13 13:27	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		07/31/13 13:27	110-75-8	
Chloroform	ND	ug/L	1.0	1		07/31/13 13:27	67-66-3	
Chloromethane	ND	ug/L	1.0	1		07/31/13 13:27	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		07/31/13 13:27	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		07/31/13 13:27	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		07/31/13 13:27	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		07/31/13 13:27	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		07/31/13 13:27	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		07/31/13 13:27	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		07/31/13 13:27	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		07/31/13 13:27	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		07/31/13 13:27	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		07/31/13 13:27	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		07/31/13 13:27	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		07/31/13 13:27	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		07/31/13 13:27	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		07/31/13 13:27	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		07/31/13 13:27	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		07/31/13 13:27	127-18-4	
Toluene	ND	ug/L	1.0	1		07/31/13 13:27	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		07/31/13 13:27	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		07/31/13 13:27	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		07/31/13 13:27	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		07/31/13 13:27	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		07/31/13 13:27	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		07/31/13 13:27	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	91 %		80-120	1		07/31/13 13:27	1868-53-7	
4-Bromofluorobenzene (S)	97 %		80-120	1		07/31/13 13:27	460-00-4	
Toluene-d8 (S)	98 %		80-120	1		07/31/13 13:27	2037-26-5	
1,2-Dichloroethane-d4 (S)	94 %		80-120	1		07/31/13 13:27	17060-07-0	
Preservation pH	7.0			1		07/31/13 13:27		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

QC Batch:	MERP/7554	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60149810001		

METHOD BLANK: 1228436 Matrix: Water  
Associated Lab Samples: 60149810001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/31/13 14:02	

LABORATORY CONTROL SAMPLE: 1228437

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228438 1228439

Parameter	Units	60149890003 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Mercury	ug/L	ND	5	5	5.0	5.2	99	103	70-130	4	20	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

QC Batch: MERP/7558 Analysis Method: EPA 245.1  
 QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury - Dissolved  
 Associated Lab Samples: 60149810001

METHOD BLANK: 1228981 Matrix: Water

Associated Lab Samples: 60149810001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	08/01/13 13:39	

LABORATORY CONTROL SAMPLE: 1228982

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228983 1228984

Parameter	Units	60149693001 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury, Dissolved	ug/L	ND	5	5	2.8	2.3	56	46	70-130	19	20	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024  
Pace Project No.: 60149810

QC Batch: MPRP/23654      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60149810001

METHOD BLANK: 1227456      Matrix: Water

Associated Lab Samples: 60149810001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/31/13 16:35	
Antimony	ug/L	ND	10.0	07/31/13 16:35	
Arsenic	ug/L	ND	10.0	07/31/13 16:35	
Beryllium	ug/L	ND	1.0	07/31/13 16:35	
Cadmium	ug/L	ND	5.0	07/31/13 16:35	
Chromium	ug/L	ND	5.0	07/31/13 16:35	
Cobalt	ug/L	ND	5.0	07/31/13 16:35	
Copper	ug/L	ND	10.0	07/31/13 16:35	
Iron	ug/L	ND	50.0	07/31/13 16:35	
Lead	ug/L	ND	5.0	07/31/13 16:35	
Nickel	ug/L	ND	5.0	07/31/13 16:35	
Selenium	ug/L	ND	15.0	07/31/13 16:35	
Silver	ug/L	ND	7.0	07/31/13 16:35	
Thallium	ug/L	ND	20.0	07/31/13 16:35	
Zinc	ug/L	ND	50.0	07/31/13 16:35	

LABORATORY CONTROL SAMPLE: 1227457

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10000	100	85-115	
Antimony	ug/L	1000	1010	101	85-115	
Arsenic	ug/L	1000	972	97	85-115	
Beryllium	ug/L	1000	1000	100	85-115	
Cadmium	ug/L	1000	983	98	85-115	
Chromium	ug/L	1000	1010	101	85-115	
Cobalt	ug/L	1000	987	99	85-115	
Copper	ug/L	1000	960	96	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	994	99	85-115	
Nickel	ug/L	1000	1010	101	85-115	
Selenium	ug/L	1000	1020	102	85-115	
Silver	ug/L	500	486	97	85-115	
Thallium	ug/L	1000	966	97	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1227458      1227459

Parameter	Units	60149441002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum	ug/L	ND	10000	10000	9860	10600	99	106	70-130	8	8

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1227458 1227459												
Parameter	Units	60149441002 Result	MS		MSD		MS		MSD		Max RPD	Qual
			Spike Conc.	MSD Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits			
Antimony	ug/L	ND	1000	1000	1010	1020	101	102	70-130	0	7	
Arsenic	ug/L	ND	1000	1000	977	987	98	99	70-130	1	10	
Beryllium	ug/L	ND	1000	1000	986	1060	99	106	70-130	7	7	
Cadmium	ug/L	ND	1000	1000	987	996	99	100	70-130	1	10	
Chromium	ug/L	ND	1000	1000	1030	1050	103	105	70-130	2	10	
Cobalt	ug/L	ND	1000	1000	999	1010	100	101	70-130	1	6	
Copper	ug/L	ND	1000	1000	978	987	98	99	70-130	1	11	
Iron	ug/L	ND	10000	10000	9940	10800	99	108	70-130	8	10	
Lead	ug/L	ND	1000	1000	1000	1020	100	102	70-130	1	10	
Nickel	ug/L	ND	1000	1000	1020	1030	102	103	70-130	1	10	
Selenium	ug/L	ND	1000	1000	1010	1020	101	102	70-130	1	10	
Silver	ug/L	ND	500	500	493	503	99	100	70-130	2	10	
Thallium	ug/L	ND	1000	1000	977	987	98	99	70-130	1	6	
Zinc	ug/L	ND	1000	1000	1030	1060	103	105	70-130	2	11	

MATRIX SPIKE SAMPLE: 1227460								
Parameter	Units	60149725001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Aluminum	ug/L	24.3J	10000	9930	99	70-130		
Antimony	ug/L	ND	1000	1020	102	70-130		
Arsenic	ug/L	ND	1000	984	98	70-130		
Beryllium	ug/L	ND	1000	1000	100	70-130		
Cadmium	ug/L	ND	1000	990	99	70-130		
Chromium	ug/L	1.5J	1000	1010	101	70-130		
Cobalt	ug/L	ND	1000	978	98	70-130		
Copper	ug/L	14.5	1000	1010	100	70-130		
Iron	ug/L	102	10000	10000	99	70-130		
Lead	ug/L	ND	1000	990	99	70-130		
Nickel	ug/L	3.6J	1000	998	99	70-130		
Selenium	ug/L	ND	1000	1010	101	70-130		
Silver	ug/L	ND	500	496	99	70-130		
Thallium	ug/L	ND	1000	971	97	70-130		
Zinc	ug/L	449	1000	1420	97	70-130		

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

QC Batch: MPRP/23689

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Dissolved

Associated Lab Samples: 60149810001

METHOD BLANK: 1228838

Matrix: Water

Associated Lab Samples: 60149810001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	08/01/13 11:37	
Antimony, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Arsenic, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Beryllium, Dissolved	ug/L	ND	1.0	08/01/13 11:37	
Cadmium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Chromium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Cobalt, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Copper, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Iron, Dissolved	ug/L	ND	50.0	08/01/13 11:37	
Lead, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Nickel, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Selenium, Dissolved	ug/L	ND	15.0	08/01/13 11:37	
Silver, Dissolved	ug/L	ND	7.0	08/01/13 11:37	
Thallium, Dissolved	ug/L	ND	20.0	08/01/13 11:37	
Zinc, Dissolved	ug/L	ND	50.0	08/01/13 11:37	

LABORATORY CONTROL SAMPLE: 1228839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10100	101	85-115	
Antimony, Dissolved	ug/L	1000	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	974	97	85-115	
Beryllium, Dissolved	ug/L	1000	998	100	85-115	
Cadmium, Dissolved	ug/L	1000	993	99	85-115	
Chromium, Dissolved	ug/L	1000	1010	101	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	968	97	85-115	
Iron, Dissolved	ug/L	10000	10300	103	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	1000	100	85-115	
Silver, Dissolved	ug/L	500	494	99	85-115	
Thallium, Dissolved	ug/L	1000	980	98	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228840

1228841

Parameter	Units	60149631001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	3640	10000	10000	10000	14000	13800	104	101	70-130	1	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

Parameter	60149631001		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony, Dissolved	ug/L	33.8	1000	1000	1020	1010	98	98	70-130	1	7		
Arsenic, Dissolved	ug/L	545	1000	1000	1670	1680	112	113	70-130	1	10		
Beryllium, Dissolved	ug/L	ND	1000	1000	926	916	93	92	70-130	1	7		
Cadmium, Dissolved	ug/L	ND	1000	1000	1030	1030	103	103	70-130	0	10		
Chromium, Dissolved	ug/L	201	1000	1000	1070	1030	87	83	70-130	4	10		
Cobalt, Dissolved	ug/L	37.0	1000	1000	937	927	90	89	70-130	1	6		
Copper, Dissolved	ug/L	ND	1000	1000	1010	1020	100	101	70-130	1	11		
Iron, Dissolved	ug/L	506000	10000	10000	548000	535000	418	286	70-130	2	10	M1	
Lead, Dissolved	ug/L	48.3	1000	1000	871	856	82	81	70-130	2	10		
Nickel, Dissolved	ug/L	111	1000	1000	993	981	88	87	70-130	1	10		
Selenium, Dissolved	ug/L	ND	1000	1000	1180	1190	118	119	70-130	1	10		
Silver, Dissolved	ug/L	ND	500	500	44.2	42.9	9	9	70-130	3	10	M1	
Thallium, Dissolved	ug/L	ND	1000	1000	760	740	76	74	70-130	3	6		
Zinc, Dissolved	ug/L	12600	1000	1000	14500	14000	195	148	70-130	3	11	M1	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

QC Batch: MSV/55266 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149810001, 60149810002

METHOD BLANK: 1228397 Matrix: Water

Associated Lab Samples: 60149810001, 60149810002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1-Dichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichloropropane	ug/L	ND	1.0	07/31/13 10:16	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/31/13 10:16	
Benzene	ug/L	ND	1.0	07/31/13 10:16	
Bromodichloromethane	ug/L	ND	1.0	07/31/13 10:16	
Bromoform	ug/L	ND	1.0	07/31/13 10:16	
Bromomethane	ug/L	ND	5.0	07/31/13 10:16	
Carbon tetrachloride	ug/L	ND	1.0	07/31/13 10:16	
Chlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
Chloroethane	ug/L	ND	1.0	07/31/13 10:16	
Chloroform	ug/L	ND	1.0	07/31/13 10:16	
Chloromethane	ug/L	ND	1.0	07/31/13 10:16	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/31/13 10:16	
Dibromochloromethane	ug/L	ND	1.0	07/31/13 10:16	
Ethylbenzene	ug/L	ND	1.0	07/31/13 10:16	
Methylene chloride	ug/L	ND	1.0	07/31/13 10:16	
Tetrachloroethene	ug/L	ND	1.0	07/31/13 10:16	
Toluene	ug/L	ND	1.0	07/31/13 10:16	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/31/13 10:16	
Trichloroethene	ug/L	ND	1.0	07/31/13 10:16	
Trichlorofluoromethane	ug/L	ND	1.0	07/31/13 10:16	
Vinyl chloride	ug/L	ND	1.0	07/31/13 10:16	
Xylene (Total)	ug/L	ND	3.0	07/31/13 10:16	
1,2-Dichloroethane-d4 (S)	%	95	80-120	07/31/13 10:16	
4-Bromofluorobenzene (S)	%	99	80-120	07/31/13 10:16	
Toluene-d8 (S)	%	99	80-120	07/31/13 10:16	

LABORATORY CONTROL SAMPLE: 1228398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	15.0	75	71-139	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

LABORATORY CONTROL SAMPLE: 1228398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	19.4	97	59-138	
1,1,2-Trichloroethane	ug/L	20	18.2	91	69-127	
1,1-Dichloroethane	ug/L	20	15.4	77	69-126	
1,1-Dichloroethene	ug/L	20	18.3	92	65-153	
1,2-Dichlorobenzene	ug/L	20	18.1	90	66-126	
1,2-Dichloroethane	ug/L	20	16.7	83	71-129	
1,2-Dichloropropane	ug/L	20	18.2	91	66-140	
1,3-Dichlorobenzene	ug/L	20	18.0	90	63-127	
1,4-Dichlorobenzene	ug/L	20	18.1	91	68-124	
2-Chloroethylvinyl ether	ug/L	20	13.6	68	33-159	
Benzene	ug/L	20	19.7	98	73-129	
Bromodichloromethane	ug/L	20	15.3	76	63-129	
Bromoform	ug/L	20	18.1	91	52-123	
Bromomethane	ug/L	20	20.8	104	10-160	
Carbon tetrachloride	ug/L	20	15.0	75	70-140	
Chlorobenzene	ug/L	20	16.7	84	68-127	
Chloroethane	ug/L	20	16.2	81	42-160	
Chloroform	ug/L	20	15.0	75	60-120	
Chloromethane	ug/L	20	20.6	103	10-160	
cis-1,2-Dichloroethene	ug/L	20	16.6	83	70-125	
cis-1,3-Dichloropropene	ug/L	20	16.0	80	66-132	
Dibromochloromethane	ug/L	20	15.9	79	63-134	
Ethylbenzene	ug/L	20	17.2	86	66-133	
Methylene chloride	ug/L	20	18.1	90	56-135	
Tetrachloroethene	ug/L	20	18.3	92	64-143	
Toluene	ug/L	20	18.0	90	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	67-149	
trans-1,3-Dichloropropene	ug/L	20	17.8	89	66-138	
Trichloroethene	ug/L	20	16.1	80	71-130	
Trichlorofluoromethane	ug/L	20	15.0	75	58-158	
Vinyl chloride	ug/L	20	17.9	90	41-160	
Xylene (Total)	ug/L	60	56.8	95	67-130	
1,2-Dichloroethane-d4 (S)	%			96	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			96	80-120	

MATRIX SPIKE SAMPLE: 1228399

Parameter	Units	60149631001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3730	93	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4820	121	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4030	101	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3670	92	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4250	106	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	4630	116	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3970	99	49-155	
1,2-Dichloropropane	ug/L	ND	4000	4290	107	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

MATRIX SPIKE SAMPLE:		1228399		60149631001		Spike	MS	MS	% Rec	
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits	Qualifiers	
1,3-Dichlorobenzene	ug/L	ND	4000	4490	112	59-146				
1,4-Dichlorobenzene	ug/L	ND	4000	4420	111	18-147				
2-Chloroethylvinyl ether	ug/L	ND	4000	4080	102	10-160				
Benzene	ug/L	ND	4000	4610	115	37-151				
Bromodichloromethane	ug/L	ND	4000	3740	94	35-155				
Bromoform	ug/L	ND	4000	4090	102	45-133				
Bromomethane	ug/L	ND	4000	4640	116	10-160				
Carbon tetrachloride	ug/L	ND	4000	3700	93	70-140				
Chlorobenzene	ug/L	ND	4000	4000	100	37-153				
Chloroethane	ug/L	ND	4000	3980	99	14-160				
Chloroform	ug/L	ND	4000	3610	90	51-138				
Chloromethane	ug/L	ND	4000	4960	124	10-160				
cis-1,2-Dichloroethene	ug/L	ND	4000	3890	97	19-160				
cis-1,3-Dichloropropene	ug/L	ND	4000	3900	98	10-160				
Dibromochloromethane	ug/L	ND	4000	3700	92	53-149				
Ethylbenzene	ug/L	ND	4000	4130	103	37-154				
Methylene chloride	ug/L	ND	4000	4310	107	15-156				
Tetrachloroethene	ug/L	ND	4000	4400	110	64-148				
Toluene	ug/L	ND	4000	4360	109	47-150				
trans-1,2-Dichloroethene	ug/L	ND	4000	4260	107	54-156				
trans-1,3-Dichloropropene	ug/L	ND	4000	4110	103	17-160				
Trichloroethene	ug/L	ND	4000	3730	93	71-157				
Trichlorofluoromethane	ug/L	ND	4000	3760	94	17-160				
Vinyl chloride	ug/L	ND	4000	4390	110	10-160				
Xylene (Total)	ug/L	ND	12000	13500	113	12-153				
1,2-Dichloroethane-d4 (S)	%				93	80-120				
4-Bromofluorobenzene (S)	%				101	80-120	D3			
Toluene-d8 (S)	%				96	80-120				
Preservation pH		7.0		7.0						

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

QC Batch: OEXT/39536 Analysis Method: EPA 625  
 QC Batch Method: EPA 625 Analysis Description: 625 MSS  
 Associated Lab Samples: 60149810001

METHOD BLANK: 1227555 Matrix: Water

Associated Lab Samples: 60149810001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/31/13 17:42	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dichlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dimethylphenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dinitrophenol	ug/L	ND	50.0	07/31/13 17:42	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/31/13 17:42	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/31/13 17:42	
2-Chloronaphthalene	ug/L	ND	5.0	07/31/13 17:42	
2-Chlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2-Nitrophenol	ug/L	ND	5.0	07/31/13 17:42	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/31/13 17:42	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/31/13 17:42	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/31/13 17:42	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/31/13 17:42	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/31/13 17:42	
4-Nitrophenol	ug/L	ND	5.0	07/31/13 17:42	
Acenaphthene	ug/L	ND	5.0	07/31/13 17:42	
Acenaphthylene	ug/L	ND	5.0	07/31/13 17:42	
Anthracene	ug/L	ND	5.0	07/31/13 17:42	
Benzidine	ug/L	ND	50.0	07/31/13 17:42	
Benzo(a)anthracene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(a)pyrene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/31/13 17:42	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/31/13 17:42	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/31/13 17:42	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/31/13 17:42	
Butylbenzylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Chrysene	ug/L	ND	5.0	07/31/13 17:42	
Di-n-butylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Di-n-octylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/31/13 17:42	
Diethylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Dimethylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
Fluorene	ug/L	ND	5.0	07/31/13 17:42	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/31/13 17:42	
Hexachlorobenzene	ug/L	ND	5.0	07/31/13 17:42	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/31/13 17:42	
Hexachloroethane	ug/L	ND	5.0	07/31/13 17:42	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/31/13 17:42	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Project No.: 60149810

METHOD BLANK: 1227555

Matrix: Water

Associated Lab Samples: 60149810001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/31/13 17:42	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/31/13 17:42	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/31/13 17:42	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/31/13 17:42	
Naphthalene	ug/L	ND	5.0	07/31/13 17:42	
Nitrobenzene	ug/L	ND	5.0	07/31/13 17:42	
Pentachlorophenol	ug/L	ND	5.0	07/31/13 17:42	
Phenanthrene	ug/L	ND	5.0	07/31/13 17:42	
Phenol	ug/L	ND	5.0	07/31/13 17:42	
Pyrene	ug/L	ND	5.0	07/31/13 17:42	
2,4,6-Tribromophenol (S)	%	74	39-119	07/31/13 17:42	
2-Fluorobiphenyl (S)	%	68	36-120	07/31/13 17:42	
2-Fluorophenol (S)	%	43	18-120	07/31/13 17:42	
Nitrobenzene-d5 (S)	%	66	32-120	07/31/13 17:42	
Phenol-d6 (S)	%	30	12-120	07/31/13 17:42	
Terphenyl-d14 (S)	%	74	44-120	07/31/13 17:42	

LABORATORY CONTROL SAMPLE: 1227556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	34.9	70	44-120	
2,4,6-Trichlorophenol	ug/L	50	35.5	71	48-120	
2,4-Dichlorophenol	ug/L	50	35.3	71	48-120	
2,4-Dimethylphenol	ug/L	50	32.6	65	37-119	
2,4-Dinitrophenol	ug/L	50	37.4J	75	15-153	
2,4-Dinitrotoluene	ug/L	50	39.7	79	54-120	
2,6-Dinitrotoluene	ug/L	50	38.2	76	52-120	
2-Chloronaphthalene	ug/L	50	35.3	71	60-118	
2-Chlorophenol	ug/L	50	33.2	66	44-120	
2-Nitrophenol	ug/L	50	38.2	76	43-120	
3,3'-Dichlorobenzidine	ug/L	50	52.7	105	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	41.4	83	31-147	
4-Bromophenylphenyl ether	ug/L	50	37.2	74	53-120	
4-Chloro-3-methylphenol	ug/L	50	36.0	72	50-120	
4-Chlorophenylphenyl ether	ug/L	50	36.4	73	54-120	
4-Nitrophenol	ug/L	50	15.6	31	10-120	
Acenaphthene	ug/L	50	35.7	71	51-120	
Acenaphthylene	ug/L	50	35.8	72	51-120	
Anthracene	ug/L	50	36.2	72	54-120	
Benzidine	ug/L	50	33.8J	68	1-124	
Benzo(a)anthracene	ug/L	50	37.1	74	54-120	
Benzo(a)pyrene	ug/L	50	37.9	76	54-120	
Benzo(b)fluoranthene	ug/L	50	36.0	72	57-120	
Benzo(g,h,i)perylene	ug/L	50	36.4	73	54-120	
Benzo(k)fluoranthene	ug/L	50	38.7	77	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

LABORATORY CONTROL SAMPLE: 1227556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	35.6	71	51-120	
bis(2-Chloroethyl) ether	ug/L	50	35.5	71	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	34.6	69	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	38.7	77	51-126	
Butylbenzylphthalate	ug/L	50	39.1	78	45-129	
Chrysene	ug/L	50	37.5	75	54-120	
Di-n-butylphthalate	ug/L	50	38.4	77	57-118	
Di-n-octylphthalate	ug/L	50	39.1	78	48-130	
Dibenz(a,h)anthracene	ug/L	50	36.3	73	56-119	
Diethylphthalate	ug/L	50	37.2	74	55-114	
Dimethylphthalate	ug/L	50	36.5	73	54-112	
Fluoranthene	ug/L	50	37.3	75	56-120	
Fluorene	ug/L	50	36.4	73	59-120	
Hexachloro-1,3-butadiene	ug/L	50	35.1	70	41-116	
Hexachlorobenzene	ug/L	50	37.4	75	53-120	
Hexachlorocyclopentadiene	ug/L	100	58.0	58	31-120	
Hexachloroethane	ug/L	50	32.9	66	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	36.4	73	55-120	
Isophorone	ug/L	50	36.0	72	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	35.6	71	47-120	
N-Nitrosodimethylamine	ug/L	50	25.4	51	28-120	
N-Nitrosodiphenylamine	ug/L	50	36.1	72	53-120	
Naphthalene	ug/L	50	35.3	71	48-120	
Nitrobenzene	ug/L	50	36.7	73	47-120	
Pentachlorophenol	ug/L	50	38.7	77	43-127	
Phenanthrene	ug/L	50	36.4	73	55-120	
Phenol	ug/L	50	14.9	30	15-112	
Pyrene	ug/L	50	38.2	76	55-115	
2,4,6-Tribromophenol (S)	%			77	39-119	
2-Fluorobiphenyl (S)	%			72	36-120	
2-Fluorophenol (S)	%			42	18-120	
Nitrobenzene-d5 (S)	%			71	32-120	
Phenol-d6 (S)	%			29	12-120	
Terphenyl-d14 (S)	%			78	44-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

QC Batch:	WET/42610	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149810001		

METHOD BLANK: 1227576 Matrix: Water

Associated Lab Samples: 60149810001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/30/13 07:50	

LABORATORY CONTROL SAMPLE: 1227577

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	40.3	101	78-114	

MATRIX SPIKE SAMPLE: 1227578

Parameter	Units	60149743001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.7	43.4	99	78-114	

SAMPLE DUPLICATE: 1227582

Parameter	Units	60149531004 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	1.7J		18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

QC Batch: WET/42632

Analysis Method: EPA 1664A

QC Batch Method: EPA 1664A

Analysis Description: 1664 SGT-HEM, TPH

Associated Lab Samples: 60149810001

METHOD BLANK: 1228227

Matrix: Water

Associated Lab Samples: 60149810001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/31/13 09:13	

LABORATORY CONTROL SAMPLE: 1228228

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.4	107	64-132	

MATRIX SPIKE SAMPLE: 1228229

Parameter	Units	60149213001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	10.3	20.6	54.8	216	64-132	M1

SAMPLE DUPLICATE: 1228231

Parameter	Units	60149229001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	4.1J	6.7		34	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

QC Batch:	WET/42612	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60149810001		

METHOD BLANK: 1227598 Matrix: Water

Associated Lab Samples: 60149810001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/30/13 08:22	

SAMPLE DUPLICATE: 1227599

Parameter	Units	60149693001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	57200	58100	1	25	

SAMPLE DUPLICATE: 1227600

Parameter	Units	60149646001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	52.0	60.0	14	25	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

QC Batch: WET/42619 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149810001

SAMPLE DUPLICATE: 1227661

Parameter	Units	60149816001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	9.5	9.5	0	5	H6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

QC Batch:	WETA/25643	Analysis Method:	EPA 350.1
QC Batch Method:	EPA 350.1	Analysis Description:	350.1 Ammonia
Associated Lab Samples:	60149810001		

METHOD BLANK: 1228896 Matrix: Water

Associated Lab Samples: 60149810001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	08/01/13 14:39	

LABORATORY CONTROL SAMPLE: 1228897

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1228898

Parameter	Units	60149749004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	106	90-110	

MATRIX SPIKE SAMPLE: 1228899

Parameter	Units	60149750001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.25	2	1.5	61	90-110	M1

SAMPLE DUPLICATE: 1228900

Parameter	Units	60149861001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	7.2	7.2	0	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

QC Batch:	WETA/25620	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60149810001		

METHOD BLANK: 1227951 Matrix: Water

Associated Lab Samples: 60149810001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	08/01/13 06:42	

LABORATORY CONTROL SAMPLE: 1227952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	51.6	103	90-110	

MATRIX SPIKE SAMPLE: 1227954

Parameter	Units	60149614002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	42.3	50	91.5	98	90-110	

MATRIX SPIKE SAMPLE: 1227955

Parameter	Units	60149668001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	16.6	50	67.6	102	90-110	

SAMPLE DUPLICATE: 1227953

Parameter	Units	60149631001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	53900	53800	0	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39536

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

S0 Surrogate recovery outside laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-024

Pace Project No.: 60149810

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149810001	316-024	EPA 200.7	MPRP/23654	EPA 200.7	ICP/18559
60149810001	316-024	EPA 200.7	MPRP/23689	EPA 200.7	ICP/18580
60149810001	316-024	EPA 245.1	MERP/7554	EPA 245.1	MERC/7511
60149810001	316-024	EPA 245.1	MERP/7558	EPA 245.1	MERC/7515
60149810001	316-024	EPA 625	OEXT/39536	EPA 625	MSSV/12544
60149810001	316-024	EPA 624 Low	MSV/55266		
60149810002	TRIP BLANK	EPA 624 Low	MSV/55266		
60149810001	316-024	EPA 1664A	WET/42610		
60149810001	316-024	EPA 1664A	WET/42632		
60149810001	316-024	SM 2540D	WET/42612		
60149810001	316-024	SM 4500-H+B	WET/42619		
60149810001	316-024	EPA 350.1	WETA/25643		
60149810001	316-024	EPA 410.4	WETA/25620		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149810
Barcode
60149810

Client Name: Barry

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other [x] Xroad

Tracking #: Pace Shipping Label Used? Yes [ ] No [x]

Custody Seal on Cooler/Box Present: Yes [x] No [ ] Seals intact: Yes [x] No [ ]

Packing Material: Bubble Wrap [ ] Bubble Bags [x] Foam [ ] None [ ] Other [x] paper

Thermometer Used: T-112 / T-194 Type of Ice: [x] Wet Blue None [ ] Samples received on ice, cooling process has begun.

Cooler Temperature: 1/1

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: PV 7/29/13

Temperature should be above freezing to 6°C

Table with 17 rows and 2 columns. Row 1: Chain of Custody present: [x] Yes [ ] No [ ] N/A. Row 2: Chain of Custody filled out: [x] Yes [ ] No [ ] N/A. Row 3: Chain of Custody relinquished: [x] Yes [ ] No [ ] N/A. Row 4: Sampler name & signature on COC: [x] Yes [ ] No [ ] N/A. Row 5: Samples arrived within holding time: [x] Yes [ ] No [ ] N/A. Row 6: Short Hold Time analyses (<72hr): [x] Yes [ ] No [ ] N/A. Row 7: Rush Turn Around Time requested: [ ] Yes [x] No [ ] N/A. Row 8: Sufficient volume: [x] Yes [ ] No [ ] N/A. Row 9: Correct containers used: [x] Yes [ ] No [ ] N/A. Row 10: Pace containers used: [x] Yes [ ] No [ ] N/A. Row 11: Containers intact: [x] Yes [ ] No [ ] N/A. Row 12: Unpreserved 5035A soils frozen w/in 48hrs?: [ ] Yes [ ] No [x] N/A. Row 13: Filtered volume received for dissolved tests?: [ ] Yes [ ] No [x] N/A. Row 14: Sample labels match COC: [x] Yes [ ] No [ ] N/A. Row 15: Includes date/time/ID/analyses Matrix: WT. Row 16: All containers needing preservation have been checked: [x] Yes [ ] No [ ] N/A. Row 17: All containers needing preservation are found to be in compliance with EPA recommendation: [x] Yes [ ] No [ ] N/A. Row 18: Exceptions: VOA coliform, TOC, O&G, WI-DRO (water), Phenolics: [x] Yes [ ] No. Row 19: Trip Blank present: [x] Yes [ ] No [ ] N/A. Row 20: Pace Trip Blank lot # (if purchased): rover PV 7/29/13. Row 21: Headspace in VOA vials (>6mm): [ ] Yes [x] No [ ] N/A. Row 22: Project sampled in USDA Regulated Area: [ ] Yes [ ] No [x] N/A. List State: AK3

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: mw for AK3

Date: 7/30/13





August 05, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-025  
Pace Project No.: 60149811

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 29, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149811001	316-025	Water	07/28/13 13:20	07/29/13 13:15
60149811002	TRIP BLANK	Water	07/28/13 13:20	07/29/13 13:15

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149811001	316-025	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	AAM	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	DJR	1
		60149811002	TRIP BLANK	EPA 624 Low

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

Sample: 316-025	Lab ID: 60149811001	Collected: 07/28/13 13:20	Received: 07/29/13 13:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum	6960 ug/L		150	2	07/29/13 15:30	07/31/13 17:54	7429-90-5	
Antimony	41.8 ug/L		20.0	2	07/29/13 15:30	07/31/13 17:54	7440-36-0	
Arsenic	653 ug/L		20.0	2	07/29/13 15:30	07/31/13 17:54	7440-38-2	
Beryllium	ND ug/L		5.0	5	07/29/13 15:30	07/31/13 18:05	7440-41-7	D3
Cadmium	13.6 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:54	7440-43-9	
Chromium	279 ug/L		25.0	5	07/29/13 15:30	07/31/13 18:05	7440-47-3	
Cobalt	48.4 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:54	7440-48-4	
Copper	ND ug/L		20.0	2	07/29/13 15:30	07/31/13 17:54	7440-50-8	D3
Iron	898000 ug/L		100	2	07/29/13 15:30	07/31/13 17:54	7439-89-6	
Lead	156 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:54	7439-92-1	
Nickel	124 ug/L		10.0	2	07/29/13 15:30	07/31/13 17:54	7440-02-0	
Selenium	ND ug/L		75.0	5	07/29/13 15:30	07/31/13 18:05	7782-49-2	D3
Silver	ND ug/L		14.0	2	07/29/13 15:30	07/31/13 17:54	7440-22-4	D3
Thallium	ND ug/L		100	5	07/29/13 15:30	07/31/13 18:05	7440-28-0	D3
Zinc	15700 ug/L		1000	20	07/29/13 15:30	07/31/13 18:15	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum, Dissolved	4130 ug/L		150	2	07/31/13 16:30	08/01/13 12:17	7429-90-5	
Antimony, Dissolved	36.0 ug/L		20.0	2	07/31/13 16:30	08/01/13 12:17	7440-36-0	
Arsenic, Dissolved	614 ug/L		20.0	2	07/31/13 16:30	08/01/13 12:17	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/31/13 16:30	08/01/13 13:02	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		10.0	2	07/31/13 16:30	08/01/13 12:17	7440-43-9	D3
Chromium, Dissolved	227 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:17	7440-47-3	
Cobalt, Dissolved	41.9 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:17	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/31/13 16:30	08/01/13 12:17	7440-50-8	D3
Iron, Dissolved	605000 ug/L		100	2	07/31/13 16:30	08/01/13 12:17	7439-89-6	
Lead, Dissolved	67.2 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:17	7439-92-1	
Nickel, Dissolved	120 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:17	7440-02-0	
Selenium, Dissolved	ND ug/L		30.0	2	07/31/13 16:30	08/01/13 12:17	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/31/13 16:30	08/01/13 12:17	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/31/13 16:30	08/01/13 13:02	7440-28-0	D3
Zinc, Dissolved	13900 ug/L		1000	20	07/31/13 16:30	08/01/13 13:41	7440-66-6	
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury	1.0 ug/L		0.20	1	07/31/13 10:45	07/31/13 14:09	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND ug/L		0.20	1	08/01/13 10:30	08/01/13 13:55	7439-97-6	
<b>625 MSSV</b>								
Analytical Method: EPA 625 Preparation Method: EPA 625								
Acenaphthene	ND ug/L		1250	5	07/30/13 00:00	08/01/13 07:45	83-32-9	
Acenaphthylene	ND ug/L		1250	5	07/30/13 00:00	08/01/13 07:45	208-96-8	
Anthracene	ND ug/L		1250	5	07/30/13 00:00	08/01/13 07:45	120-12-7	
Benzidine	ND ug/L		12500	5	07/30/13 00:00	08/01/13 07:45	92-87-5	
Benzo(a)anthracene	ND ug/L		1250	5	07/30/13 00:00	08/01/13 07:45	56-55-3	
Benzo(a)pyrene	ND ug/L		1250	5	07/30/13 00:00	08/01/13 07:45	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

Sample: 316-025		Lab ID: 60149811001	Collected: 07/28/13 13:20	Received: 07/29/13 13:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	101-55-3	
Butylbenzylphthalate	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1500	5	07/30/13 00:00	08/01/13 07:45	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1500	5	07/30/13 00:00	08/01/13 07:45	39638-32-9	
2-Chloronaphthalene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	91-58-7	
2-Chlorophenol	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	7005-72-3	
Chrysene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	5000	5	07/30/13 00:00	08/01/13 07:45	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	120-83-2	
Diethylphthalate	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	105-67-9	
Dimethylphthalate	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	131-11-3	
Di-n-butylphthalate	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	6250	5	07/30/13 00:00	08/01/13 07:45	534-52-1	
2,4-Dinitrophenol	ND	ug/L	12500	5	07/30/13 00:00	08/01/13 07:45	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	1500	5	07/30/13 00:00	08/01/13 07:45	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	606-20-2	
Di-n-octylphthalate	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	117-81-7	
Fluoranthene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	206-44-0	
Fluorene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	87-68-3	
Hexachlorobenzene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	77-47-4	
Hexachloroethane	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	193-39-5	
Isophorone	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	78-59-1	
Naphthalene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	91-20-3	
Nitrobenzene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	98-95-3	
2-Nitrophenol	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	88-75-5	
4-Nitrophenol	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	86-30-6	
Pentachlorophenol	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	87-86-5	
Phenanthrene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	85-01-8	
Phenol	<b>17900</b>	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	108-95-2	
Pyrene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1250	5	07/30/13 00:00	08/01/13 07:45	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

Sample: 316-025		Lab ID: 60149811001	Collected: 07/28/13 13:20	Received: 07/29/13 13:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	5	07/30/13 00:00	08/01/13 07:45	4165-60-0	P3,S0
2-Fluorobiphenyl (S)	0 %		36-120	5	07/30/13 00:00	08/01/13 07:45	321-60-8	S0
Terphenyl-d14 (S)	0 %		44-120	5	07/30/13 00:00	08/01/13 07:45	1718-51-0	S0
Phenol-d6 (S)	0 %		12-120	5	07/30/13 00:00	08/01/13 07:45	13127-88-3	S0
2-Fluorophenol (S)	0 %		18-120	5	07/30/13 00:00	08/01/13 07:45	367-12-4	S0
2,4,6-Tribromophenol (S)	0 %		39-119	5	07/30/13 00:00	08/01/13 07:45	118-79-6	S0
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		07/31/13 12:45	71-43-2	
Bromodichloromethane	ND ug/L		200	200		07/31/13 12:45	75-27-4	
Bromoform	ND ug/L		200	200		07/31/13 12:45	75-25-2	
Bromomethane	ND ug/L		1000	200		07/31/13 12:45	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		07/31/13 12:45	56-23-5	
Chlorobenzene	ND ug/L		200	200		07/31/13 12:45	108-90-7	
Chloroethane	ND ug/L		200	200		07/31/13 12:45	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		07/31/13 12:45	110-75-8	
Chloroform	ND ug/L		200	200		07/31/13 12:45	67-66-3	
Chloromethane	ND ug/L		200	200		07/31/13 12:45	74-87-3	
Dibromochloromethane	ND ug/L		200	200		07/31/13 12:45	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		07/31/13 12:45	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		07/31/13 12:45	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		07/31/13 12:45	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		07/31/13 12:45	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		07/31/13 12:45	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		07/31/13 12:45	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		07/31/13 12:45	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		07/31/13 12:45	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		07/31/13 12:45	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		07/31/13 12:45	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		07/31/13 12:45	10061-02-6	
Ethylbenzene	ND ug/L		200	200		07/31/13 12:45	100-41-4	
Methylene chloride	ND ug/L		200	200		07/31/13 12:45	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		07/31/13 12:45	79-34-5	
Tetrachloroethene	ND ug/L		200	200		07/31/13 12:45	127-18-4	
Toluene	ND ug/L		200	200		07/31/13 12:45	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		07/31/13 12:45	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		07/31/13 12:45	79-00-5	
Trichloroethene	ND ug/L		200	200		07/31/13 12:45	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		07/31/13 12:45	75-69-4	
Vinyl chloride	ND ug/L		200	200		07/31/13 12:45	75-01-4	
Xylene (Total)	ND ug/L		600	200		07/31/13 12:45	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	92 %		80-120	200		07/31/13 12:45	1868-53-7	D3
4-Bromofluorobenzene (S)	100 %		80-120	200		07/31/13 12:45	460-00-4	
Toluene-d8 (S)	98 %		80-120	200		07/31/13 12:45	2037-26-5	
1,2-Dichloroethane-d4 (S)	98 %		80-120	200		07/31/13 12:45	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

<b>Sample: 316-025</b>		<b>Lab ID: 60149811001</b>	Collected: 07/28/13 13:20	Received: 07/29/13 13:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Preservation pH	<b>7.0</b>		1.0	200		07/31/13 12:45		
<b>HEM, Oil and Grease</b>		Analytical Method: EPA 1664A						
Oil and Grease	<b>510</b>	mg/L	5.0	1		07/30/13 07:51		
<b>1664 SGT-HEM, TPH</b>		Analytical Method: EPA 1664A						
Total Petroleum Hydrocarbons	ND	mg/L	5.0	1		07/31/13 09:17		
<b>2540D Total Suspended Solids</b>		Analytical Method: SM 2540D						
Total Suspended Solids	<b>1380</b>	mg/L	5.0	1		07/30/13 08:24		
<b>4500H+ pH, Electrometric</b>		Analytical Method: SM 4500-H+B						
pH at 25 Degrees C	<b>5.5</b>	Std. Units	0.10	1		07/30/13 10:12		H6
<b>350.1 Ammonia</b>		Analytical Method: EPA 350.1						
Nitrogen, Ammonia	<b>783</b>	mg/L	20.0	200		08/01/13 14:47	7664-41-7	
<b>410.4 COD</b>		Analytical Method: EPA 410.4						
Chemical Oxygen Demand	<b>57300</b>	mg/L	5000	500		08/01/13 06:46		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

Sample: TRIP BLANK	Lab ID: 60149811002	Collected: 07/28/13 13:20	Received: 07/29/13 13:15	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		07/31/13 13:06	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		07/31/13 13:06	75-27-4	
Bromoform	ND ug/L		1.0	1		07/31/13 13:06	75-25-2	
Bromomethane	ND ug/L		5.0	1		07/31/13 13:06	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		07/31/13 13:06	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		07/31/13 13:06	108-90-7	
Chloroethane	ND ug/L		1.0	1		07/31/13 13:06	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		07/31/13 13:06	110-75-8	
Chloroform	ND ug/L		1.0	1		07/31/13 13:06	67-66-3	
Chloromethane	ND ug/L		1.0	1		07/31/13 13:06	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		07/31/13 13:06	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		07/31/13 13:06	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		07/31/13 13:06	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		07/31/13 13:06	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		07/31/13 13:06	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		07/31/13 13:06	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		07/31/13 13:06	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		07/31/13 13:06	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		07/31/13 13:06	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		07/31/13 13:06	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		07/31/13 13:06	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		07/31/13 13:06	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		07/31/13 13:06	100-41-4	
Methylene chloride	ND ug/L		1.0	1		07/31/13 13:06	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		07/31/13 13:06	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		07/31/13 13:06	127-18-4	
Toluene	ND ug/L		1.0	1		07/31/13 13:06	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		07/31/13 13:06	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		07/31/13 13:06	79-00-5	
Trichloroethene	ND ug/L		1.0	1		07/31/13 13:06	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		07/31/13 13:06	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		07/31/13 13:06	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		07/31/13 13:06	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	92 %		80-120	1		07/31/13 13:06	1868-53-7	
4-Bromofluorobenzene (S)	101 %		80-120	1		07/31/13 13:06	460-00-4	
Toluene-d8 (S)	98 %		80-120	1		07/31/13 13:06	2037-26-5	
1,2-Dichloroethane-d4 (S)	91 %		80-120	1		07/31/13 13:06	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		07/31/13 13:06		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

QC Batch:	MERP/7554	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60149811001		

METHOD BLANK: 1228436 Matrix: Water

Associated Lab Samples: 60149811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	07/31/13 14:02	

LABORATORY CONTROL SAMPLE: 1228437

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228438 1228439

Parameter	Units	60149890003 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Mercury	ug/L	ND	5	5	5.0	5.2	99	103	70-130	4	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

QC Batch:	MERP/7558	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60149811001		

METHOD BLANK: 1228981 Matrix: Water

Associated Lab Samples: 60149811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	08/01/13 13:39	

LABORATORY CONTROL SAMPLE: 1228982

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228983 1228984

Parameter	Units	60149693001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	2.8	2.3	56	46	70-130	19	20	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025  
Pace Project No.: 60149811

QC Batch: MPRP/23654      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60149811001

METHOD BLANK: 1227456      Matrix: Water  
Associated Lab Samples: 60149811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	07/31/13 16:35	
Antimony	ug/L	ND	10.0	07/31/13 16:35	
Arsenic	ug/L	ND	10.0	07/31/13 16:35	
Beryllium	ug/L	ND	1.0	07/31/13 16:35	
Cadmium	ug/L	ND	5.0	07/31/13 16:35	
Chromium	ug/L	ND	5.0	07/31/13 16:35	
Cobalt	ug/L	ND	5.0	07/31/13 16:35	
Copper	ug/L	ND	10.0	07/31/13 16:35	
Iron	ug/L	ND	50.0	07/31/13 16:35	
Lead	ug/L	ND	5.0	07/31/13 16:35	
Nickel	ug/L	ND	5.0	07/31/13 16:35	
Selenium	ug/L	ND	15.0	07/31/13 16:35	
Silver	ug/L	ND	7.0	07/31/13 16:35	
Thallium	ug/L	ND	20.0	07/31/13 16:35	
Zinc	ug/L	ND	50.0	07/31/13 16:35	

LABORATORY CONTROL SAMPLE: 1227457

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10000	100	85-115	
Antimony	ug/L	1000	1010	101	85-115	
Arsenic	ug/L	1000	972	97	85-115	
Beryllium	ug/L	1000	1000	100	85-115	
Cadmium	ug/L	1000	983	98	85-115	
Chromium	ug/L	1000	1010	101	85-115	
Cobalt	ug/L	1000	987	99	85-115	
Copper	ug/L	1000	960	96	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	994	99	85-115	
Nickel	ug/L	1000	1010	101	85-115	
Selenium	ug/L	1000	1020	102	85-115	
Silver	ug/L	500	486	97	85-115	
Thallium	ug/L	1000	966	97	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1227458      1227459

Parameter	Units	60149441002 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum	ug/L	ND	10000	10000	9860	10600	99	106	70-130	8	8

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1227458 1227459												
Parameter	Units	60149441002 Result	MS		MSD		MS		MSD		Max RPD	Qual
			Spike Conc.	MSD Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits			
Antimony	ug/L	ND	1000	1000	1010	1020	101	102	70-130	0	7	
Arsenic	ug/L	ND	1000	1000	977	987	98	99	70-130	1	10	
Beryllium	ug/L	ND	1000	1000	986	1060	99	106	70-130	7	7	
Cadmium	ug/L	ND	1000	1000	987	996	99	100	70-130	1	10	
Chromium	ug/L	ND	1000	1000	1030	1050	103	105	70-130	2	10	
Cobalt	ug/L	ND	1000	1000	999	1010	100	101	70-130	1	6	
Copper	ug/L	ND	1000	1000	978	987	98	99	70-130	1	11	
Iron	ug/L	ND	10000	10000	9940	10800	99	108	70-130	8	10	
Lead	ug/L	ND	1000	1000	1000	1020	100	102	70-130	1	10	
Nickel	ug/L	ND	1000	1000	1020	1030	102	103	70-130	1	10	
Selenium	ug/L	ND	1000	1000	1010	1020	101	102	70-130	1	10	
Silver	ug/L	ND	500	500	493	503	99	100	70-130	2	10	
Thallium	ug/L	ND	1000	1000	977	987	98	99	70-130	1	6	
Zinc	ug/L	ND	1000	1000	1030	1060	103	105	70-130	2	11	

MATRIX SPIKE SAMPLE: 1227460								
Parameter	Units	60149725001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Aluminum	ug/L	24.3J	10000	9930	99	70-130		
Antimony	ug/L	ND	1000	1020	102	70-130		
Arsenic	ug/L	ND	1000	984	98	70-130		
Beryllium	ug/L	ND	1000	1000	100	70-130		
Cadmium	ug/L	ND	1000	990	99	70-130		
Chromium	ug/L	1.5J	1000	1010	101	70-130		
Cobalt	ug/L	ND	1000	978	98	70-130		
Copper	ug/L	14.5	1000	1010	100	70-130		
Iron	ug/L	102	10000	10000	99	70-130		
Lead	ug/L	ND	1000	990	99	70-130		
Nickel	ug/L	3.6J	1000	998	99	70-130		
Selenium	ug/L	ND	1000	1010	101	70-130		
Silver	ug/L	ND	500	496	99	70-130		
Thallium	ug/L	ND	1000	971	97	70-130		
Zinc	ug/L	449	1000	1420	97	70-130		

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

QC Batch:	MPRP/23689	Analysis Method:	EPA 200.7
QC Batch Method:	EPA 200.7	Analysis Description:	200.7 Metals, Dissolved
Associated Lab Samples:	60149811001		

METHOD BLANK: 1228838 Matrix: Water

Associated Lab Samples: 60149811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	08/01/13 11:37	
Antimony, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Arsenic, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Beryllium, Dissolved	ug/L	ND	1.0	08/01/13 11:37	
Cadmium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Chromium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Cobalt, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Copper, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Iron, Dissolved	ug/L	ND	50.0	08/01/13 11:37	
Lead, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Nickel, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Selenium, Dissolved	ug/L	ND	15.0	08/01/13 11:37	
Silver, Dissolved	ug/L	ND	7.0	08/01/13 11:37	
Thallium, Dissolved	ug/L	ND	20.0	08/01/13 11:37	
Zinc, Dissolved	ug/L	ND	50.0	08/01/13 11:37	

LABORATORY CONTROL SAMPLE: 1228839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10100	101	85-115	
Antimony, Dissolved	ug/L	1000	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	974	97	85-115	
Beryllium, Dissolved	ug/L	1000	998	100	85-115	
Cadmium, Dissolved	ug/L	1000	993	99	85-115	
Chromium, Dissolved	ug/L	1000	1010	101	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	968	97	85-115	
Iron, Dissolved	ug/L	10000	10300	103	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	1000	100	85-115	
Silver, Dissolved	ug/L	500	494	99	85-115	
Thallium, Dissolved	ug/L	1000	980	98	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228840 1228841

Parameter	Units	60149631001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	
Aluminum, Dissolved	ug/L	3640	10000	10000	10000	14000	13800	104	101	70-130	1	8

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

Parameter	60149631001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec						
Antimony, Dissolved	ug/L	33.8	1000	1000	1020	1010	98	98	70-130	1	7			
Arsenic, Dissolved	ug/L	545	1000	1000	1670	1680	112	113	70-130	1	10			
Beryllium, Dissolved	ug/L	ND	1000	1000	926	916	93	92	70-130	1	7			
Cadmium, Dissolved	ug/L	ND	1000	1000	1030	1030	103	103	70-130	0	10			
Chromium, Dissolved	ug/L	201	1000	1000	1070	1030	87	83	70-130	4	10			
Cobalt, Dissolved	ug/L	37.0	1000	1000	937	927	90	89	70-130	1	6			
Copper, Dissolved	ug/L	ND	1000	1000	1010	1020	100	101	70-130	1	11			
Iron, Dissolved	ug/L	506000	10000	10000	548000	535000	418	286	70-130	2	10	M1		
Lead, Dissolved	ug/L	48.3	1000	1000	871	856	82	81	70-130	2	10			
Nickel, Dissolved	ug/L	111	1000	1000	993	981	88	87	70-130	1	10			
Selenium, Dissolved	ug/L	ND	1000	1000	1180	1190	118	119	70-130	1	10			
Silver, Dissolved	ug/L	ND	500	500	44.2	42.9	9	9	70-130	3	10	M1		
Thallium, Dissolved	ug/L	ND	1000	1000	760	740	76	74	70-130	3	6			
Zinc, Dissolved	ug/L	12600	1000	1000	14500	14000	195	148	70-130	3	11	M1		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

QC Batch: MSV/55266 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149811001, 60149811002

METHOD BLANK: 1228397 Matrix: Water

Associated Lab Samples: 60149811001, 60149811002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1,2-Trichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1-Dichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,1-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichloroethane	ug/L	ND	1.0	07/31/13 10:16	
1,2-Dichloropropane	ug/L	ND	1.0	07/31/13 10:16	
1,3-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
1,4-Dichlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
2-Chloroethylvinyl ether	ug/L	ND	10.0	07/31/13 10:16	
Benzene	ug/L	ND	1.0	07/31/13 10:16	
Bromodichloromethane	ug/L	ND	1.0	07/31/13 10:16	
Bromoform	ug/L	ND	1.0	07/31/13 10:16	
Bromomethane	ug/L	ND	5.0	07/31/13 10:16	
Carbon tetrachloride	ug/L	ND	1.0	07/31/13 10:16	
Chlorobenzene	ug/L	ND	1.0	07/31/13 10:16	
Chloroethane	ug/L	ND	1.0	07/31/13 10:16	
Chloroform	ug/L	ND	1.0	07/31/13 10:16	
Chloromethane	ug/L	ND	1.0	07/31/13 10:16	
cis-1,2-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
cis-1,3-Dichloropropene	ug/L	ND	1.0	07/31/13 10:16	
Dibromochloromethane	ug/L	ND	1.0	07/31/13 10:16	
Ethylbenzene	ug/L	ND	1.0	07/31/13 10:16	
Methylene chloride	ug/L	ND	1.0	07/31/13 10:16	
Tetrachloroethene	ug/L	ND	1.0	07/31/13 10:16	
Toluene	ug/L	ND	1.0	07/31/13 10:16	
trans-1,2-Dichloroethene	ug/L	ND	1.0	07/31/13 10:16	
trans-1,3-Dichloropropene	ug/L	ND	1.0	07/31/13 10:16	
Trichloroethene	ug/L	ND	1.0	07/31/13 10:16	
Trichlorofluoromethane	ug/L	ND	1.0	07/31/13 10:16	
Vinyl chloride	ug/L	ND	1.0	07/31/13 10:16	
Xylene (Total)	ug/L	ND	3.0	07/31/13 10:16	
1,2-Dichloroethane-d4 (S)	%	95	80-120	07/31/13 10:16	
4-Bromofluorobenzene (S)	%	99	80-120	07/31/13 10:16	
Toluene-d8 (S)	%	99	80-120	07/31/13 10:16	

LABORATORY CONTROL SAMPLE: 1228398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	15.0	75	71-139	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

LABORATORY CONTROL SAMPLE: 1228398

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	19.4	97	59-138	
1,1,2-Trichloroethane	ug/L	20	18.2	91	69-127	
1,1-Dichloroethane	ug/L	20	15.4	77	69-126	
1,1-Dichloroethene	ug/L	20	18.3	92	65-153	
1,2-Dichlorobenzene	ug/L	20	18.1	90	66-126	
1,2-Dichloroethane	ug/L	20	16.7	83	71-129	
1,2-Dichloropropane	ug/L	20	18.2	91	66-140	
1,3-Dichlorobenzene	ug/L	20	18.0	90	63-127	
1,4-Dichlorobenzene	ug/L	20	18.1	91	68-124	
2-Chloroethylvinyl ether	ug/L	20	13.6	68	33-159	
Benzene	ug/L	20	19.7	98	73-129	
Bromodichloromethane	ug/L	20	15.3	76	63-129	
Bromoform	ug/L	20	18.1	91	52-123	
Bromomethane	ug/L	20	20.8	104	10-160	
Carbon tetrachloride	ug/L	20	15.0	75	70-140	
Chlorobenzene	ug/L	20	16.7	84	68-127	
Chloroethane	ug/L	20	16.2	81	42-160	
Chloroform	ug/L	20	15.0	75	60-120	
Chloromethane	ug/L	20	20.6	103	10-160	
cis-1,2-Dichloroethene	ug/L	20	16.6	83	70-125	
cis-1,3-Dichloropropene	ug/L	20	16.0	80	66-132	
Dibromochloromethane	ug/L	20	15.9	79	63-134	
Ethylbenzene	ug/L	20	17.2	86	66-133	
Methylene chloride	ug/L	20	18.1	90	56-135	
Tetrachloroethene	ug/L	20	18.3	92	64-143	
Toluene	ug/L	20	18.0	90	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	67-149	
trans-1,3-Dichloropropene	ug/L	20	17.8	89	66-138	
Trichloroethene	ug/L	20	16.1	80	71-130	
Trichlorofluoromethane	ug/L	20	15.0	75	58-158	
Vinyl chloride	ug/L	20	17.9	90	41-160	
Xylene (Total)	ug/L	60	56.8	95	67-130	
1,2-Dichloroethane-d4 (S)	%			96	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			96	80-120	

MATRIX SPIKE SAMPLE: 1228399

Parameter	Units	60149631001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	3730	93	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	4820	121	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	4030	101	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3670	92	59-155	
1,1-Dichloroethene	ug/L	ND	4000	4250	106	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	4630	116	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3970	99	49-155	
1,2-Dichloropropane	ug/L	ND	4000	4290	107	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

MATRIX SPIKE SAMPLE:		1228399					
Parameter	Units	60149631001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,3-Dichlorobenzene	ug/L	ND	4000	4490	112	59-146	
1,4-Dichlorobenzene	ug/L	ND	4000	4420	111	18-147	
2-Chloroethylvinyl ether	ug/L	ND	4000	4080	102	10-160	
Benzene	ug/L	ND	4000	4610	115	37-151	
Bromodichloromethane	ug/L	ND	4000	3740	94	35-155	
Bromoform	ug/L	ND	4000	4090	102	45-133	
Bromomethane	ug/L	ND	4000	4640	116	10-160	
Carbon tetrachloride	ug/L	ND	4000	3700	93	70-140	
Chlorobenzene	ug/L	ND	4000	4000	100	37-153	
Chloroethane	ug/L	ND	4000	3980	99	14-160	
Chloroform	ug/L	ND	4000	3610	90	51-138	
Chloromethane	ug/L	ND	4000	4960	124	10-160	
cis-1,2-Dichloroethene	ug/L	ND	4000	3890	97	19-160	
cis-1,3-Dichloropropene	ug/L	ND	4000	3900	98	10-160	
Dibromochloromethane	ug/L	ND	4000	3700	92	53-149	
Ethylbenzene	ug/L	ND	4000	4130	103	37-154	
Methylene chloride	ug/L	ND	4000	4310	107	15-156	
Tetrachloroethene	ug/L	ND	4000	4400	110	64-148	
Toluene	ug/L	ND	4000	4360	109	47-150	
trans-1,2-Dichloroethene	ug/L	ND	4000	4260	107	54-156	
trans-1,3-Dichloropropene	ug/L	ND	4000	4110	103	17-160	
Trichloroethene	ug/L	ND	4000	3730	93	71-157	
Trichlorofluoromethane	ug/L	ND	4000	3760	94	17-160	
Vinyl chloride	ug/L	ND	4000	4390	110	10-160	
Xylene (Total)	ug/L	ND	12000	13500	113	12-153	
1,2-Dichloroethane-d4 (S)	%					93	80-120
4-Bromofluorobenzene (S)	%					101	80-120 D3
Toluene-d8 (S)	%					96	80-120
Preservation pH		7.0		7.0			

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025  
Pace Project No.: 60149811

QC Batch: OEXT/39536 Analysis Method: EPA 625  
QC Batch Method: EPA 625 Analysis Description: 625 MSS  
Associated Lab Samples: 60149811001

METHOD BLANK: 1227555 Matrix: Water  
Associated Lab Samples: 60149811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	07/31/13 17:42	
2,4,6-Trichlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dichlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dimethylphenol	ug/L	ND	5.0	07/31/13 17:42	
2,4-Dinitrophenol	ug/L	ND	50.0	07/31/13 17:42	
2,4-Dinitrotoluene	ug/L	ND	6.0	07/31/13 17:42	
2,6-Dinitrotoluene	ug/L	ND	5.0	07/31/13 17:42	
2-Chloronaphthalene	ug/L	ND	5.0	07/31/13 17:42	
2-Chlorophenol	ug/L	ND	5.0	07/31/13 17:42	
2-Nitrophenol	ug/L	ND	5.0	07/31/13 17:42	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	07/31/13 17:42	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	07/31/13 17:42	
4-Bromophenylphenyl ether	ug/L	ND	5.0	07/31/13 17:42	
4-Chloro-3-methylphenol	ug/L	ND	5.0	07/31/13 17:42	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	07/31/13 17:42	
4-Nitrophenol	ug/L	ND	5.0	07/31/13 17:42	
Acenaphthene	ug/L	ND	5.0	07/31/13 17:42	
Acenaphthylene	ug/L	ND	5.0	07/31/13 17:42	
Anthracene	ug/L	ND	5.0	07/31/13 17:42	
Benzidine	ug/L	ND	50.0	07/31/13 17:42	
Benzo(a)anthracene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(a)pyrene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(b)fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(g,h,i)perylene	ug/L	ND	5.0	07/31/13 17:42	
Benzo(k)fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	07/31/13 17:42	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	07/31/13 17:42	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	07/31/13 17:42	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	07/31/13 17:42	
Butylbenzylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Chrysene	ug/L	ND	5.0	07/31/13 17:42	
Di-n-butylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Di-n-octylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Dibenz(a,h)anthracene	ug/L	ND	5.0	07/31/13 17:42	
Diethylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Dimethylphthalate	ug/L	ND	5.0	07/31/13 17:42	
Fluoranthene	ug/L	ND	5.0	07/31/13 17:42	
Fluorene	ug/L	ND	5.0	07/31/13 17:42	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	07/31/13 17:42	
Hexachlorobenzene	ug/L	ND	5.0	07/31/13 17:42	
Hexachlorocyclopentadiene	ug/L	ND	5.0	07/31/13 17:42	
Hexachloroethane	ug/L	ND	5.0	07/31/13 17:42	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	07/31/13 17:42	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Project No.: 60149811

METHOD BLANK: 1227555

Matrix: Water

Associated Lab Samples: 60149811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	07/31/13 17:42	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	07/31/13 17:42	
N-Nitrosodimethylamine	ug/L	ND	5.0	07/31/13 17:42	
N-Nitrosodiphenylamine	ug/L	ND	5.0	07/31/13 17:42	
Naphthalene	ug/L	ND	5.0	07/31/13 17:42	
Nitrobenzene	ug/L	ND	5.0	07/31/13 17:42	
Pentachlorophenol	ug/L	ND	5.0	07/31/13 17:42	
Phenanthrene	ug/L	ND	5.0	07/31/13 17:42	
Phenol	ug/L	ND	5.0	07/31/13 17:42	
Pyrene	ug/L	ND	5.0	07/31/13 17:42	
2,4,6-Tribromophenol (S)	%	74	39-119	07/31/13 17:42	
2-Fluorobiphenyl (S)	%	68	36-120	07/31/13 17:42	
2-Fluorophenol (S)	%	43	18-120	07/31/13 17:42	
Nitrobenzene-d5 (S)	%	66	32-120	07/31/13 17:42	
Phenol-d6 (S)	%	30	12-120	07/31/13 17:42	
Terphenyl-d14 (S)	%	74	44-120	07/31/13 17:42	

LABORATORY CONTROL SAMPLE: 1227556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	34.9	70	44-120	
2,4,6-Trichlorophenol	ug/L	50	35.5	71	48-120	
2,4-Dichlorophenol	ug/L	50	35.3	71	48-120	
2,4-Dimethylphenol	ug/L	50	32.6	65	37-119	
2,4-Dinitrophenol	ug/L	50	37.4J	75	15-153	
2,4-Dinitrotoluene	ug/L	50	39.7	79	54-120	
2,6-Dinitrotoluene	ug/L	50	38.2	76	52-120	
2-Chloronaphthalene	ug/L	50	35.3	71	60-118	
2-Chlorophenol	ug/L	50	33.2	66	44-120	
2-Nitrophenol	ug/L	50	38.2	76	43-120	
3,3'-Dichlorobenzidine	ug/L	50	52.7	105	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	41.4	83	31-147	
4-Bromophenylphenyl ether	ug/L	50	37.2	74	53-120	
4-Chloro-3-methylphenol	ug/L	50	36.0	72	50-120	
4-Chlorophenylphenyl ether	ug/L	50	36.4	73	54-120	
4-Nitrophenol	ug/L	50	15.6	31	10-120	
Acenaphthene	ug/L	50	35.7	71	51-120	
Acenaphthylene	ug/L	50	35.8	72	51-120	
Anthracene	ug/L	50	36.2	72	54-120	
Benzidine	ug/L	50	33.8J	68	1-124	
Benzo(a)anthracene	ug/L	50	37.1	74	54-120	
Benzo(a)pyrene	ug/L	50	37.9	76	54-120	
Benzo(b)fluoranthene	ug/L	50	36.0	72	57-120	
Benzo(g,h,i)perylene	ug/L	50	36.4	73	54-120	
Benzo(k)fluoranthene	ug/L	50	38.7	77	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

LABORATORY CONTROL SAMPLE: 1227556

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	35.6	71	51-120	
bis(2-Chloroethyl) ether	ug/L	50	35.5	71	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	34.6	69	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	38.7	77	51-126	
Butylbenzylphthalate	ug/L	50	39.1	78	45-129	
Chrysene	ug/L	50	37.5	75	54-120	
Di-n-butylphthalate	ug/L	50	38.4	77	57-118	
Di-n-octylphthalate	ug/L	50	39.1	78	48-130	
Dibenz(a,h)anthracene	ug/L	50	36.3	73	56-119	
Diethylphthalate	ug/L	50	37.2	74	55-114	
Dimethylphthalate	ug/L	50	36.5	73	54-112	
Fluoranthene	ug/L	50	37.3	75	56-120	
Fluorene	ug/L	50	36.4	73	59-120	
Hexachloro-1,3-butadiene	ug/L	50	35.1	70	41-116	
Hexachlorobenzene	ug/L	50	37.4	75	53-120	
Hexachlorocyclopentadiene	ug/L	100	58.0	58	31-120	
Hexachloroethane	ug/L	50	32.9	66	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	36.4	73	55-120	
Isophorone	ug/L	50	36.0	72	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	35.6	71	47-120	
N-Nitrosodimethylamine	ug/L	50	25.4	51	28-120	
N-Nitrosodiphenylamine	ug/L	50	36.1	72	53-120	
Naphthalene	ug/L	50	35.3	71	48-120	
Nitrobenzene	ug/L	50	36.7	73	47-120	
Pentachlorophenol	ug/L	50	38.7	77	43-127	
Phenanthrene	ug/L	50	36.4	73	55-120	
Phenol	ug/L	50	14.9	30	15-112	
Pyrene	ug/L	50	38.2	76	55-115	
2,4,6-Tribromophenol (S)	%			77	39-119	
2-Fluorobiphenyl (S)	%			72	36-120	
2-Fluorophenol (S)	%			42	18-120	
Nitrobenzene-d5 (S)	%			71	32-120	
Phenol-d6 (S)	%			29	12-120	
Terphenyl-d14 (S)	%			78	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

QC Batch:	WET/42610	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149811001		

METHOD BLANK: 1227576 Matrix: Water

Associated Lab Samples: 60149811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	07/30/13 07:50	

LABORATORY CONTROL SAMPLE: 1227577

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	40.3	101	78-114	

MATRIX SPIKE SAMPLE: 1227578

Parameter	Units	60149743001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.7	43.4	99	78-114	

SAMPLE DUPLICATE: 1227582

Parameter	Units	60149531004 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	1.7J		18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

QC Batch:	WET/42632	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60149811001		

METHOD BLANK: 1228227 Matrix: Water

Associated Lab Samples: 60149811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	07/31/13 09:13	

LABORATORY CONTROL SAMPLE: 1228228

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.4	107	64-132	

MATRIX SPIKE SAMPLE: 1228229

Parameter	Units	60149213001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	10.3	20.6	54.8	216	64-132	M1

SAMPLE DUPLICATE: 1228231

Parameter	Units	60149229001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	4.1J	6.7		34	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

QC Batch:	WET/42612	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60149811001		

METHOD BLANK: 1227598 Matrix: Water

Associated Lab Samples: 60149811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/30/13 08:22	

SAMPLE DUPLICATE: 1227599

Parameter	Units	60149693001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	57200	58100	1	25	

SAMPLE DUPLICATE: 1227600

Parameter	Units	60149646001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	52.0	60.0	14	25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

QC Batch: WET/42619 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149811001

SAMPLE DUPLICATE: 1227661

Parameter	Units	60149816001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	9.5	9.5	0	5	H6

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-025  
Pace Project No.: 60149811

QC Batch: WETA/25643 Analysis Method: EPA 350.1  
QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
Associated Lab Samples: 60149811001

METHOD BLANK: 1228896 Matrix: Water  
Associated Lab Samples: 60149811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	08/01/13 14:39	

LABORATORY CONTROL SAMPLE: 1228897

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1228898

Parameter	Units	60149749004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	106	90-110	

MATRIX SPIKE SAMPLE: 1228899

Parameter	Units	60149750001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.25	2	1.5	61	90-110	M1

SAMPLE DUPLICATE: 1228900

Parameter	Units	60149861001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	7.2	7.2	0	18	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

QC Batch: WETA/25620 Analysis Method: EPA 410.4  
 QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD  
 Associated Lab Samples: 60149811001

METHOD BLANK: 1227951 Matrix: Water

Associated Lab Samples: 60149811001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	08/01/13 06:42	

LABORATORY CONTROL SAMPLE: 1227952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	51.6	103	90-110	

MATRIX SPIKE SAMPLE: 1227954

Parameter	Units	60149614002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	42.3	50	91.5	98	90-110	

MATRIX SPIKE SAMPLE: 1227955

Parameter	Units	60149668001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	16.6	50	67.6	102	90-110	

SAMPLE DUPLICATE: 1227953

Parameter	Units	60149631001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	53900	53800	0	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

### BATCH QUALIFIERS

Batch: OEXT/39536

[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.

S0 Surrogate recovery outside laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-025

Pace Project No.: 60149811

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149811001	316-025	EPA 200.7	MPRP/23654	EPA 200.7	ICP/18559
60149811001	316-025	EPA 200.7	MPRP/23689	EPA 200.7	ICP/18580
60149811001	316-025	EPA 245.1	MERP/7554	EPA 245.1	MERC/7511
60149811001	316-025	EPA 245.1	MERP/7558	EPA 245.1	MERC/7515
60149811001	316-025	EPA 625	OEXT/39536	EPA 625	MSSV/12544
60149811001	316-025	EPA 624 Low	MSV/55266		
60149811002	TRIP BLANK	EPA 624 Low	MSV/55266		
60149811001	316-025	EPA 1664A	WET/42610		
60149811001	316-025	EPA 1664A	WET/42632		
60149811001	316-025	SM 2540D	WET/42612		
60149811001	316-025	SM 4500-H+B	WET/42619		
60149811001	316-025	EPA 350.1	WETA/25643		
60149811001	316-025	EPA 410.4	WETA/25620		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO#: 60149811**



Client Name: Barr

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2010

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 2.3

Date and initials of person examining contents: pv 7/29/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>PH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>pv</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative <u>12510</u>
Pace Trip Blank lot # (if purchased): <u>COVER</u>		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State: _____

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: mwe [Signature] Date: 7/30/13



# CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

<b>Section A</b> Required Client Information:	<b>Section B</b> Required Project Information:	<b>Section C</b> Invoice Information:
Company: <b>BARR ENGINEERING</b>	Report To: <b>ED GALBRAITH/BARR</b>	Attention: <b>TABITHA PROVINCE</b>
Address:	Copy To: <b>SCOTT FEDAK/FEEZOR</b>	Company Name: <b>REPUBLIC SERVICES</b>
	<b>DANA BAKER/MARGARET TREANOR -BARR</b>	Address: <b>BRIDGETON, MO 63044</b>
Email To:	Purchase Order No: <b>PO 3727110</b>	Pace Quote Reference: <b>130426_7588</b>
Phone: <b>(816) 285-8410</b> Fax:	Client Project ID: <b>BRIDGETON LF</b>	Pace Project Manager: <b>Brown, Angie</b>
Requested Due Date/TAT: <b>10 Day (Default)</b>	Container Order Number:	Pace Profile #: <b>6787 LINE 2</b>

ITEM#	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX CODE Drinking Water DW Water WT Waste Water WW Product P Soil/Solid SL Oil OL Wipe WP Air AR Other OT Tissue TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Y/N	Requested Analysis Filtered (Y/N)													Residual Chlorine (Y/N)
					START		END				Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	COD EPA 410		pH SM 4500H+H	LF DIS. METALS 200.7/245	TOTAL METALS 200.7/245	AMMONIA EPA 350	O/G EPA 1664	625 SVOCs	VOCs EPA 624	TSS SM2540D	TPH/HEM-SGT 1664					
					DATE	TIME	DATE	TIME																											
1	1BPSU 1BPS <sup>3</sup> 316-025 1BPSN <sup>4</sup> 1BPN 3A1H		OT	G	7/29/13	13:20			15/19	1	1	23	3A1H		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	5D/21H	METALS LIST total & LF Dis:
2	TRIP BLANK								2	2																									Al, Sb, As, Be, Cd, Cr,
3																																		Co, Cu, Fe, Pb, Ni, Se, Ag, Tl, Zn	
4																																	and Mercury		
5																																			
6																																			
7																																			
8																																			
9																																			
10																																			
11																																			
12																																			

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
SITE CONTACT: BILL ABERNATHY 314-502-1299	<i>William Abernathy</i>	7/29/13	09:14	<i>Bill Steine</i>	7-29-13	9:15	
SITE ADDRESS: BRIDGETON LF				<i>PAZ</i>	7/29/13	3:15	2-3 Y Y Y
13570 ST. CHARLES ROCK RD							
BRIDGETON MO 63044							

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:					
SIGNATURE of SAMPLER:	DATE Signed:				
<i>William Abernathy</i>	<i>WILLIAM ABERNATHY</i>				



August 06, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-026  
Pace Project No.: 60149915

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 31, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-026

Pace Project No.: 60149915

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

---

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

## SAMPLE SUMMARY

Project: BRIDGETON LF 316-026

Pace Project No.: 60149915

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149915001	316-026	Water	07/29/13 12:11	07/31/13 01:35

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-026

Pace Project No.: 60149915

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149915001	316-026	SM 5210B	JML	1

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-026

Pace Project No.: 60149915

Sample: 316-026	Lab ID: 60149915001	Collected: 07/29/13 12:11	Received: 07/31/13 01:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>31600</b>	mg/L	2.0	1	07/31/13 11:22	08/05/13 12:23		

## REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149915

QC Batch: WET/42638

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149915001

METHOD BLANK: 1228286

Matrix: Water

Associated Lab Samples: 60149915001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	08/05/13 09:37	

LABORATORY CONTROL SAMPLE: 1228287

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	172	87	85-115	

SAMPLE DUPLICATE: 1228288

Parameter	Units	60149834001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	ND	ND		17	

### REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, Inc..

## QUALIFIERS

Project: BRIDGETON LF 316-026

Pace Project No.: 60149915

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-026

Pace Project No.: 60149915

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149915001	316-026	SM 5210B	WET/42638	SM 5210B	WET/42720

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO# : 60149915**



60149915

Client Name: Bar

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  APIL

Thermometer Used: T-112 / T-194 Type of Ice:  Wet  Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 5-9

Date and initials of person examining contents: DL 7/31/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: MW SR (AKS)

Date: 8/1/13



August 06, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-027  
Pace Project No.: 60149922

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 31, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-027

Pace Project No.: 60149922

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

---

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE SUMMARY

Project: BRIDGETON LF 316-027

Pace Project No.: 60149922

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149922001	316-027	Water	07/30/13 07:59	07/31/13 01:35

### REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-027

Pace Project No.: 60149922

---

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149922001	316-027	SM 5210B	JML	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-027

Pace Project No.: 60149922

Sample: 316-027	Lab ID: 60149922001	Collected: 07/30/13 07:59	Received: 07/31/13 01:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>		Analytical Method: SM 5210B Preparation Method: SM 5210B						
BOD, 5 day	<b>32400</b>	mg/L	2.0	1	07/31/13 16:04	08/05/13 12:43		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149922

QC Batch: WET/42646

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60149922001

METHOD BLANK: 1228751

Matrix: Water

Associated Lab Samples: 60149922001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	08/05/13 12:39	

LABORATORY CONTROL SAMPLE: 1228752

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	169	85	85-115	

SAMPLE DUPLICATE: 1228753

Parameter	Units	60149918003 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	159	124	25	17	D6

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-027

Pace Project No.: 60149922

---

### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D6 The relative percent difference (RPD) between the sample and sample duplicate exceeded laboratory control limits.

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-027

Pace Project No.: 60149922

---

<b>Lab ID</b>	<b>Sample ID</b>	<b>QC Batch Method</b>	<b>QC Batch</b>	<b>Analytical Method</b>	<b>Analytical Batch</b>
60149922001	316-027	SM 5210B	WET/42646	SM 5210B	WET/42719

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO# : 60149922**



60149922

Client Name: Barr Ey

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other

Thermometer Used: T-112 / T-194 Type of Ice: VVW Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 2.5

(circle one)

Date and initials of person examining contents: KE 7/31/13

Temperature should be above freezing to 6°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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>BOD</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Includes date/time/ID/analyses	Matrix: <u>WT</u>	13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: MW GR (AKB)

Date: 8/1/13



August 07, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-026  
Pace Project No.: 60149923

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 31, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

---

### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

---

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149923001	316-026	Water	07/29/13 12:11	07/31/13 01:35
60149923002	TRIP BLANK	Water	07/29/13 12:11	07/31/13 01:35

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149923001	316-026	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	AAM	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	JML	1
		EPA 350.1	AJM	1
		EPA 410.4	NDL	1
		60149923002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

Sample: 316-026	Lab ID: 60149923001	Collected: 07/29/13 12:11	Received: 07/31/13 01:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum	6380	ug/L	150	2	08/01/13 16:15	08/06/13 11:15	7429-90-5	
Antimony	ND	ug/L	50.0	5	08/01/13 16:15	08/06/13 11:26	7440-36-0	D3
Arsenic	594	ug/L	50.0	5	08/01/13 16:15	08/06/13 11:26	7440-38-2	
Beryllium	ND	ug/L	2.0	2	08/01/13 16:15	08/06/13 11:15	7440-41-7	D3
Cadmium	ND	ug/L	25.0	5	08/01/13 16:15	08/06/13 11:26	7440-43-9	D3
Chromium	261	ug/L	25.0	5	08/01/13 16:15	08/06/13 11:26	7440-47-3	
Cobalt	42.2	ug/L	25.0	5	08/01/13 16:15	08/06/13 11:26	7440-48-4	
Copper	ND	ug/L	20.0	2	08/01/13 16:15	08/06/13 11:15	7440-50-8	D3
Iron	773000	ug/L	100	2	08/01/13 16:15	08/06/13 11:15	7439-89-6	
Lead	131	ug/L	25.0	5	08/01/13 16:15	08/06/13 11:26	7439-92-1	
Nickel	124	ug/L	25.0	5	08/01/13 16:15	08/06/13 11:26	7440-02-0	
Selenium	ND	ug/L	75.0	5	08/01/13 16:15	08/06/13 11:26	7782-49-2	D3
Silver	16.2	ug/L	14.0	2	08/01/13 16:15	08/06/13 11:15	7440-22-4	
Thallium	ND	ug/L	100	5	08/01/13 16:15	08/06/13 11:26	7440-28-0	D3
Zinc	15800	ug/L	1000	20	08/01/13 16:15	08/06/13 11:36	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>								
Analytical Method: EPA 200.7 Preparation Method: EPA 200.7								
Aluminum, Dissolved	4310	ug/L	150	2	07/31/13 16:30	08/01/13 12:21	7429-90-5	
Antimony, Dissolved	40.7	ug/L	20.0	2	07/31/13 16:30	08/01/13 12:21	7440-36-0	D9
Arsenic, Dissolved	614	ug/L	20.0	2	07/31/13 16:30	08/01/13 12:21	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	5	07/31/13 16:30	08/01/13 13:05	7440-41-7	D3
Cadmium, Dissolved	ND	ug/L	10.0	2	07/31/13 16:30	08/01/13 12:21	7440-43-9	D3
Chromium, Dissolved	225	ug/L	10.0	2	07/31/13 16:30	08/01/13 12:21	7440-47-3	
Cobalt, Dissolved	44.2	ug/L	10.0	2	07/31/13 16:30	08/01/13 12:21	7440-48-4	D9
Copper, Dissolved	ND	ug/L	20.0	2	07/31/13 16:30	08/01/13 12:21	7440-50-8	D3
Iron, Dissolved	645000	ug/L	100	2	07/31/13 16:30	08/01/13 12:21	7439-89-6	
Lead, Dissolved	80.5	ug/L	10.0	2	07/31/13 16:30	08/01/13 12:21	7439-92-1	
Nickel, Dissolved	117	ug/L	10.0	2	07/31/13 16:30	08/01/13 12:21	7440-02-0	
Selenium, Dissolved	ND	ug/L	30.0	2	07/31/13 16:30	08/01/13 12:21	7782-49-2	D3
Silver, Dissolved	ND	ug/L	14.0	2	07/31/13 16:30	08/01/13 12:21	7440-22-4	D3
Thallium, Dissolved	ND	ug/L	100	5	07/31/13 16:30	08/01/13 13:05	7440-28-0	D3
Zinc, Dissolved	14400	ug/L	1000	20	07/31/13 16:30	08/01/13 13:44	7440-66-6	
<b>245.1 Mercury</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury	1.2	ug/L	0.20	1	08/01/13 10:30	08/01/13 14:13	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>								
Analytical Method: EPA 245.1 Preparation Method: EPA 245.1								
Mercury, Dissolved	ND	ug/L	0.20	1	08/01/13 10:30	08/01/13 13:57	7439-97-6	
<b>625 MSSV</b>								
Analytical Method: EPA 625 Preparation Method: EPA 625								
Acenaphthene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	83-32-9	
Acenaphthylene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	208-96-8	
Anthracene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	120-12-7	
Benzidine	ND	ug/L	10000	20	08/01/13 00:00	08/02/13 19:11	92-87-5	
Benzo(a)anthracene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	56-55-3	
Benzo(a)pyrene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

Sample: 316-026		Lab ID: 60149923001	Collected: 07/29/13 12:11	Received: 07/31/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	101-55-3	
Butylbenzylphthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1200	20	08/01/13 00:00	08/02/13 19:11	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1200	20	08/01/13 00:00	08/02/13 19:11	39638-32-9	
2-Chloronaphthalene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	91-58-7	
2-Chlorophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	7005-72-3	
Chrysene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	4000	20	08/01/13 00:00	08/02/13 19:11	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	120-83-2	
Diethylphthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	105-67-9	
Dimethylphthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	131-11-3	
Di-n-butylphthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	20	08/01/13 00:00	08/02/13 19:11	534-52-1	
2,4-Dinitrophenol	ND	ug/L	10000	20	08/01/13 00:00	08/02/13 19:11	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	1200	20	08/01/13 00:00	08/02/13 19:11	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	606-20-2	
Di-n-octylphthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	117-81-7	
Fluoranthene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	206-44-0	
Fluorene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	87-68-3	
Hexachlorobenzene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	77-47-4	
Hexachloroethane	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	193-39-5	
Isophorone	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	78-59-1	
Naphthalene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	91-20-3	
Nitrobenzene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	98-95-3	
2-Nitrophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	88-75-5	
4-Nitrophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	86-30-6	
Pentachlorophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	87-86-5	
Phenanthrene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	85-01-8	
Phenol	<b>2950</b>	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	108-95-2	
Pyrene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:11	88-06-2	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

Sample: 316-026		Lab ID: 60149923001	Collected: 07/29/13 12:11	Received: 07/31/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	08/01/13 00:00	08/02/13 19:11	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	08/01/13 00:00	08/02/13 19:11	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	08/01/13 00:00	08/02/13 19:11	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	08/01/13 00:00	08/02/13 19:11	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	08/01/13 00:00	08/02/13 19:11	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	08/01/13 00:00	08/02/13 19:11	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		08/05/13 12:21	71-43-2	
Bromodichloromethane	ND ug/L		200	200		08/05/13 12:21	75-27-4	
Bromoform	ND ug/L		200	200		08/05/13 12:21	75-25-2	
Bromomethane	ND ug/L		1000	200		08/05/13 12:21	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		08/05/13 12:21	56-23-5	
Chlorobenzene	ND ug/L		200	200		08/05/13 12:21	108-90-7	
Chloroethane	ND ug/L		200	200		08/05/13 12:21	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		08/05/13 12:21	110-75-8	
Chloroform	ND ug/L		200	200		08/05/13 12:21	67-66-3	
Chloromethane	ND ug/L		200	200		08/05/13 12:21	74-87-3	
Dibromochloromethane	ND ug/L		200	200		08/05/13 12:21	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		08/05/13 12:21	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		08/05/13 12:21	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		08/05/13 12:21	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		08/05/13 12:21	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		08/05/13 12:21	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		08/05/13 12:21	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		08/05/13 12:21	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		08/05/13 12:21	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		08/05/13 12:21	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		08/05/13 12:21	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		08/05/13 12:21	10061-02-6	
Ethylbenzene	ND ug/L		200	200		08/05/13 12:21	100-41-4	
Methylene chloride	ND ug/L		200	200		08/05/13 12:21	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		08/05/13 12:21	79-34-5	
Tetrachloroethene	ND ug/L		200	200		08/05/13 12:21	127-18-4	
Toluene	ND ug/L		200	200		08/05/13 12:21	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		08/05/13 12:21	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		08/05/13 12:21	79-00-5	
Trichloroethene	ND ug/L		200	200		08/05/13 12:21	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		08/05/13 12:21	75-69-4	
Vinyl chloride	ND ug/L		200	200		08/05/13 12:21	75-01-4	
Xylene (Total)	ND ug/L		600	200		08/05/13 12:21	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	87 %		80-120	200		08/05/13 12:21	1868-53-7	D3
4-Bromofluorobenzene (S)	98 %		80-120	200		08/05/13 12:21	460-00-4	
Toluene-d8 (S)	92 %		80-120	200		08/05/13 12:21	2037-26-5	
1,2-Dichloroethane-d4 (S)	87 %		80-120	200		08/05/13 12:21	17060-07-0	

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

<b>Sample: 316-026</b>		<b>Lab ID: 60149923001</b>		Collected: 07/29/13 12:11	Received: 07/31/13 01:35	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Preservation pH	<b>7.0</b>		1.0	200		08/05/13 12:21		
<b>HEM, Oil and Grease</b>		Analytical Method: EPA 1664A						
Oil and Grease	<b>84.2</b>	mg/L	5.0	1		08/01/13 07:50		
<b>1664 SGT-HEM, TPH</b>		Analytical Method: EPA 1664A						
Total Petroleum Hydrocarbons	ND	mg/L	5.0	1		08/07/13 07:28		
<b>2540D Total Suspended Solids</b>		Analytical Method: SM 2540D						
Total Suspended Solids	<b>1600</b>	mg/L	5.0	1		07/31/13 13:13		
<b>4500H+ pH, Electrometric</b>		Analytical Method: SM 4500-H+B						
pH at 25 Degrees C	<b>5.4</b>	Std. Units	0.10	1		08/01/13 17:00		H6
<b>350.1 Ammonia</b>		Analytical Method: EPA 350.1						
Nitrogen, Ammonia	<b>913</b>	mg/L	20.0	200		08/01/13 15:09	7664-41-7	
<b>410.4 COD</b>		Analytical Method: EPA 410.4						
Chemical Oxygen Demand	<b>54500</b>	mg/L	5000	500		08/01/13 09:58		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

Sample: TRIP BLANK		Lab ID: 60149923002	Collected: 07/29/13 12:11	Received: 07/31/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		08/05/13 13:03	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		08/05/13 13:03	75-27-4	
Bromoform	ND ug/L		1.0	1		08/05/13 13:03	75-25-2	
Bromomethane	ND ug/L		5.0	1		08/05/13 13:03	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		08/05/13 13:03	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		08/05/13 13:03	108-90-7	
Chloroethane	ND ug/L		1.0	1		08/05/13 13:03	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		08/05/13 13:03	110-75-8	
Chloroform	ND ug/L		1.0	1		08/05/13 13:03	67-66-3	
Chloromethane	ND ug/L		1.0	1		08/05/13 13:03	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		08/05/13 13:03	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		08/05/13 13:03	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		08/05/13 13:03	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		08/05/13 13:03	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		08/05/13 13:03	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		08/05/13 13:03	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		08/05/13 13:03	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		08/05/13 13:03	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		08/05/13 13:03	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		08/05/13 13:03	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		08/05/13 13:03	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		08/05/13 13:03	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		08/05/13 13:03	100-41-4	
Methylene chloride	ND ug/L		1.0	1		08/05/13 13:03	75-09-2	
1,1,1,2-Tetrachloroethane	ND ug/L		1.0	1		08/05/13 13:03	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		08/05/13 13:03	127-18-4	
Toluene	ND ug/L		1.0	1		08/05/13 13:03	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		08/05/13 13:03	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		08/05/13 13:03	79-00-5	
Trichloroethene	ND ug/L		1.0	1		08/05/13 13:03	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		08/05/13 13:03	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		08/05/13 13:03	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		08/05/13 13:03	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	87 %		80-120	1		08/05/13 13:03	1868-53-7	
4-Bromofluorobenzene (S)	101 %		80-120	1		08/05/13 13:03	460-00-4	
Toluene-d8 (S)	92 %		80-120	1		08/05/13 13:03	2037-26-5	
1,2-Dichloroethane-d4 (S)	86 %		80-120	1		08/05/13 13:03	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		08/05/13 13:03		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch: MERP/7559

Analysis Method: EPA 245.1

QC Batch Method: EPA 245.1

Analysis Description: 245.1 Mercury

Associated Lab Samples: 60149923001

METHOD BLANK: 1228989

Matrix: Water

Associated Lab Samples: 60149923001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	08/01/13 14:08	

LABORATORY CONTROL SAMPLE: 1228990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228991

1228992

Parameter	Units	60149964001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD
Mercury	ug/L	0.76	5	5	5	3.3	3.1	51	48	70-130	6	20 M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch:	MERP/7558	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60149923001		

METHOD BLANK: 1228981 Matrix: Water

Associated Lab Samples: 60149923001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	08/01/13 13:39	

LABORATORY CONTROL SAMPLE: 1228982

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228983 1228984

Parameter	Units	60149693001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	5	2.8	2.3	56	46	70-130	19	20	M1

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch: MPRP/23696 Analysis Method: EPA 200.7  
 QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
 Associated Lab Samples: 60149923001

METHOD BLANK: 1229559 Matrix: Water

Associated Lab Samples: 60149923001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	08/06/13 10:00	
Antimony	ug/L	ND	10.0	08/06/13 10:00	
Arsenic	ug/L	ND	10.0	08/06/13 10:00	
Beryllium	ug/L	ND	1.0	08/06/13 10:00	
Cadmium	ug/L	ND	5.0	08/06/13 10:00	
Chromium	ug/L	ND	5.0	08/06/13 10:00	
Cobalt	ug/L	ND	5.0	08/06/13 10:00	
Copper	ug/L	ND	10.0	08/06/13 10:00	
Iron	ug/L	ND	50.0	08/06/13 10:00	
Lead	ug/L	ND	5.0	08/06/13 10:00	
Nickel	ug/L	ND	5.0	08/06/13 10:00	
Selenium	ug/L	ND	15.0	08/06/13 10:00	
Silver	ug/L	ND	7.0	08/06/13 10:00	
Thallium	ug/L	ND	20.0	08/06/13 10:00	
Zinc	ug/L	ND	50.0	08/06/13 14:04	

LABORATORY CONTROL SAMPLE: 1229560

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10100	101	85-115	
Antimony	ug/L	1000	1050	105	85-115	
Arsenic	ug/L	1000	996	100	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	988	99	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	980	98	85-115	
Iron	ug/L	10000	10000	100	85-115	
Lead	ug/L	1000	1010	101	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1020	102	85-115	
Silver	ug/L	500	508	102	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1229561 1229562

Parameter	Units	60150002001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum	ug/L	1490	10000	10000	14600	14900	132	134	70-130	2	8	M1	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1229561 1229562												
Parameter	Units	60150002001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
			Spike Conc.	MSD Conc.	MS Result	MSD Result						
Antimony	ug/L	ND	1000	1000	1040	1050	104	105	70-130	1	7	
Arsenic	ug/L	ND	1000	1000	1000	1010	100	101	70-130	1	10	
Beryllium	ug/L	ND	1000	1000	1000	1010	100	101	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1000	1010	100	101	70-130	1	10	
Chromium	ug/L	ND	1000	1000	943	954	94	95	70-130	1	10	
Cobalt	ug/L	ND	1000	1000	985	997	98	100	70-130	1	6	
Copper	ug/L	ND	1000	1000	1000	1010	99	101	70-130	1	11	
Iron	ug/L	1160	10000	10000	12700	12800	116	116	70-130	1	10	
Lead	ug/L	9.5	1000	1000	970	980	96	97	70-130	1	10	
Nickel	ug/L	8.0	1000	1000	1000	1010	99	101	70-130	1	10	
Selenium	ug/L	17.0	1000	1000	1030	1050	101	103	70-130	2	10	
Silver	ug/L	ND	500	500	503	510	101	102	70-130	1	10	
Thallium	ug/L	ND	1000	1000	951	962	95	96	70-130	1	6	
Zinc	ug/L	118	1000	1000	1060	1080	94	96	70-130	2	11	

MATRIX SPIKE SAMPLE: 1229563								
Parameter	Units	60149964001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Aluminum	ug/L		88.7	10000	10100	100	70-130	
Antimony	ug/L		ND	1000	1040	104	70-130	
Arsenic	ug/L		ND	1000	1000	100	70-130	
Beryllium	ug/L		ND	1000	1010	101	70-130	
Cadmium	ug/L		ND	1000	1010	101	70-130	
Chromium	ug/L		ND	1000	983	98	70-130	
Cobalt	ug/L		ND	1000	1000	100	70-130	
Copper	ug/L		109	1000	1110	100	70-130	
Iron	ug/L		2260	10000	11900	96	70-130	
Lead	ug/L		ND	1000	990	99	70-130	
Nickel	ug/L		ND	1000	1010	101	70-130	
Selenium	ug/L		ND	1000	1020	102	70-130	
Silver	ug/L		ND	500	508	101	70-130	
Thallium	ug/L		ND	1000	940	94	70-130	
Zinc	ug/L		53.4	1000	1030	97	70-130	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch: MPRP/23689

Analysis Method: EPA 200.7

QC Batch Method: EPA 200.7

Analysis Description: 200.7 Metals, Dissolved

Associated Lab Samples: 60149923001

METHOD BLANK: 1228838

Matrix: Water

Associated Lab Samples: 60149923001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	08/01/13 11:37	
Antimony, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Arsenic, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Beryllium, Dissolved	ug/L	ND	1.0	08/01/13 11:37	
Cadmium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Chromium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Cobalt, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Copper, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Iron, Dissolved	ug/L	ND	50.0	08/01/13 11:37	
Lead, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Nickel, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Selenium, Dissolved	ug/L	ND	15.0	08/01/13 11:37	
Silver, Dissolved	ug/L	ND	7.0	08/01/13 11:37	
Thallium, Dissolved	ug/L	ND	20.0	08/01/13 11:37	
Zinc, Dissolved	ug/L	ND	50.0	08/01/13 11:37	

LABORATORY CONTROL SAMPLE: 1228839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10100	101	85-115	
Antimony, Dissolved	ug/L	1000	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	974	97	85-115	
Beryllium, Dissolved	ug/L	1000	998	100	85-115	
Cadmium, Dissolved	ug/L	1000	993	99	85-115	
Chromium, Dissolved	ug/L	1000	1010	101	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	968	97	85-115	
Iron, Dissolved	ug/L	10000	10300	103	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	1000	100	85-115	
Silver, Dissolved	ug/L	500	494	99	85-115	
Thallium, Dissolved	ug/L	1000	980	98	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228840

1228841

Parameter	Units	60149631001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	3640	10000	10000	14000	13800	104	101	70-130	1	8		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

Parameter	60149631001		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony, Dissolved	ug/L	33.8	1000	1000	1020	1010	98	98	70-130	1	7		
Arsenic, Dissolved	ug/L	545	1000	1000	1670	1680	112	113	70-130	1	10		
Beryllium, Dissolved	ug/L	ND	1000	1000	926	916	93	92	70-130	1	7		
Cadmium, Dissolved	ug/L	ND	1000	1000	1030	1030	103	103	70-130	0	10		
Chromium, Dissolved	ug/L	201	1000	1000	1070	1030	87	83	70-130	4	10		
Cobalt, Dissolved	ug/L	37.0	1000	1000	937	927	90	89	70-130	1	6		
Copper, Dissolved	ug/L	ND	1000	1000	1010	1020	100	101	70-130	1	11		
Iron, Dissolved	ug/L	506000	10000	10000	548000	535000	418	286	70-130	2	10	M1	
Lead, Dissolved	ug/L	48.3	1000	1000	871	856	82	81	70-130	2	10		
Nickel, Dissolved	ug/L	111	1000	1000	993	981	88	87	70-130	1	10		
Selenium, Dissolved	ug/L	ND	1000	1000	1180	1190	118	119	70-130	1	10		
Silver, Dissolved	ug/L	ND	500	500	44.2	42.9	9	9	70-130	3	10	M1	
Thallium, Dissolved	ug/L	ND	1000	1000	760	740	76	74	70-130	3	6		
Zinc, Dissolved	ug/L	12600	1000	1000	14500	14000	195	148	70-130	3	11	M1	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch: MSV/55359 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149923001, 60149923002

METHOD BLANK: 1231096 Matrix: Water

Associated Lab Samples: 60149923001, 60149923002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1-Dichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1-Dichloroethene	ug/L	ND	1.0	08/05/13 11:49	
1,2-Dichlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
1,2-Dichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,2-Dichloropropane	ug/L	ND	1.0	08/05/13 11:49	
1,3-Dichlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
2-Chloroethylvinyl ether	ug/L	ND	10.0	08/05/13 11:49	
Benzene	ug/L	ND	1.0	08/05/13 11:49	
Bromodichloromethane	ug/L	ND	1.0	08/05/13 11:49	
Bromoform	ug/L	ND	1.0	08/05/13 11:49	
Bromomethane	ug/L	ND	5.0	08/05/13 11:49	
Carbon tetrachloride	ug/L	ND	1.0	08/05/13 11:49	
Chlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
Chloroethane	ug/L	ND	1.0	08/05/13 11:49	
Chloroform	ug/L	ND	1.0	08/05/13 11:49	
Chloromethane	ug/L	ND	1.0	08/05/13 11:49	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/05/13 11:49	
cis-1,3-Dichloropropene	ug/L	ND	1.0	08/05/13 11:49	
Dibromochloromethane	ug/L	ND	1.0	08/05/13 11:49	
Ethylbenzene	ug/L	ND	1.0	08/05/13 11:49	
Methylene chloride	ug/L	ND	1.0	08/05/13 11:49	
Tetrachloroethene	ug/L	ND	1.0	08/05/13 11:49	
Toluene	ug/L	ND	1.0	08/05/13 11:49	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/05/13 11:49	
trans-1,3-Dichloropropene	ug/L	ND	1.0	08/05/13 11:49	
Trichloroethene	ug/L	ND	1.0	08/05/13 11:49	
Trichlorofluoromethane	ug/L	ND	1.0	08/05/13 11:49	
Vinyl chloride	ug/L	ND	1.0	08/05/13 11:49	
Xylene (Total)	ug/L	ND	3.0	08/05/13 11:49	
1,2-Dichloroethane-d4 (S)	%	85	80-120	08/05/13 11:49	
4-Bromofluorobenzene (S)	%	101	80-120	08/05/13 11:49	
Toluene-d8 (S)	%	95	80-120	08/05/13 11:49	

LABORATORY CONTROL SAMPLE: 1231097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	14.4	72	71-139	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

LABORATORY CONTROL SAMPLE: 1231097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	22.0	110	59-138	
1,1,2-Trichloroethane	ug/L	20	17.6	88	69-127	
1,1-Dichloroethane	ug/L	20	14.8	74	69-126	
1,1-Dichloroethene	ug/L	20	18.1	90	65-153	
1,2-Dichlorobenzene	ug/L	20	19.7	98	66-126	
1,2-Dichloroethane	ug/L	20	16.2	81	71-129	
1,2-Dichloropropane	ug/L	20	17.5	88	66-140	
1,3-Dichlorobenzene	ug/L	20	19.5	97	63-127	
1,4-Dichlorobenzene	ug/L	20	19.2	96	68-124	
2-Chloroethylvinyl ether	ug/L	20	10.8	54	33-159	
Benzene	ug/L	20	18.8	94	73-129	
Bromodichloromethane	ug/L	20	15.3	76	63-129	
Bromoform	ug/L	20	18.7	93	52-123	
Bromomethane	ug/L	20	23.6	118	10-160	
Carbon tetrachloride	ug/L	20	15.1	76	70-140	
Chlorobenzene	ug/L	20	16.7	83	68-127	
Chloroethane	ug/L	20	16.8	84	42-160	
Chloroform	ug/L	20	14.8	74	60-120	
Chloromethane	ug/L	20	26.6	133	10-160	
cis-1,2-Dichloroethene	ug/L	20	15.5	78	70-125	
cis-1,3-Dichloropropene	ug/L	20	15.9	80	66-132	
Dibromochloromethane	ug/L	20	16.5	83	63-134	
Ethylbenzene	ug/L	20	17.0	85	66-133	
Methylene chloride	ug/L	20	16.9	85	56-135	
Tetrachloroethene	ug/L	20	18.7	93	64-143	
Toluene	ug/L	20	17.8	89	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.3	86	67-149	
trans-1,3-Dichloropropene	ug/L	20	17.9	90	66-138	
Trichloroethene	ug/L	20	15.1	76	71-130	
Trichlorofluoromethane	ug/L	20	15.1	75	58-158	
Vinyl chloride	ug/L	20	19.8	99	41-160	
Xylene (Total)	ug/L	60	56.9	95	67-130	
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			92	80-120	

MATRIX SPIKE SAMPLE: 1231098

Parameter	Units	60149923001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	2970	74	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3760	94	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3450	86	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3080	77	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3690	92	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3470	87	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3130	78	49-155	
1,2-Dichloropropane	ug/L	ND	4000	3650	91	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

MATRIX SPIKE SAMPLE:		1231098						
Parameter	Units	60149923001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
1,3-Dichlorobenzene	ug/L	ND	4000	3530	88	59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	3520	88	18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	3350	84	10-160		
Benzene	ug/L	ND	4000	3760	94	37-151		
Bromodichloromethane	ug/L	ND	4000	3080	77	35-155		
Bromoform	ug/L	ND	4000	3440	86	45-133		
Bromomethane	ug/L	ND	4000	4000	100	10-160		
Carbon tetrachloride	ug/L	ND	4000	3050	76	70-140		
Chlorobenzene	ug/L	ND	4000	3340	84	37-153		
Chloroethane	ug/L	ND	4000	3320	83	14-160		
Chloroform	ug/L	ND	4000	2960	74	51-138		
Chloromethane	ug/L	ND	4000	5050	126	10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	3190	80	19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	3150	79	10-160		
Dibromochloromethane	ug/L	ND	4000	3190	80	53-149		
Ethylbenzene	ug/L	ND	4000	3430	86	37-154		
Methylene chloride	ug/L	ND	4000	3490	87	15-156		
Tetrachloroethene	ug/L	ND	4000	3620	90	64-148		
Toluene	ug/L	ND	4000	3590	90	47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	3540	89	54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	3490	87	17-160		
Trichloroethene	ug/L	ND	4000	3070	77	71-157		
Trichlorofluoromethane	ug/L	ND	4000	3100	78	17-160		
Vinyl chloride	ug/L	ND	4000	4040	101	10-160		
Xylene (Total)	ug/L	ND	12000	11100	92	12-153		
1,2-Dichloroethane-d4 (S)	%				88	80-120		
4-Bromofluorobenzene (S)	%				97	80-120		
Toluene-d8 (S)	%				93	80-120		
Preservation pH		7.0		7.0				

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch: OEXT/39593

Analysis Method: EPA 625

QC Batch Method: EPA 625

Analysis Description: 625 MSS

Associated Lab Samples: 60149923001

METHOD BLANK: 1228921

Matrix: Water

Associated Lab Samples: 60149923001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	08/02/13 17:27	
2,4,6-Trichlorophenol	ug/L	ND	5.0	08/02/13 17:27	
2,4-Dichlorophenol	ug/L	ND	5.0	08/02/13 17:27	
2,4-Dimethylphenol	ug/L	ND	5.0	08/02/13 17:27	
2,4-Dinitrophenol	ug/L	ND	50.0	08/02/13 17:27	
2,4-Dinitrotoluene	ug/L	ND	6.0	08/02/13 17:27	
2,6-Dinitrotoluene	ug/L	ND	5.0	08/02/13 17:27	
2-Chloronaphthalene	ug/L	ND	5.0	08/02/13 17:27	
2-Chlorophenol	ug/L	ND	5.0	08/02/13 17:27	
2-Nitrophenol	ug/L	ND	5.0	08/02/13 17:27	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	08/02/13 17:27	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	08/02/13 17:27	
4-Bromophenylphenyl ether	ug/L	ND	5.0	08/02/13 17:27	
4-Chloro-3-methylphenol	ug/L	ND	5.0	08/02/13 17:27	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	08/02/13 17:27	
4-Nitrophenol	ug/L	ND	5.0	08/02/13 17:27	
Acenaphthene	ug/L	ND	5.0	08/02/13 17:27	
Acenaphthylene	ug/L	ND	5.0	08/02/13 17:27	
Anthracene	ug/L	ND	5.0	08/02/13 17:27	
Benzidine	ug/L	ND	50.0	08/02/13 17:27	
Benzo(a)anthracene	ug/L	ND	5.0	08/02/13 17:27	
Benzo(a)pyrene	ug/L	ND	5.0	08/02/13 17:27	
Benzo(b)fluoranthene	ug/L	ND	5.0	08/02/13 17:27	
Benzo(g,h,i)perylene	ug/L	ND	5.0	08/02/13 17:27	
Benzo(k)fluoranthene	ug/L	ND	5.0	08/02/13 17:27	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	08/02/13 17:27	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	08/02/13 17:27	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	08/02/13 17:27	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	08/02/13 17:27	
Butylbenzylphthalate	ug/L	ND	5.0	08/02/13 17:27	
Chrysene	ug/L	ND	5.0	08/02/13 17:27	
Di-n-butylphthalate	ug/L	ND	5.0	08/02/13 17:27	
Di-n-octylphthalate	ug/L	ND	5.0	08/02/13 17:27	
Dibenz(a,h)anthracene	ug/L	ND	5.0	08/02/13 17:27	
Diethylphthalate	ug/L	ND	5.0	08/02/13 17:27	
Dimethylphthalate	ug/L	ND	5.0	08/02/13 17:27	
Fluoranthene	ug/L	ND	5.0	08/02/13 17:27	
Fluorene	ug/L	ND	5.0	08/02/13 17:27	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	08/02/13 17:27	
Hexachlorobenzene	ug/L	ND	5.0	08/02/13 17:27	
Hexachlorocyclopentadiene	ug/L	ND	5.0	08/02/13 17:27	
Hexachloroethane	ug/L	ND	5.0	08/02/13 17:27	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	08/02/13 17:27	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

METHOD BLANK: 1228921

Matrix: Water

Associated Lab Samples: 60149923001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	08/02/13 17:27	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	08/02/13 17:27	
N-Nitrosodimethylamine	ug/L	ND	5.0	08/02/13 17:27	
N-Nitrosodiphenylamine	ug/L	ND	5.0	08/02/13 17:27	
Naphthalene	ug/L	ND	5.0	08/02/13 17:27	
Nitrobenzene	ug/L	ND	5.0	08/02/13 17:27	
Pentachlorophenol	ug/L	ND	5.0	08/02/13 17:27	
Phenanthrene	ug/L	ND	5.0	08/02/13 17:27	
Phenol	ug/L	ND	5.0	08/02/13 17:27	
Pyrene	ug/L	ND	5.0	08/02/13 17:27	
2,4,6-Tribromophenol (S)	%	81	39-119	08/02/13 17:27	
2-Fluorobiphenyl (S)	%	80	36-120	08/02/13 17:27	
2-Fluorophenol (S)	%	48	18-120	08/02/13 17:27	
Nitrobenzene-d5 (S)	%	80	32-120	08/02/13 17:27	
Phenol-d6 (S)	%	32	12-120	08/02/13 17:27	
Terphenyl-d14 (S)	%	83	44-120	08/02/13 17:27	

LABORATORY CONTROL SAMPLE: 1228922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	37.9	76	44-120	
2,4,6-Trichlorophenol	ug/L	50	43.6	87	48-120	
2,4-Dichlorophenol	ug/L	50	41.9	84	48-120	
2,4-Dimethylphenol	ug/L	50	39.8	80	37-119	
2,4-Dinitrophenol	ug/L	50	33.3J	67	15-153	
2,4-Dinitrotoluene	ug/L	50	45.4	91	54-120	
2,6-Dinitrotoluene	ug/L	50	46.7	93	52-120	
2-Chloronaphthalene	ug/L	50	41.5	83	60-118	
2-Chlorophenol	ug/L	50	39.0	78	44-120	
2-Nitrophenol	ug/L	50	44.2	88	43-120	
3,3'-Dichlorobenzidine	ug/L	50	46.1	92	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	42.0	84	31-147	
4-Bromophenylphenyl ether	ug/L	50	44.5	89	53-120	
4-Chloro-3-methylphenol	ug/L	50	41.7	83	50-120	
4-Chlorophenylphenyl ether	ug/L	50	42.5	85	54-120	
4-Nitrophenol	ug/L	50	18.7	37	10-120	
Acenaphthene	ug/L	50	42.0	84	51-120	
Acenaphthylene	ug/L	50	42.3	85	51-120	
Anthracene	ug/L	50	43.8	88	54-120	
Benzidine	ug/L	50	3.2J	6	1-124	
Benzo(a)anthracene	ug/L	50	43.9	88	54-120	
Benzo(a)pyrene	ug/L	50	45.6	91	54-120	
Benzo(b)fluoranthene	ug/L	50	47.7	95	57-120	
Benzo(g,h,i)perylene	ug/L	50	44.9	90	54-120	
Benzo(k)fluoranthene	ug/L	50	44.0	88	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

LABORATORY CONTROL SAMPLE: 1228922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	41.4	83	51-120	
bis(2-Chloroethyl) ether	ug/L	50	41.3	83	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	41.2	82	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	46.8	94	51-126	
Butylbenzylphthalate	ug/L	50	47.2	94	45-129	
Chrysene	ug/L	50	44.6	89	54-120	
Di-n-butylphthalate	ug/L	50	46.4	93	57-118	
Di-n-octylphthalate	ug/L	50	49.7	99	48-130	
Dibenz(a,h)anthracene	ug/L	50	46.1	92	56-119	
Diethylphthalate	ug/L	50	44.3	89	55-114	
Dimethylphthalate	ug/L	50	43.6	87	54-112	
Fluoranthene	ug/L	50	45.8	92	56-120	
Fluorene	ug/L	50	42.8	86	59-120	
Hexachloro-1,3-butadiene	ug/L	50	36.1	72	41-116	
Hexachlorobenzene	ug/L	50	44.0	88	53-120	
Hexachlorocyclopentadiene	ug/L	100	66.5	67	31-120	
Hexachloroethane	ug/L	50	35.8	72	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	44.5	89	55-120	
Isophorone	ug/L	50	42.1	84	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	42.0	84	47-120	
N-Nitrosodimethylamine	ug/L	50	26.0	52	28-120	
N-Nitrosodiphenylamine	ug/L	50	43.7	87	53-120	
Naphthalene	ug/L	50	39.1	78	48-120	
Nitrobenzene	ug/L	50	41.6	83	47-120	
Pentachlorophenol	ug/L	50	45.0	90	43-127	
Phenanthrene	ug/L	50	43.2	86	55-120	
Phenol	ug/L	50	18.9	38	15-112	
Pyrene	ug/L	50	45.7	91	55-115	
2,4,6-Tribromophenol (S)	%			87	39-119	
2-Fluorobiphenyl (S)	%			82	36-120	
2-Fluorophenol (S)	%			51	18-120	
Nitrobenzene-d5 (S)	%			79	32-120	
Phenol-d6 (S)	%			35	12-120	
Terphenyl-d14 (S)	%			88	44-120	

MATRIX SPIKE SAMPLE: 1228923

Parameter	Units	60149698003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	36.0	72	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	39.1	78	37-121	
2,4-Dichlorophenol	ug/L	ND	50	37.9	76	39-120	
2,4-Dimethylphenol	ug/L	22.9	50	50.3	55	32-119	
2,4-Dinitrophenol	ug/L	ND	50	40.6J	81	20-157	
2,4-Dinitrotoluene	ug/L	ND	50	43.3	87	39-130	
2,6-Dinitrotoluene	ug/L	ND	50	42.7	85	50-128	
2-Chloronaphthalene	ug/L	ND	50	38.8	78	60-118	
2-Chlorophenol	ug/L	ND	50	35.5	71	35-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

MATRIX SPIKE SAMPLE:		1228923						
Parameter	Units	60149698003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
2-Nitrophenol	ug/L	ND	50	40.2	80	29-123		
3,3'-Dichlorobenzidine	ug/L	ND	50	17.4J	35	10-160		
4,6-Dinitro-2-methylphenol	ug/L	ND	50	43.4	87	27-146		
4-Bromophenylphenyl ether	ug/L	ND	50	41.5	83	53-124		
4-Chloro-3-methylphenol	ug/L	ND	50	38.4	77	33-123		
4-Chlorophenylphenyl ether	ug/L	ND	50	39.5	79	34-125		
4-Nitrophenol	ug/L	ND	50	17.6	35	10-120		
Acenaphthene	ug/L	ND	50	38.9	78	47-120		
Acenaphthylene	ug/L	ND	50	39.6	79	33-120		
Anthracene	ug/L	ND	50	42.0	84	36-121		
Benzidine	ug/L	ND	50	ND	0	1-120	M1	
Benzo(a)anthracene	ug/L	ND	50	40.9	82	37-127		
Benzo(a)pyrene	ug/L	ND	50	42.7	85	34-125		
Benzo(b)fluoranthene	ug/L	ND	50	44.3	89	37-131		
Benzo(g,h,i)perylene	ug/L	ND	50	41.5	83	35-128		
Benzo(k)fluoranthene	ug/L	ND	50	41.6	83	34-130		
bis(2-Chloroethoxy)methane	ug/L	ND	50	38.1	76	33-120		
bis(2-Chloroethyl) ether	ug/L	ND	50	37.6	75	32-120		
bis(2-Chloroisopropyl) ether	ug/L	ND	50	37.9	76	36-120		
bis(2-Ethylhexyl)phthalate	ug/L	ND	50	44.0	88	38-137		
Butylbenzylphthalate	ug/L	ND	50	45.8	92	43-136		
Chrysene	ug/L	ND	50	41.7	83	36-127		
Di-n-butylphthalate	ug/L	ND	50	45.5	91	38-118		
Di-n-octylphthalate	ug/L	ND	50	47.1	94	40-140		
Dibenz(a,h)anthracene	ug/L	ND	50	43.1	86	35-131		
Diethylphthalate	ug/L	ND	50	41.3	83	33-114		
Dimethylphthalate	ug/L	ND	50	40.3	81	34-112		
Fluoranthene	ug/L	ND	50	43.2	86	38-125		
Fluorene	ug/L	ND	50	40.0	80	59-121		
Hexachloro-1,3-butadiene	ug/L	ND	50	34.8	70	27-116		
Hexachlorobenzene	ug/L	ND	50	40.0	80	34-124		
Hexachlorocyclopentadiene	ug/L	ND	100	64.8	65	11-120		
Hexachloroethane	ug/L	ND	50	37.3	75	40-113		
Indeno(1,2,3-cd)pyrene	ug/L	ND	50	41.7	83	38-127		
Isophorone	ug/L	ND	50	39.0	78	31-120		
N-Nitroso-di-n-propylamine	ug/L	ND	50	37.2	74	30-120		
N-Nitrosodimethylamine	ug/L	ND	50	23.7	47	29-120		
N-Nitrosodiphenylamine	ug/L	ND	50	33.8	68	10-139		
Naphthalene	ug/L	ND	50	37.3	75	32-120		
Nitrobenzene	ug/L	ND	50	38.8	78	35-128		
Pentachlorophenol	ug/L	ND	50	45.3	91	38-133		
Phenanthrene	ug/L	ND	50	41.2	82	54-120		
Phenol	ug/L	ND	50	19.0	30	13-112		
Pyrene	ug/L	ND	50	42.7	85	52-115		
2,4,6-Tribromophenol (S)	%				82	39-119		
2-Fluorobiphenyl (S)	%				76	36-120		
2-Fluorophenol (S)	%				43	18-120		
Nitrobenzene-d5 (S)	%				74	32-120		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

MATRIX SPIKE SAMPLE:		1228923					
Parameter	Units	60149698003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenol-d6 (S)	%				29	12-120	
Terphenyl-d14 (S)	%				85	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch:	WET/42650	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149923001		

METHOD BLANK: 1228928 Matrix: Water  
Associated Lab Samples: 60149923001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	08/01/13 07:45	

LABORATORY CONTROL SAMPLE: 1228929

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	38.1	95	78-114	

MATRIX SPIKE SAMPLE: 1228934

Parameter	Units	60149668001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.4	40.6	99	78-114	

SAMPLE DUPLICATE: 1228935

Parameter	Units	60149765001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch:	WET/42743	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60149923001		

METHOD BLANK: 1231879 Matrix: Water

Associated Lab Samples: 60149923001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	08/07/13 07:27	

LABORATORY CONTROL SAMPLE: 1231880

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	19.6	98	64-132	

MATRIX SPIKE SAMPLE: 1231912

Parameter	Units	60150085001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.7	22.1	95	64-132	

SAMPLE DUPLICATE: 1231915

Parameter	Units	60149960001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	70.0	51.9	30	34	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch: WET/42644

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60149923001

METHOD BLANK: 1228557

Matrix: Water

Associated Lab Samples: 60149923001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/31/13 13:10	

SAMPLE DUPLICATE: 1228558

Parameter	Units	60149867002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	327	331	1	25	

SAMPLE DUPLICATE: 1228559

Parameter	Units	60149904001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	5.3	6.7	22	25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch: WET/42673 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149923001

SAMPLE DUPLICATE: 1229689

Parameter	Units	60149833001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.8	7.8	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch: WETA/25643 Analysis Method: EPA 350.1  
 QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
 Associated Lab Samples: 60149923001

METHOD BLANK: 1228896 Matrix: Water

Associated Lab Samples: 60149923001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	08/01/13 14:39	

LABORATORY CONTROL SAMPLE: 1228897

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1228898

Parameter	Units	60149749004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	106	90-110	

MATRIX SPIKE SAMPLE: 1228899

Parameter	Units	60149750001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.25	2	1.5	61	90-110	M1

SAMPLE DUPLICATE: 1228900

Parameter	Units	60149861001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	7.2	7.2	0	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

QC Batch:	WETA/25634	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60149923001		

METHOD BLANK: 1228467 Matrix: Water

Associated Lab Samples: 60149923001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	08/01/13 09:53	

LABORATORY CONTROL SAMPLE: 1228468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	52.2	104	90-110	

MATRIX SPIKE SAMPLE: 1228470

Parameter	Units	60149896004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	55.9	111	90-110	M1

MATRIX SPIKE SAMPLE: 1228471

Parameter	Units	60149909001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	114	50	155	82	90-110	M1

SAMPLE DUPLICATE: 1228469

Parameter	Units	60149906002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	ND	5.2J		25	

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## QUALIFIERS

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D9 Dissolved result is greater than the total. Data is within laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-026

Pace Project No.: 60149923

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149923001	316-026	EPA 200.7	MPRP/23696	EPA 200.7	ICP/18586
60149923001	316-026	EPA 200.7	MPRP/23689	EPA 200.7	ICP/18580
60149923001	316-026	EPA 245.1	MERP/7559	EPA 245.1	MERC/7516
60149923001	316-026	EPA 245.1	MERP/7558	EPA 245.1	MERC/7515
60149923001	316-026	EPA 625	OEXT/39593	EPA 625	MSSV/12563
60149923001	316-026	EPA 624 Low	MSV/55359		
60149923002	TRIP BLANK	EPA 624 Low	MSV/55359		
60149923001	316-026	EPA 1664A	WET/42650		
60149923001	316-026	EPA 1664A	WET/42743		
60149923001	316-026	SM 2540D	WET/42644		
60149923001	316-026	SM 4500-H+B	WET/42673		
60149923001	316-026	EPA 350.1	WETA/25643		
60149923001	316-026	EPA 410.4	WETA/25634		

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**Sample Condition Upon Receipt**

**WO# : 60149923**



Client Name: Barr

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  Xroad

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  2296

Thermometer Used: -112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 59  
Temperature should be above freezing to 6°C

Date and initials of person examining contents: PV 7/31/13

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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>pH</u>
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>BPRS pH is 6.0</u>
Includes date/time/ID/analyses Matrix:	<u>LV</u>	13.
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	<u>Added 2.5 ml of Hno3 to BPRS</u>
All containers needing preservation are found to be in compliance with EPA recommendation.	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	<u>pH 6.0/4.0</u>
Exceptions: VOA, coliform, TOC, (O&G) WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed <u>PV</u> Lot # of added preservative <u>12500</u>
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank lot # (if purchased):	<u>Cover</u> <u>047/31/13</u>	15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: mw for ARR Date: 8/1/13



August 07, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-027  
Pace Project No.: 60149929

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on July 31, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60149929001	316-027	Water	07/30/13 07:59	07/31/13 01:35
60149929002	TRIP BLANK	Water	07/30/13 07:59	07/31/13 01:35

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60149929001	316-027	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	AAM	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	JML	1
		EPA 350.1	AJM	1
		EPA 410.4	NDL	1
		60149929002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

Sample: 316-027		Lab ID: 60149929001	Collected: 07/30/13 07:59	Received: 07/31/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	7220 ug/L		150	2	08/01/13 16:15	08/06/13 11:19	7429-90-5	
Antimony	ND ug/L		50.0	5	08/01/13 16:15	08/06/13 11:29	7440-36-0	D3
Arsenic	617 ug/L		50.0	5	08/01/13 16:15	08/06/13 11:29	7440-38-2	
Beryllium	ND ug/L		2.0	2	08/01/13 16:15	08/06/13 11:19	7440-41-7	D3
Cadmium	ND ug/L		25.0	5	08/01/13 16:15	08/06/13 11:29	7440-43-9	D3
Chromium	266 ug/L		25.0	5	08/01/13 16:15	08/06/13 11:29	7440-47-3	
Cobalt	47.6 ug/L		25.0	5	08/01/13 16:15	08/06/13 11:29	7440-48-4	
Copper	ND ug/L		20.0	2	08/01/13 16:15	08/06/13 11:19	7440-50-8	D3
Iron	922000 ug/L		100	2	08/01/13 16:15	08/06/13 11:19	7439-89-6	
Lead	194 ug/L		25.0	5	08/01/13 16:15	08/06/13 11:29	7439-92-1	
Nickel	130 ug/L		25.0	5	08/01/13 16:15	08/06/13 11:29	7440-02-0	
Selenium	ND ug/L		75.0	5	08/01/13 16:15	08/06/13 11:29	7782-49-2	D3
Silver	18.3 ug/L		14.0	2	08/01/13 16:15	08/06/13 11:19	7440-22-4	
Thallium	ND ug/L		100	5	08/01/13 16:15	08/06/13 11:29	7440-28-0	D3
Zinc	15100 ug/L		1000	20	08/01/13 16:15	08/06/13 11:39	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	4280 ug/L		150	2	07/31/13 16:30	08/01/13 12:24	7429-90-5	
Antimony, Dissolved	35.8 ug/L		20.0	2	07/31/13 16:30	08/01/13 12:24	7440-36-0	D9
Arsenic, Dissolved	608 ug/L		20.0	2	07/31/13 16:30	08/01/13 12:24	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	07/31/13 16:30	08/01/13 13:09	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		10.0	2	07/31/13 16:30	08/01/13 12:24	7440-43-9	D3
Chromium, Dissolved	224 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:24	7440-47-3	
Cobalt, Dissolved	42.3 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:24	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	07/31/13 16:30	08/01/13 12:24	7440-50-8	D3
Iron, Dissolved	647000 ug/L		100	2	07/31/13 16:30	08/01/13 12:24	7439-89-6	
Lead, Dissolved	79.6 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:24	7439-92-1	
Nickel, Dissolved	116 ug/L		10.0	2	07/31/13 16:30	08/01/13 12:24	7440-02-0	
Selenium, Dissolved	ND ug/L		30.0	2	07/31/13 16:30	08/01/13 12:24	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	07/31/13 16:30	08/01/13 12:24	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	07/31/13 16:30	08/01/13 13:09	7440-28-0	D3
Zinc, Dissolved	14900 ug/L		1000	20	07/31/13 16:30	08/01/13 13:48	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	0.36 ug/L		0.20	1	08/01/13 10:30	08/01/13 14:19	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	08/01/13 10:30	08/01/13 13:59	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		1000	20	08/01/13 00:00	08/02/13 19:31	83-32-9	
Acenaphthylene	ND ug/L		1000	20	08/01/13 00:00	08/02/13 19:31	208-96-8	
Anthracene	ND ug/L		1000	20	08/01/13 00:00	08/02/13 19:31	120-12-7	
Benzidine	ND ug/L		10000	20	08/01/13 00:00	08/02/13 19:31	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	08/01/13 00:00	08/02/13 19:31	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	08/01/13 00:00	08/02/13 19:31	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

Sample: 316-027		Lab ID: 60149929001	Collected: 07/30/13 07:59	Received: 07/31/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	101-55-3	
Butylbenzylphthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1200	20	08/01/13 00:00	08/02/13 19:31	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1200	20	08/01/13 00:00	08/02/13 19:31	39638-32-9	
2-Chloronaphthalene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	91-58-7	
2-Chlorophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	7005-72-3	
Chrysene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	4000	20	08/01/13 00:00	08/02/13 19:31	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	120-83-2	
Diethylphthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	105-67-9	
Dimethylphthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	131-11-3	
Di-n-butylphthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	20	08/01/13 00:00	08/02/13 19:31	534-52-1	
2,4-Dinitrophenol	ND	ug/L	10000	20	08/01/13 00:00	08/02/13 19:31	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	1200	20	08/01/13 00:00	08/02/13 19:31	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	606-20-2	
Di-n-octylphthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	117-81-7	
Fluoranthene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	206-44-0	
Fluorene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	87-68-3	
Hexachlorobenzene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	77-47-4	
Hexachloroethane	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	193-39-5	
Isophorone	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	78-59-1	
Naphthalene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	91-20-3	
Nitrobenzene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	98-95-3	
2-Nitrophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	88-75-5	
4-Nitrophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	86-30-6	
Pentachlorophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	87-86-5	
Phenanthrene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	85-01-8	
Phenol	<b>3180</b>	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	108-95-2	
Pyrene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	20	08/01/13 00:00	08/02/13 19:31	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

Sample: 316-027		Lab ID: 60149929001	Collected: 07/30/13 07:59	Received: 07/31/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
<b>Surrogates</b>								
Nitrobenzene-d5 (S)	0 %		32-120	20	08/01/13 00:00	08/02/13 19:31	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	08/01/13 00:00	08/02/13 19:31	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	08/01/13 00:00	08/02/13 19:31	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	08/01/13 00:00	08/02/13 19:31	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	08/01/13 00:00	08/02/13 19:31	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	08/01/13 00:00	08/02/13 19:31	118-79-6	S4
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		200	200		08/05/13 13:25	71-43-2	
Bromodichloromethane	ND ug/L		200	200		08/05/13 13:25	75-27-4	
Bromoform	ND ug/L		200	200		08/05/13 13:25	75-25-2	
Bromomethane	ND ug/L		1000	200		08/05/13 13:25	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		08/05/13 13:25	56-23-5	
Chlorobenzene	ND ug/L		200	200		08/05/13 13:25	108-90-7	
Chloroethane	ND ug/L		200	200		08/05/13 13:25	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		08/05/13 13:25	110-75-8	
Chloroform	ND ug/L		200	200		08/05/13 13:25	67-66-3	
Chloromethane	ND ug/L		200	200		08/05/13 13:25	74-87-3	
Dibromochloromethane	ND ug/L		200	200		08/05/13 13:25	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		08/05/13 13:25	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		08/05/13 13:25	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		08/05/13 13:25	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		08/05/13 13:25	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		08/05/13 13:25	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		08/05/13 13:25	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		08/05/13 13:25	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		08/05/13 13:25	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		08/05/13 13:25	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		08/05/13 13:25	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		08/05/13 13:25	10061-02-6	
Ethylbenzene	ND ug/L		200	200		08/05/13 13:25	100-41-4	
Methylene chloride	ND ug/L		200	200		08/05/13 13:25	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		08/05/13 13:25	79-34-5	
Tetrachloroethene	ND ug/L		200	200		08/05/13 13:25	127-18-4	
Toluene	ND ug/L		200	200		08/05/13 13:25	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		08/05/13 13:25	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		08/05/13 13:25	79-00-5	
Trichloroethene	ND ug/L		200	200		08/05/13 13:25	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		08/05/13 13:25	75-69-4	
Vinyl chloride	ND ug/L		200	200		08/05/13 13:25	75-01-4	
Xylene (Total)	ND ug/L		600	200		08/05/13 13:25	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	85 %		80-120	200		08/05/13 13:25	1868-53-7	D3
4-Bromofluorobenzene (S)	100 %		80-120	200		08/05/13 13:25	460-00-4	
Toluene-d8 (S)	94 %		80-120	200		08/05/13 13:25	2037-26-5	
1,2-Dichloroethane-d4 (S)	87 %		80-120	200		08/05/13 13:25	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

<b>Sample: 316-027</b>		<b>Lab ID: 60149929001</b>	Collected: 07/30/13 07:59	Received: 07/31/13 01:35	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		08/05/13 13:25		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>69.6</b>	mg/L	5.0	1		08/01/13 07:50		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	ND	mg/L	5.0	1		08/07/13 07:28		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>1540</b>	mg/L	5.0	1		07/31/13 13:13		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.4</b>	Std. Units	0.10	1		08/01/13 17:00		H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>678</b>	mg/L	20.0	200		08/01/13 15:11	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>56800</b>	mg/L	5000	500		08/01/13 09:58		

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

Sample: TRIP BLANK	Lab ID: 60149929002	Collected: 07/30/13 07:59	Received: 07/31/13 01:35	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND ug/L		1.0	1		08/05/13 13:46	71-43-2	
Bromodichloromethane	ND ug/L		1.0	1		08/05/13 13:46	75-27-4	
Bromoform	ND ug/L		1.0	1		08/05/13 13:46	75-25-2	
Bromomethane	ND ug/L		5.0	1		08/05/13 13:46	74-83-9	
Carbon tetrachloride	ND ug/L		1.0	1		08/05/13 13:46	56-23-5	
Chlorobenzene	ND ug/L		1.0	1		08/05/13 13:46	108-90-7	
Chloroethane	ND ug/L		1.0	1		08/05/13 13:46	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		10.0	1		08/05/13 13:46	110-75-8	
Chloroform	ND ug/L		1.0	1		08/05/13 13:46	67-66-3	
Chloromethane	ND ug/L		1.0	1		08/05/13 13:46	74-87-3	
Dibromochloromethane	ND ug/L		1.0	1		08/05/13 13:46	124-48-1	
1,2-Dichlorobenzene	ND ug/L		1.0	1		08/05/13 13:46	95-50-1	
1,3-Dichlorobenzene	ND ug/L		1.0	1		08/05/13 13:46	541-73-1	
1,4-Dichlorobenzene	ND ug/L		1.0	1		08/05/13 13:46	106-46-7	
1,1-Dichloroethane	ND ug/L		1.0	1		08/05/13 13:46	75-34-3	
1,2-Dichloroethane	ND ug/L		1.0	1		08/05/13 13:46	107-06-2	
1,1-Dichloroethene	ND ug/L		1.0	1		08/05/13 13:46	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		1.0	1		08/05/13 13:46	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		1.0	1		08/05/13 13:46	156-60-5	
1,2-Dichloropropane	ND ug/L		1.0	1		08/05/13 13:46	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		1.0	1		08/05/13 13:46	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		1.0	1		08/05/13 13:46	10061-02-6	
Ethylbenzene	ND ug/L		1.0	1		08/05/13 13:46	100-41-4	
Methylene chloride	ND ug/L		1.0	1		08/05/13 13:46	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		1.0	1		08/05/13 13:46	79-34-5	
Tetrachloroethene	ND ug/L		1.0	1		08/05/13 13:46	127-18-4	
Toluene	ND ug/L		1.0	1		08/05/13 13:46	108-88-3	
1,1,1-Trichloroethane	ND ug/L		1.0	1		08/05/13 13:46	71-55-6	
1,1,2-Trichloroethane	ND ug/L		1.0	1		08/05/13 13:46	79-00-5	
Trichloroethene	ND ug/L		1.0	1		08/05/13 13:46	79-01-6	
Trichlorofluoromethane	ND ug/L		1.0	1		08/05/13 13:46	75-69-4	
Vinyl chloride	ND ug/L		1.0	1		08/05/13 13:46	75-01-4	
Xylene (Total)	ND ug/L		3.0	1		08/05/13 13:46	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	91 %		80-120	1		08/05/13 13:46	1868-53-7	
4-Bromofluorobenzene (S)	100 %		80-120	1		08/05/13 13:46	460-00-4	
Toluene-d8 (S)	93 %		80-120	1		08/05/13 13:46	2037-26-5	
1,2-Dichloroethane-d4 (S)	90 %		80-120	1		08/05/13 13:46	17060-07-0	
Preservation pH	<b>7.0</b>		1.0	1		08/05/13 13:46		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

QC Batch:	MERP/7559	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60149929001		

METHOD BLANK: 1228989 Matrix: Water  
Associated Lab Samples: 60149929001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	08/01/13 14:08	

LABORATORY CONTROL SAMPLE: 1228990

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228991 1228992

Parameter	Units	60149964001		MS	MSD	MS	MSD	MS	MSD	% Rec	Max	
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD
Mercury	ug/L	0.76	5	5	5	3.3	3.1	51	48	70-130	6	20 M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

QC Batch:	MERP/7558	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury - Dissolved
Associated Lab Samples:	60149929001		

METHOD BLANK: 1228981 Matrix: Water  
Associated Lab Samples: 60149929001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	08/01/13 13:39	

LABORATORY CONTROL SAMPLE: 1228982

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228983 1228984

Parameter	Units	60149693001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/L	ND	5	5	2.8	2.3	56	46	70-130	19	20	M1

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027  
Pace Project No.: 60149929

QC Batch: MPRP/23696 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60149929001

METHOD BLANK: 1229559 Matrix: Water  
Associated Lab Samples: 60149929001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	08/06/13 10:00	
Antimony	ug/L	ND	10.0	08/06/13 10:00	
Arsenic	ug/L	ND	10.0	08/06/13 10:00	
Beryllium	ug/L	ND	1.0	08/06/13 10:00	
Cadmium	ug/L	ND	5.0	08/06/13 10:00	
Chromium	ug/L	ND	5.0	08/06/13 10:00	
Cobalt	ug/L	ND	5.0	08/06/13 10:00	
Copper	ug/L	ND	10.0	08/06/13 10:00	
Iron	ug/L	ND	50.0	08/06/13 10:00	
Lead	ug/L	ND	5.0	08/06/13 10:00	
Nickel	ug/L	ND	5.0	08/06/13 10:00	
Selenium	ug/L	ND	15.0	08/06/13 10:00	
Silver	ug/L	ND	7.0	08/06/13 10:00	
Thallium	ug/L	ND	20.0	08/06/13 10:00	
Zinc	ug/L	ND	50.0	08/06/13 14:04	

LABORATORY CONTROL SAMPLE: 1229560

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10100	101	85-115	
Antimony	ug/L	1000	1050	105	85-115	
Arsenic	ug/L	1000	996	100	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	988	99	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	980	98	85-115	
Iron	ug/L	10000	10000	100	85-115	
Lead	ug/L	1000	1010	101	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1020	102	85-115	
Silver	ug/L	500	508	102	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1229561 1229562

Parameter	Units	60150002001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum	ug/L	1490	10000	10000	14600	14900	132	134	70-130	2	8	M1	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1229561 1229562												
Parameter	Units	60150002001 Result	MS		MSD		MS		MSD		Max RPD	Qual
			Spike Conc.	MSD Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits			
Antimony	ug/L	ND	1000	1000	1040	1050	104	105	70-130	1	7	
Arsenic	ug/L	ND	1000	1000	1000	1010	100	101	70-130	1	10	
Beryllium	ug/L	ND	1000	1000	1000	1010	100	101	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1000	1010	100	101	70-130	1	10	
Chromium	ug/L	ND	1000	1000	943	954	94	95	70-130	1	10	
Cobalt	ug/L	ND	1000	1000	985	997	98	100	70-130	1	6	
Copper	ug/L	ND	1000	1000	1000	1010	99	101	70-130	1	11	
Iron	ug/L	1160	10000	10000	12700	12800	116	116	70-130	1	10	
Lead	ug/L	9.5	1000	1000	970	980	96	97	70-130	1	10	
Nickel	ug/L	8.0	1000	1000	1000	1010	99	101	70-130	1	10	
Selenium	ug/L	17.0	1000	1000	1030	1050	101	103	70-130	2	10	
Silver	ug/L	ND	500	500	503	510	101	102	70-130	1	10	
Thallium	ug/L	ND	1000	1000	951	962	95	96	70-130	1	6	
Zinc	ug/L	118	1000	1000	1060	1080	94	96	70-130	2	11	

MATRIX SPIKE SAMPLE: 1229563								
Parameter	Units	60149964001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Aluminum	ug/L	88.7	10000	10100	100	70-130		
Antimony	ug/L	ND	1000	1040	104	70-130		
Arsenic	ug/L	ND	1000	1000	100	70-130		
Beryllium	ug/L	ND	1000	1010	101	70-130		
Cadmium	ug/L	ND	1000	1010	101	70-130		
Chromium	ug/L	ND	1000	983	98	70-130		
Cobalt	ug/L	ND	1000	1000	100	70-130		
Copper	ug/L	109	1000	1110	100	70-130		
Iron	ug/L	2260	10000	11900	96	70-130		
Lead	ug/L	ND	1000	990	99	70-130		
Nickel	ug/L	ND	1000	1010	101	70-130		
Selenium	ug/L	ND	1000	1020	102	70-130		
Silver	ug/L	ND	500	508	101	70-130		
Thallium	ug/L	ND	1000	940	94	70-130		
Zinc	ug/L	53.4	1000	1030	97	70-130		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027  
Pace Project No.: 60149929

QC Batch: MPRP/23689      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60149929001

METHOD BLANK: 1228838      Matrix: Water  
Associated Lab Samples: 60149929001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	08/01/13 11:37	
Antimony, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Arsenic, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Beryllium, Dissolved	ug/L	ND	1.0	08/01/13 11:37	
Cadmium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Chromium, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Cobalt, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Copper, Dissolved	ug/L	ND	10.0	08/01/13 11:37	
Iron, Dissolved	ug/L	ND	50.0	08/01/13 11:37	
Lead, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Nickel, Dissolved	ug/L	ND	5.0	08/01/13 11:37	
Selenium, Dissolved	ug/L	ND	15.0	08/01/13 11:37	
Silver, Dissolved	ug/L	ND	7.0	08/01/13 11:37	
Thallium, Dissolved	ug/L	ND	20.0	08/01/13 11:37	
Zinc, Dissolved	ug/L	ND	50.0	08/01/13 11:37	

LABORATORY CONTROL SAMPLE: 1228839

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10100	101	85-115	
Antimony, Dissolved	ug/L	1000	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	974	97	85-115	
Beryllium, Dissolved	ug/L	1000	998	100	85-115	
Cadmium, Dissolved	ug/L	1000	993	99	85-115	
Chromium, Dissolved	ug/L	1000	1010	101	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	968	97	85-115	
Iron, Dissolved	ug/L	10000	10300	103	85-115	
Lead, Dissolved	ug/L	1000	1000	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	1000	100	85-115	
Silver, Dissolved	ug/L	500	494	99	85-115	
Thallium, Dissolved	ug/L	1000	980	98	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1228840      1228841

Parameter	Units	60149631001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	3640	10000	10000	10000	14000	13800	104	101	70-130	1	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

Parameter	60149631001		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
	Units	Result	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Antimony, Dissolved	ug/L	33.8	1000	1000	1020	1010	98	98	70-130	1	7		
Arsenic, Dissolved	ug/L	545	1000	1000	1670	1680	112	113	70-130	1	10		
Beryllium, Dissolved	ug/L	ND	1000	1000	926	916	93	92	70-130	1	7		
Cadmium, Dissolved	ug/L	ND	1000	1000	1030	1030	103	103	70-130	0	10		
Chromium, Dissolved	ug/L	201	1000	1000	1070	1030	87	83	70-130	4	10		
Cobalt, Dissolved	ug/L	37.0	1000	1000	937	927	90	89	70-130	1	6		
Copper, Dissolved	ug/L	ND	1000	1000	1010	1020	100	101	70-130	1	11		
Iron, Dissolved	ug/L	506000	10000	10000	548000	535000	418	286	70-130	2	10	M1	
Lead, Dissolved	ug/L	48.3	1000	1000	871	856	82	81	70-130	2	10		
Nickel, Dissolved	ug/L	111	1000	1000	993	981	88	87	70-130	1	10		
Selenium, Dissolved	ug/L	ND	1000	1000	1180	1190	118	119	70-130	1	10		
Silver, Dissolved	ug/L	ND	500	500	44.2	42.9	9	9	70-130	3	10	M1	
Thallium, Dissolved	ug/L	ND	1000	1000	760	740	76	74	70-130	3	6		
Zinc, Dissolved	ug/L	12600	1000	1000	14500	14000	195	148	70-130	3	11	M1	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

QC Batch: MSV/55359 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60149929001, 60149929002

METHOD BLANK: 1231096 Matrix: Water

Associated Lab Samples: 60149929001, 60149929002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1-Dichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1-Dichloroethene	ug/L	ND	1.0	08/05/13 11:49	
1,2-Dichlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
1,2-Dichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,2-Dichloropropane	ug/L	ND	1.0	08/05/13 11:49	
1,3-Dichlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
2-Chloroethylvinyl ether	ug/L	ND	10.0	08/05/13 11:49	
Benzene	ug/L	ND	1.0	08/05/13 11:49	
Bromodichloromethane	ug/L	ND	1.0	08/05/13 11:49	
Bromoform	ug/L	ND	1.0	08/05/13 11:49	
Bromomethane	ug/L	ND	5.0	08/05/13 11:49	
Carbon tetrachloride	ug/L	ND	1.0	08/05/13 11:49	
Chlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
Chloroethane	ug/L	ND	1.0	08/05/13 11:49	
Chloroform	ug/L	ND	1.0	08/05/13 11:49	
Chloromethane	ug/L	ND	1.0	08/05/13 11:49	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/05/13 11:49	
cis-1,3-Dichloropropene	ug/L	ND	1.0	08/05/13 11:49	
Dibromochloromethane	ug/L	ND	1.0	08/05/13 11:49	
Ethylbenzene	ug/L	ND	1.0	08/05/13 11:49	
Methylene chloride	ug/L	ND	1.0	08/05/13 11:49	
Tetrachloroethene	ug/L	ND	1.0	08/05/13 11:49	
Toluene	ug/L	ND	1.0	08/05/13 11:49	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/05/13 11:49	
trans-1,3-Dichloropropene	ug/L	ND	1.0	08/05/13 11:49	
Trichloroethene	ug/L	ND	1.0	08/05/13 11:49	
Trichlorofluoromethane	ug/L	ND	1.0	08/05/13 11:49	
Vinyl chloride	ug/L	ND	1.0	08/05/13 11:49	
Xylene (Total)	ug/L	ND	3.0	08/05/13 11:49	
1,2-Dichloroethane-d4 (S)	%	85	80-120	08/05/13 11:49	
4-Bromofluorobenzene (S)	%	101	80-120	08/05/13 11:49	
Toluene-d8 (S)	%	95	80-120	08/05/13 11:49	

LABORATORY CONTROL SAMPLE: 1231097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	14.4	72	71-139	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

LABORATORY CONTROL SAMPLE: 1231097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	22.0	110	59-138	
1,1,2-Trichloroethane	ug/L	20	17.6	88	69-127	
1,1-Dichloroethane	ug/L	20	14.8	74	69-126	
1,1-Dichloroethene	ug/L	20	18.1	90	65-153	
1,2-Dichlorobenzene	ug/L	20	19.7	98	66-126	
1,2-Dichloroethane	ug/L	20	16.2	81	71-129	
1,2-Dichloropropane	ug/L	20	17.5	88	66-140	
1,3-Dichlorobenzene	ug/L	20	19.5	97	63-127	
1,4-Dichlorobenzene	ug/L	20	19.2	96	68-124	
2-Chloroethylvinyl ether	ug/L	20	10.8	54	33-159	
Benzene	ug/L	20	18.8	94	73-129	
Bromodichloromethane	ug/L	20	15.3	76	63-129	
Bromoform	ug/L	20	18.7	93	52-123	
Bromomethane	ug/L	20	23.6	118	10-160	
Carbon tetrachloride	ug/L	20	15.1	76	70-140	
Chlorobenzene	ug/L	20	16.7	83	68-127	
Chloroethane	ug/L	20	16.8	84	42-160	
Chloroform	ug/L	20	14.8	74	60-120	
Chloromethane	ug/L	20	26.6	133	10-160	
cis-1,2-Dichloroethene	ug/L	20	15.5	78	70-125	
cis-1,3-Dichloropropene	ug/L	20	15.9	80	66-132	
Dibromochloromethane	ug/L	20	16.5	83	63-134	
Ethylbenzene	ug/L	20	17.0	85	66-133	
Methylene chloride	ug/L	20	16.9	85	56-135	
Tetrachloroethene	ug/L	20	18.7	93	64-143	
Toluene	ug/L	20	17.8	89	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.3	86	67-149	
trans-1,3-Dichloropropene	ug/L	20	17.9	90	66-138	
Trichloroethene	ug/L	20	15.1	76	71-130	
Trichlorofluoromethane	ug/L	20	15.1	75	58-158	
Vinyl chloride	ug/L	20	19.8	99	41-160	
Xylene (Total)	ug/L	60	56.9	95	67-130	
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			92	80-120	

MATRIX SPIKE SAMPLE: 1231098

Parameter	Units	60149923001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	2970	74	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3760	94	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3450	86	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3080	77	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3690	92	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3470	87	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3130	78	49-155	
1,2-Dichloropropane	ug/L	ND	4000	3650	91	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

MATRIX SPIKE SAMPLE:		1231098						
Parameter	Units	60149923001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
1,3-Dichlorobenzene	ug/L	ND	4000	3530	88	59-146		
1,4-Dichlorobenzene	ug/L	ND	4000	3520	88	18-147		
2-Chloroethylvinyl ether	ug/L	ND	4000	3350	84	10-160		
Benzene	ug/L	ND	4000	3760	94	37-151		
Bromodichloromethane	ug/L	ND	4000	3080	77	35-155		
Bromoform	ug/L	ND	4000	3440	86	45-133		
Bromomethane	ug/L	ND	4000	4000	100	10-160		
Carbon tetrachloride	ug/L	ND	4000	3050	76	70-140		
Chlorobenzene	ug/L	ND	4000	3340	84	37-153		
Chloroethane	ug/L	ND	4000	3320	83	14-160		
Chloroform	ug/L	ND	4000	2960	74	51-138		
Chloromethane	ug/L	ND	4000	5050	126	10-160		
cis-1,2-Dichloroethene	ug/L	ND	4000	3190	80	19-160		
cis-1,3-Dichloropropene	ug/L	ND	4000	3150	79	10-160		
Dibromochloromethane	ug/L	ND	4000	3190	80	53-149		
Ethylbenzene	ug/L	ND	4000	3430	86	37-154		
Methylene chloride	ug/L	ND	4000	3490	87	15-156		
Tetrachloroethene	ug/L	ND	4000	3620	90	64-148		
Toluene	ug/L	ND	4000	3590	90	47-150		
trans-1,2-Dichloroethene	ug/L	ND	4000	3540	89	54-156		
trans-1,3-Dichloropropene	ug/L	ND	4000	3490	87	17-160		
Trichloroethene	ug/L	ND	4000	3070	77	71-157		
Trichlorofluoromethane	ug/L	ND	4000	3100	78	17-160		
Vinyl chloride	ug/L	ND	4000	4040	101	10-160		
Xylene (Total)	ug/L	ND	12000	11100	92	12-153		
1,2-Dichloroethane-d4 (S)	%				88	80-120		
4-Bromofluorobenzene (S)	%				97	80-120		
Toluene-d8 (S)	%				93	80-120		
Preservation pH		7.0		7.0				

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

QC Batch: OEXT/39593

Analysis Method: EPA 625

QC Batch Method: EPA 625

Analysis Description: 625 MSS

Associated Lab Samples: 60149929001

METHOD BLANK: 1228921

Matrix: Water

Associated Lab Samples: 60149929001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	08/02/13 17:27	
2,4,6-Trichlorophenol	ug/L	ND	5.0	08/02/13 17:27	
2,4-Dichlorophenol	ug/L	ND	5.0	08/02/13 17:27	
2,4-Dimethylphenol	ug/L	ND	5.0	08/02/13 17:27	
2,4-Dinitrophenol	ug/L	ND	50.0	08/02/13 17:27	
2,4-Dinitrotoluene	ug/L	ND	6.0	08/02/13 17:27	
2,6-Dinitrotoluene	ug/L	ND	5.0	08/02/13 17:27	
2-Chloronaphthalene	ug/L	ND	5.0	08/02/13 17:27	
2-Chlorophenol	ug/L	ND	5.0	08/02/13 17:27	
2-Nitrophenol	ug/L	ND	5.0	08/02/13 17:27	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	08/02/13 17:27	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	08/02/13 17:27	
4-Bromophenylphenyl ether	ug/L	ND	5.0	08/02/13 17:27	
4-Chloro-3-methylphenol	ug/L	ND	5.0	08/02/13 17:27	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	08/02/13 17:27	
4-Nitrophenol	ug/L	ND	5.0	08/02/13 17:27	
Acenaphthene	ug/L	ND	5.0	08/02/13 17:27	
Acenaphthylene	ug/L	ND	5.0	08/02/13 17:27	
Anthracene	ug/L	ND	5.0	08/02/13 17:27	
Benzidine	ug/L	ND	50.0	08/02/13 17:27	
Benzo(a)anthracene	ug/L	ND	5.0	08/02/13 17:27	
Benzo(a)pyrene	ug/L	ND	5.0	08/02/13 17:27	
Benzo(b)fluoranthene	ug/L	ND	5.0	08/02/13 17:27	
Benzo(g,h,i)perylene	ug/L	ND	5.0	08/02/13 17:27	
Benzo(k)fluoranthene	ug/L	ND	5.0	08/02/13 17:27	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	08/02/13 17:27	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	08/02/13 17:27	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	08/02/13 17:27	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	08/02/13 17:27	
Butylbenzylphthalate	ug/L	ND	5.0	08/02/13 17:27	
Chrysene	ug/L	ND	5.0	08/02/13 17:27	
Di-n-butylphthalate	ug/L	ND	5.0	08/02/13 17:27	
Di-n-octylphthalate	ug/L	ND	5.0	08/02/13 17:27	
Dibenz(a,h)anthracene	ug/L	ND	5.0	08/02/13 17:27	
Diethylphthalate	ug/L	ND	5.0	08/02/13 17:27	
Dimethylphthalate	ug/L	ND	5.0	08/02/13 17:27	
Fluoranthene	ug/L	ND	5.0	08/02/13 17:27	
Fluorene	ug/L	ND	5.0	08/02/13 17:27	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	08/02/13 17:27	
Hexachlorobenzene	ug/L	ND	5.0	08/02/13 17:27	
Hexachlorocyclopentadiene	ug/L	ND	5.0	08/02/13 17:27	
Hexachloroethane	ug/L	ND	5.0	08/02/13 17:27	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	08/02/13 17:27	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

METHOD BLANK: 1228921

Matrix: Water

Associated Lab Samples: 60149929001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	08/02/13 17:27	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	08/02/13 17:27	
N-Nitrosodimethylamine	ug/L	ND	5.0	08/02/13 17:27	
N-Nitrosodiphenylamine	ug/L	ND	5.0	08/02/13 17:27	
Naphthalene	ug/L	ND	5.0	08/02/13 17:27	
Nitrobenzene	ug/L	ND	5.0	08/02/13 17:27	
Pentachlorophenol	ug/L	ND	5.0	08/02/13 17:27	
Phenanthrene	ug/L	ND	5.0	08/02/13 17:27	
Phenol	ug/L	ND	5.0	08/02/13 17:27	
Pyrene	ug/L	ND	5.0	08/02/13 17:27	
2,4,6-Tribromophenol (S)	%	81	39-119	08/02/13 17:27	
2-Fluorobiphenyl (S)	%	80	36-120	08/02/13 17:27	
2-Fluorophenol (S)	%	48	18-120	08/02/13 17:27	
Nitrobenzene-d5 (S)	%	80	32-120	08/02/13 17:27	
Phenol-d6 (S)	%	32	12-120	08/02/13 17:27	
Terphenyl-d14 (S)	%	83	44-120	08/02/13 17:27	

LABORATORY CONTROL SAMPLE: 1228922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	37.9	76	44-120	
2,4,6-Trichlorophenol	ug/L	50	43.6	87	48-120	
2,4-Dichlorophenol	ug/L	50	41.9	84	48-120	
2,4-Dimethylphenol	ug/L	50	39.8	80	37-119	
2,4-Dinitrophenol	ug/L	50	33.3J	67	15-153	
2,4-Dinitrotoluene	ug/L	50	45.4	91	54-120	
2,6-Dinitrotoluene	ug/L	50	46.7	93	52-120	
2-Chloronaphthalene	ug/L	50	41.5	83	60-118	
2-Chlorophenol	ug/L	50	39.0	78	44-120	
2-Nitrophenol	ug/L	50	44.2	88	43-120	
3,3'-Dichlorobenzidine	ug/L	50	46.1	92	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	42.0	84	31-147	
4-Bromophenylphenyl ether	ug/L	50	44.5	89	53-120	
4-Chloro-3-methylphenol	ug/L	50	41.7	83	50-120	
4-Chlorophenylphenyl ether	ug/L	50	42.5	85	54-120	
4-Nitrophenol	ug/L	50	18.7	37	10-120	
Acenaphthene	ug/L	50	42.0	84	51-120	
Acenaphthylene	ug/L	50	42.3	85	51-120	
Anthracene	ug/L	50	43.8	88	54-120	
Benzidine	ug/L	50	3.2J	6	1-124	
Benzo(a)anthracene	ug/L	50	43.9	88	54-120	
Benzo(a)pyrene	ug/L	50	45.6	91	54-120	
Benzo(b)fluoranthene	ug/L	50	47.7	95	57-120	
Benzo(g,h,i)perylene	ug/L	50	44.9	90	54-120	
Benzo(k)fluoranthene	ug/L	50	44.0	88	52-121	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

LABORATORY CONTROL SAMPLE: 1228922

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	41.4	83	51-120	
bis(2-Chloroethyl) ether	ug/L	50	41.3	83	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	41.2	82	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	46.8	94	51-126	
Butylbenzylphthalate	ug/L	50	47.2	94	45-129	
Chrysene	ug/L	50	44.6	89	54-120	
Di-n-butylphthalate	ug/L	50	46.4	93	57-118	
Di-n-octylphthalate	ug/L	50	49.7	99	48-130	
Dibenz(a,h)anthracene	ug/L	50	46.1	92	56-119	
Diethylphthalate	ug/L	50	44.3	89	55-114	
Dimethylphthalate	ug/L	50	43.6	87	54-112	
Fluoranthene	ug/L	50	45.8	92	56-120	
Fluorene	ug/L	50	42.8	86	59-120	
Hexachloro-1,3-butadiene	ug/L	50	36.1	72	41-116	
Hexachlorobenzene	ug/L	50	44.0	88	53-120	
Hexachlorocyclopentadiene	ug/L	100	66.5	67	31-120	
Hexachloroethane	ug/L	50	35.8	72	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	44.5	89	55-120	
Isophorone	ug/L	50	42.1	84	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	42.0	84	47-120	
N-Nitrosodimethylamine	ug/L	50	26.0	52	28-120	
N-Nitrosodiphenylamine	ug/L	50	43.7	87	53-120	
Naphthalene	ug/L	50	39.1	78	48-120	
Nitrobenzene	ug/L	50	41.6	83	47-120	
Pentachlorophenol	ug/L	50	45.0	90	43-127	
Phenanthrene	ug/L	50	43.2	86	55-120	
Phenol	ug/L	50	18.9	38	15-112	
Pyrene	ug/L	50	45.7	91	55-115	
2,4,6-Tribromophenol (S)	%			87	39-119	
2-Fluorobiphenyl (S)	%			82	36-120	
2-Fluorophenol (S)	%			51	18-120	
Nitrobenzene-d5 (S)	%			79	32-120	
Phenol-d6 (S)	%			35	12-120	
Terphenyl-d14 (S)	%			88	44-120	

MATRIX SPIKE SAMPLE: 1228923

Parameter	Units	60149698003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	36.0	72	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	39.1	78	37-121	
2,4-Dichlorophenol	ug/L	ND	50	37.9	76	39-120	
2,4-Dimethylphenol	ug/L	22.9	50	50.3	55	32-119	
2,4-Dinitrophenol	ug/L	ND	50	40.6J	81	20-157	
2,4-Dinitrotoluene	ug/L	ND	50	43.3	87	39-130	
2,6-Dinitrotoluene	ug/L	ND	50	42.7	85	50-128	
2-Chloronaphthalene	ug/L	ND	50	38.8	78	60-118	
2-Chlorophenol	ug/L	ND	50	35.5	71	35-120	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

MATRIX SPIKE SAMPLE:		1228923						
Parameter	Units	60149698003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
2-Nitrophenol	ug/L	ND	50	40.2	80	29-123		
3,3'-Dichlorobenzidine	ug/L	ND	50	17.4J	35	10-160		
4,6-Dinitro-2-methylphenol	ug/L	ND	50	43.4	87	27-146		
4-Bromophenylphenyl ether	ug/L	ND	50	41.5	83	53-124		
4-Chloro-3-methylphenol	ug/L	ND	50	38.4	77	33-123		
4-Chlorophenylphenyl ether	ug/L	ND	50	39.5	79	34-125		
4-Nitrophenol	ug/L	ND	50	17.6	35	10-120		
Acenaphthene	ug/L	ND	50	38.9	78	47-120		
Acenaphthylene	ug/L	ND	50	39.6	79	33-120		
Anthracene	ug/L	ND	50	42.0	84	36-121		
Benzidine	ug/L	ND	50	ND	0	1-120 M1		
Benzo(a)anthracene	ug/L	ND	50	40.9	82	37-127		
Benzo(a)pyrene	ug/L	ND	50	42.7	85	34-125		
Benzo(b)fluoranthene	ug/L	ND	50	44.3	89	37-131		
Benzo(g,h,i)perylene	ug/L	ND	50	41.5	83	35-128		
Benzo(k)fluoranthene	ug/L	ND	50	41.6	83	34-130		
bis(2-Chloroethoxy)methane	ug/L	ND	50	38.1	76	33-120		
bis(2-Chloroethyl) ether	ug/L	ND	50	37.6	75	32-120		
bis(2-Chloroisopropyl) ether	ug/L	ND	50	37.9	76	36-120		
bis(2-Ethylhexyl)phthalate	ug/L	ND	50	44.0	88	38-137		
Butylbenzylphthalate	ug/L	ND	50	45.8	92	43-136		
Chrysene	ug/L	ND	50	41.7	83	36-127		
Di-n-butylphthalate	ug/L	ND	50	45.5	91	38-118		
Di-n-octylphthalate	ug/L	ND	50	47.1	94	40-140		
Dibenz(a,h)anthracene	ug/L	ND	50	43.1	86	35-131		
Diethylphthalate	ug/L	ND	50	41.3	83	33-114		
Dimethylphthalate	ug/L	ND	50	40.3	81	34-112		
Fluoranthene	ug/L	ND	50	43.2	86	38-125		
Fluorene	ug/L	ND	50	40.0	80	59-121		
Hexachloro-1,3-butadiene	ug/L	ND	50	34.8	70	27-116		
Hexachlorobenzene	ug/L	ND	50	40.0	80	34-124		
Hexachlorocyclopentadiene	ug/L	ND	100	64.8	65	11-120		
Hexachloroethane	ug/L	ND	50	37.3	75	40-113		
Indeno(1,2,3-cd)pyrene	ug/L	ND	50	41.7	83	38-127		
Isophorone	ug/L	ND	50	39.0	78	31-120		
N-Nitroso-di-n-propylamine	ug/L	ND	50	37.2	74	30-120		
N-Nitrosodimethylamine	ug/L	ND	50	23.7	47	29-120		
N-Nitrosodiphenylamine	ug/L	ND	50	33.8	68	10-139		
Naphthalene	ug/L	ND	50	37.3	75	32-120		
Nitrobenzene	ug/L	ND	50	38.8	78	35-128		
Pentachlorophenol	ug/L	ND	50	45.3	91	38-133		
Phenanthrene	ug/L	ND	50	41.2	82	54-120		
Phenol	ug/L	ND	50	19.0	30	13-112		
Pyrene	ug/L	ND	50	42.7	85	52-115		
2,4,6-Tribromophenol (S)	%				82	39-119		
2-Fluorobiphenyl (S)	%				76	36-120		
2-Fluorophenol (S)	%				43	18-120		
Nitrobenzene-d5 (S)	%				74	32-120		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

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MATRIX SPIKE SAMPLE:		1228923					
Parameter	Units	60149698003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenol-d6 (S)	%					29	12-120
Terphenyl-d14 (S)	%					85	44-120

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

QC Batch:	WET/42650	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60149929001		

METHOD BLANK: 1228928 Matrix: Water

Associated Lab Samples: 60149929001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	08/01/13 07:45	

LABORATORY CONTROL SAMPLE: 1228929

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	38.1	95	78-114	

MATRIX SPIKE SAMPLE: 1228934

Parameter	Units	60149668001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.4	40.6	99	78-114	

SAMPLE DUPLICATE: 1228935

Parameter	Units	60149765001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

QC Batch:	WET/42743	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60149929001		

METHOD BLANK: 1231879 Matrix: Water  
Associated Lab Samples: 60149929001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	08/07/13 07:27	

LABORATORY CONTROL SAMPLE: 1231880

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	19.6	98	64-132	

MATRIX SPIKE SAMPLE: 1231912

Parameter	Units	60150085001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.7	22.1	95	64-132	

SAMPLE DUPLICATE: 1231915

Parameter	Units	60149960001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	70.0	51.9	30	34	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

QC Batch: WET/42644

Analysis Method: SM 2540D

QC Batch Method: SM 2540D

Analysis Description: 2540D Total Suspended Solids

Associated Lab Samples: 60149929001

METHOD BLANK: 1228557

Matrix: Water

Associated Lab Samples: 60149929001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	07/31/13 13:10	

SAMPLE DUPLICATE: 1228558

Parameter	Units	60149867002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	327	331	1	25	

SAMPLE DUPLICATE: 1228559

Parameter	Units	60149904001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	5.3	6.7	22	25	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

QC Batch: WET/42673 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60149929001

SAMPLE DUPLICATE: 1229689

Parameter	Units	60149833001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.8	7.8	0	5	H6

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

QC Batch: WETA/25643 Analysis Method: EPA 350.1  
 QC Batch Method: EPA 350.1 Analysis Description: 350.1 Ammonia  
 Associated Lab Samples: 60149929001

METHOD BLANK: 1228896 Matrix: Water

Associated Lab Samples: 60149929001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	08/01/13 14:39	

LABORATORY CONTROL SAMPLE: 1228897

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1228898

Parameter	Units	60149749004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	106	90-110	

MATRIX SPIKE SAMPLE: 1228899

Parameter	Units	60149750001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.25	2	1.5	61	90-110	M1

SAMPLE DUPLICATE: 1228900

Parameter	Units	60149861001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	7.2	7.2	0	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-027  
Pace Project No.: 60149929

QC Batch: WETA/25634      Analysis Method: EPA 410.4  
QC Batch Method: EPA 410.4      Analysis Description: 410.4 COD  
Associated Lab Samples: 60149929001

METHOD BLANK: 1228467      Matrix: Water  
Associated Lab Samples: 60149929001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	08/01/13 09:53	

LABORATORY CONTROL SAMPLE: 1228468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	52.2	104	90-110	

MATRIX SPIKE SAMPLE: 1228470

Parameter	Units	60149896004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	55.9	111	90-110	M1

MATRIX SPIKE SAMPLE: 1228471

Parameter	Units	60149909001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	114	50	155	82	90-110	M1

SAMPLE DUPLICATE: 1228469

Parameter	Units	60149906002 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	ND	5.2J		25	

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## QUALIFIERS

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

D9 Dissolved result is greater than the total. Data is within laboratory control limits.

H6 Analysis initiated outside of the 15 minute EPA recommended holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-027

Pace Project No.: 60149929

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60149929001	316-027	EPA 200.7	MPRP/23696	EPA 200.7	ICP/18586
60149929001	316-027	EPA 200.7	MPRP/23689	EPA 200.7	ICP/18580
60149929001	316-027	EPA 245.1	MERP/7559	EPA 245.1	MERC/7516
60149929001	316-027	EPA 245.1	MERP/7558	EPA 245.1	MERC/7515
60149929001	316-027	EPA 625	OEXT/39593	EPA 625	MSSV/12563
60149929001	316-027	EPA 624 Low	MSV/55359		
60149929002	TRIP BLANK	EPA 624 Low	MSV/55359		
60149929001	316-027	EPA 1664A	WET/42650		
60149929001	316-027	EPA 1664A	WET/42743		
60149929001	316-027	SM 2540D	WET/42644		
60149929001	316-027	SM 4500-H+B	WET/42673		
60149929001	316-027	EPA 350.1	WETA/25643		
60149929001	316-027	EPA 410.4	WETA/25634		

### REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 60149929
Barcode
60149929

Client Name: Barr Eng

Courier: Fed Ex [ ] UPS [ ] USPS [ ] Client [ ] Commercial [ ] Pace [ ] Other [x] X roads

Tracking #: Pace Shipping Label Used? Yes [x] No [ ]

Custody Seal on Cooler/Box Present: Yes [x] No [ ] Seals intact: Yes [x] No [ ]

Packing Material: Bubble Wrap [ ] Bubble Bags [x] Foam [x] None [ ] Other [ ]

Thermometer Used: T-112 / T-194 Type of Ice: (Web) Blue None [ ] Samples received on ice, cooling process has begun.

Cooler Temperature: 2.5

Date and initials of person examining contents: KE 7/31/13

Temperature should be above freezing to 6°C

Table with 17 rows and 2 columns. Row 1: Chain of Custody present: [x] Yes [ ] No [ ] N/A 1. Row 2: Chain of Custody filled out: [x] Yes [ ] No [ ] N/A 2. Row 3: Chain of Custody relinquished: [x] Yes [ ] No [ ] N/A 3. Row 4: Sampler name & signature on COC: [x] Yes [ ] No [ ] N/A 4. Row 5: Samples arrived within holding time: [x] Yes [ ] No [ ] N/A 5. Row 6: Short Hold Time analyses (<72hr): [x] Yes [ ] No [ ] N/A 6. pH. Row 7: Rush Turn Around Time requested: [ ] Yes [x] No [ ] N/A 7. Row 8: Sufficient volume: [x] Yes [ ] No [ ] N/A 8. Row 9: Correct containers used: [x] Yes [ ] No [ ] N/A. Row 10: Pace containers used: [x] Yes [ ] No [ ] N/A 9. Row 11: Containers intact: [x] Yes [ ] No [ ] N/A 10. Row 12: Unpreserved 5035A soils frozen w/in 48hrs? [ ] Yes [ ] No [x] N/A 11. Row 13: Filtered volume received for dissolved tests? [ ] Yes [x] No [ ] N/A 12. Row 14: Sample labels match COC: [x] Yes [ ] No [ ] N/A. Row 15: Includes date/time/ID/analyses Matrix: WT 13. Row 16: All containers needing preservation have been checked. [x] Yes [ ] No [ ] N/A. All containers needing preservation are found to be in compliance with EPA recommendation. [ ] Yes [x] No [ ] N/A. Exceptions: VOA, coliform, TOC, O&G WI-DRO (water), Phenolics [x] Yes [ ] No. Initial when completed KE Lot # of added preservative 12510. Trip Blank present: [x] Yes [ ] No [ ] N/A. Pace Trip Blank lot # (if purchased): Jul 22 15. Row 17: Headspace in VOA vials (>6mm): [ ] Yes [x] No [ ] N/A 16. Row 18: Project sampled in USDA Regulated Area: [ ] Yes [x] No [ ] N/A 17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: [Signature]

Date: 7/31/13



August 08, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-028  
Pace Project No.: 60150019

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on August 01, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60150019001	316-028	Water	07/31/13 08:30	08/01/13 01:30
60150019002	TRIP BLANK	Water	07/31/13 08:30	08/01/13 01:30

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60150019001	316-028	EPA 200.7	JGP	15
		EPA 200.7	JGP	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	59
		EPA 624 Low	AAM	38
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	LEM	1
		SM 4500-H+B	JML	1
		EPA 350.1	NDL	1
		EPA 410.4	NDL	1
		60150019002	TRIP BLANK	EPA 624 Low

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

Sample: 316-028		Lab ID: 60150019001	Collected: 07/31/13 08:30	Received: 08/01/13 01:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>200.7 Metals, Total</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum	4740 ug/L		150	2	08/01/13 16:15	08/06/13 11:22	7429-90-5	
Antimony	43.6 ug/L		20.0	2	08/01/13 16:15	08/06/13 11:22	7440-36-0	
Arsenic	578 ug/L		20.0	2	08/01/13 16:15	08/06/13 11:22	7440-38-2	
Beryllium	ND ug/L		2.0	2	08/01/13 16:15	08/06/13 11:22	7440-41-7	D3
Cadmium	ND ug/L		10.0	2	08/01/13 16:15	08/06/13 11:22	7440-43-9	
Chromium	217 ug/L		25.0	5	08/01/13 16:15	08/06/13 11:33	7440-47-3	
Cobalt	42.6 ug/L		10.0	2	08/01/13 16:15	08/06/13 11:22	7440-48-4	
Copper	ND ug/L		20.0	2	08/01/13 16:15	08/06/13 11:22	7440-50-8	
Iron	596000 ug/L		100	2	08/01/13 16:15	08/06/13 11:22	7439-89-6	
Lead	85.3 ug/L		10.0	2	08/01/13 16:15	08/06/13 11:22	7439-92-1	
Nickel	109 ug/L		10.0	2	08/01/13 16:15	08/06/13 11:22	7440-02-0	
Selenium	ND ug/L		75.0	5	08/01/13 16:15	08/06/13 11:33	7782-49-2	
Silver	ND ug/L		14.0	2	08/01/13 16:15	08/06/13 11:22	7440-22-4	
Thallium	ND ug/L		100	5	08/01/13 16:15	08/06/13 11:33	7440-28-0	D3
Zinc	11600 ug/L		100	2	08/01/13 16:15	08/06/13 11:22	7440-66-6	
<b>200.7 Metals, Dissolved (LF)</b>		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Aluminum, Dissolved	3910 ug/L		150	2	08/05/13 16:30	08/06/13 18:41	7429-90-5	
Antimony, Dissolved	22.2 ug/L		20.0	2	08/05/13 16:30	08/06/13 18:41	7440-36-0	
Arsenic, Dissolved	455 ug/L		20.0	2	08/05/13 16:30	08/06/13 18:41	7440-38-2	
Beryllium, Dissolved	ND ug/L		5.0	5	08/05/13 16:30	08/06/13 19:23	7440-41-7	D3
Cadmium, Dissolved	ND ug/L		10.0	2	08/05/13 16:30	08/06/13 18:41	7440-43-9	D3
Chromium, Dissolved	218 ug/L		25.0	5	08/05/13 16:30	08/06/13 19:23	7440-47-3	D9
Cobalt, Dissolved	36.6 ug/L		10.0	2	08/05/13 16:30	08/06/13 18:41	7440-48-4	
Copper, Dissolved	ND ug/L		20.0	2	08/05/13 16:30	08/07/13 11:09	7440-50-8	D3
Iron, Dissolved	616000 ug/L		100	2	08/05/13 16:30	08/06/13 18:41	7439-89-6	
Lead, Dissolved	82.3 ug/L		10.0	2	08/05/13 16:30	08/06/13 18:41	7439-92-1	
Nickel, Dissolved	103 ug/L		10.0	2	08/05/13 16:30	08/06/13 18:41	7440-02-0	
Selenium, Dissolved	ND ug/L		75.0	5	08/05/13 16:30	08/06/13 19:23	7782-49-2	D3
Silver, Dissolved	ND ug/L		14.0	2	08/05/13 16:30	08/06/13 18:41	7440-22-4	D3
Thallium, Dissolved	ND ug/L		100	5	08/05/13 16:30	08/06/13 19:23	7440-28-0	D3
Zinc, Dissolved	11800 ug/L		1000	20	08/05/13 16:30	08/06/13 18:51	7440-66-6	
<b>245.1 Mercury</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury	3.0 ug/L		0.20	1	08/02/13 09:30	08/02/13 12:54	7439-97-6	
<b>245.1 Mercury, Dissolved (LF)</b>		Analytical Method: EPA 245.1 Preparation Method: EPA 245.1						
Mercury, Dissolved	ND ug/L		0.20	1	08/07/13 08:30	08/07/13 11:21	7439-97-6	
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Acenaphthene	ND ug/L		1000	20	08/02/13 00:00	08/04/13 22:23	83-32-9	
Acenaphthylene	ND ug/L		1000	20	08/02/13 00:00	08/04/13 22:23	208-96-8	
Anthracene	ND ug/L		1000	20	08/02/13 00:00	08/04/13 22:23	120-12-7	
Benzidine	ND ug/L		10000	20	08/02/13 00:00	08/04/13 22:23	92-87-5	
Benzo(a)anthracene	ND ug/L		1000	20	08/02/13 00:00	08/04/13 22:23	56-55-3	
Benzo(a)pyrene	ND ug/L		1000	20	08/02/13 00:00	08/04/13 22:23	50-32-8	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

Sample: 316-028		Lab ID: 60150019001	Collected: 07/31/13 08:30	Received: 08/01/13 01:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>625 MSSV</b>		Analytical Method: EPA 625 Preparation Method: EPA 625						
Benzo(b)fluoranthene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	205-99-2	
Benzo(g,h,i)perylene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	191-24-2	
Benzo(k)fluoranthene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	207-08-9	
4-Bromophenylphenyl ether	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	101-55-3	
Butylbenzylphthalate	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	85-68-7	
4-Chloro-3-methylphenol	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	59-50-7	
bis(2-Chloroethoxy)methane	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	111-91-1	
bis(2-Chloroethyl) ether	ND	ug/L	1200	20	08/02/13 00:00	08/04/13 22:23	111-44-4	
bis(2-Chloroisopropyl) ether	ND	ug/L	1200	20	08/02/13 00:00	08/04/13 22:23	39638-32-9	
2-Chloronaphthalene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	91-58-7	L2
2-Chlorophenol	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	95-57-8	
4-Chlorophenylphenyl ether	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	7005-72-3	
Chrysene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	218-01-9	
Dibenz(a,h)anthracene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	53-70-3	
3,3'-Dichlorobenzidine	ND	ug/L	4000	20	08/02/13 00:00	08/04/13 22:23	91-94-1	
2,4-Dichlorophenol	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	120-83-2	
Diethylphthalate	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	84-66-2	
2,4-Dimethylphenol	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	105-67-9	
Dimethylphthalate	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	131-11-3	
Di-n-butylphthalate	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	84-74-2	
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	20	08/02/13 00:00	08/04/13 22:23	534-52-1	
2,4-Dinitrophenol	ND	ug/L	10000	20	08/02/13 00:00	08/04/13 22:23	51-28-5	
2,4-Dinitrotoluene	ND	ug/L	1200	20	08/02/13 00:00	08/04/13 22:23	121-14-2	
2,6-Dinitrotoluene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	606-20-2	
Di-n-octylphthalate	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	117-84-0	
bis(2-Ethylhexyl)phthalate	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	117-81-7	
Fluoranthene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	206-44-0	
Fluorene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	86-73-7	
Hexachloro-1,3-butadiene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	87-68-3	
Hexachlorobenzene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	118-74-1	
Hexachlorocyclopentadiene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	77-47-4	
Hexachloroethane	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	67-72-1	
Indeno(1,2,3-cd)pyrene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	193-39-5	
Isophorone	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	78-59-1	
Naphthalene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	91-20-3	
Nitrobenzene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	98-95-3	
2-Nitrophenol	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	88-75-5	
4-Nitrophenol	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	100-02-7	
N-Nitrosodimethylamine	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	62-75-9	
N-Nitroso-di-n-propylamine	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	621-64-7	
N-Nitrosodiphenylamine	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	86-30-6	
Pentachlorophenol	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	87-86-5	
Phenanthrene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	85-01-8	
Phenol	<b>12900</b>	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	108-95-2	
Pyrene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	129-00-0	
1,2,4-Trichlorobenzene	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	20	08/02/13 00:00	08/04/13 22:23	88-06-2	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

**Sample: 316-028**      **Lab ID: 60150019001**      Collected: 07/31/13 08:30      Received: 08/01/13 01:30      Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
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**625 MSSV**

Analytical Method: EPA 625      Preparation Method: EPA 625

**Surrogates**

Nitrobenzene-d5 (S)	0 %		32-120	20	08/02/13 00:00	08/04/13 22:23	4165-60-0	S4
2-Fluorobiphenyl (S)	0 %		36-120	20	08/02/13 00:00	08/04/13 22:23	321-60-8	S4
Terphenyl-d14 (S)	0 %		44-120	20	08/02/13 00:00	08/04/13 22:23	1718-51-0	S4
Phenol-d6 (S)	0 %		12-120	20	08/02/13 00:00	08/04/13 22:23	13127-88-3	S4
2-Fluorophenol (S)	0 %		18-120	20	08/02/13 00:00	08/04/13 22:23	367-12-4	S4
2,4,6-Tribromophenol (S)	0 %		39-119	20	08/02/13 00:00	08/04/13 22:23	118-79-6	S4

**624 Volatile Organics**

Analytical Method: EPA 624 Low

Benzene	ND ug/L		200	200		08/05/13 14:07	71-43-2	
Bromodichloromethane	ND ug/L		200	200		08/05/13 14:07	75-27-4	
Bromoform	ND ug/L		200	200		08/05/13 14:07	75-25-2	
Bromomethane	ND ug/L		1000	200		08/05/13 14:07	74-83-9	
Carbon tetrachloride	ND ug/L		200	200		08/05/13 14:07	56-23-5	
Chlorobenzene	ND ug/L		200	200		08/05/13 14:07	108-90-7	
Chloroethane	ND ug/L		200	200		08/05/13 14:07	75-00-3	
2-Chloroethylvinyl ether	ND ug/L		2000	200		08/05/13 14:07	110-75-8	
Chloroform	ND ug/L		200	200		08/05/13 14:07	67-66-3	
Chloromethane	ND ug/L		200	200		08/05/13 14:07	74-87-3	
Dibromochloromethane	ND ug/L		200	200		08/05/13 14:07	124-48-1	
1,2-Dichlorobenzene	ND ug/L		200	200		08/05/13 14:07	95-50-1	
1,3-Dichlorobenzene	ND ug/L		200	200		08/05/13 14:07	541-73-1	
1,4-Dichlorobenzene	ND ug/L		200	200		08/05/13 14:07	106-46-7	
1,1-Dichloroethane	ND ug/L		200	200		08/05/13 14:07	75-34-3	
1,2-Dichloroethane	ND ug/L		200	200		08/05/13 14:07	107-06-2	
1,1-Dichloroethene	ND ug/L		200	200		08/05/13 14:07	75-35-4	
cis-1,2-Dichloroethene	ND ug/L		200	200		08/05/13 14:07	156-59-2	
trans-1,2-Dichloroethene	ND ug/L		200	200		08/05/13 14:07	156-60-5	
1,2-Dichloropropane	ND ug/L		200	200		08/05/13 14:07	78-87-5	
cis-1,3-Dichloropropene	ND ug/L		200	200		08/05/13 14:07	10061-01-5	
trans-1,3-Dichloropropene	ND ug/L		200	200		08/05/13 14:07	10061-02-6	
Ethylbenzene	ND ug/L		200	200		08/05/13 14:07	100-41-4	
Methylene chloride	ND ug/L		200	200		08/05/13 14:07	75-09-2	
1,1,2,2-Tetrachloroethane	ND ug/L		200	200		08/05/13 14:07	79-34-5	
Tetrachloroethene	ND ug/L		200	200		08/05/13 14:07	127-18-4	
Toluene	ND ug/L		200	200		08/05/13 14:07	108-88-3	
1,1,1-Trichloroethane	ND ug/L		200	200		08/05/13 14:07	71-55-6	
1,1,2-Trichloroethane	ND ug/L		200	200		08/05/13 14:07	79-00-5	
Trichloroethene	ND ug/L		200	200		08/05/13 14:07	79-01-6	
Trichlorofluoromethane	ND ug/L		200	200		08/05/13 14:07	75-69-4	
Vinyl chloride	ND ug/L		200	200		08/05/13 14:07	75-01-4	
Xylene (Total)	ND ug/L		600	200		08/05/13 14:07	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	89 %		80-120	200		08/05/13 14:07	1868-53-7	D3
4-Bromofluorobenzene (S)	100 %		80-120	200		08/05/13 14:07	460-00-4	
Toluene-d8 (S)	90 %		80-120	200		08/05/13 14:07	2037-26-5	
1,2-Dichloroethane-d4 (S)	94 %		80-120	200		08/05/13 14:07	17060-07-0	

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

<b>Sample: 316-028</b>		<b>Lab ID: 60150019001</b>	Collected: 07/31/13 08:30	Received: 08/01/13 01:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>	Analytical Method: EPA 624 Low							
Preservation pH	<b>7.0</b>		1.0	200		08/05/13 14:07		
<b>HEM, Oil and Grease</b>	Analytical Method: EPA 1664A							
Oil and Grease	<b>425</b> mg/L		5.0	1		08/02/13 09:43		
<b>1664 SGT-HEM, TPH</b>	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	ND mg/L		5.0	1		08/07/13 07:28		
<b>2540D Total Suspended Solids</b>	Analytical Method: SM 2540D							
Total Suspended Solids	<b>1600</b> mg/L		5.0	1		08/02/13 08:28		
<b>4500H+ pH, Electrometric</b>	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	<b>5.5</b> Std. Units		0.10	1		08/02/13 13:09		H1,H6
<b>350.1 Ammonia</b>	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	<b>597</b> mg/L		20.0	200		08/06/13 15:11	7664-41-7	
<b>410.4 COD</b>	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	<b>55400</b> mg/L		5000	500		08/06/13 09:02		

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

Sample: TRIP BLANK		Lab ID: 60150019002	Collected: 07/31/13 08:30	Received: 08/01/13 01:30	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>624 Volatile Organics</b>		Analytical Method: EPA 624 Low						
Benzene	ND	ug/L	1.0	1		08/05/13 14:28	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		08/05/13 14:28	75-27-4	
Bromoform	ND	ug/L	1.0	1		08/05/13 14:28	75-25-2	
Bromomethane	ND	ug/L	5.0	1		08/05/13 14:28	74-83-9	
Carbon tetrachloride	ND	ug/L	1.0	1		08/05/13 14:28	56-23-5	
Chlorobenzene	ND	ug/L	1.0	1		08/05/13 14:28	108-90-7	
Chloroethane	ND	ug/L	1.0	1		08/05/13 14:28	75-00-3	
2-Chloroethylvinyl ether	ND	ug/L	10.0	1		08/05/13 14:28	110-75-8	
Chloroform	ND	ug/L	1.0	1		08/05/13 14:28	67-66-3	
Chloromethane	ND	ug/L	1.0	1		08/05/13 14:28	74-87-3	
Dibromochloromethane	ND	ug/L	1.0	1		08/05/13 14:28	124-48-1	
1,2-Dichlorobenzene	ND	ug/L	1.0	1		08/05/13 14:28	95-50-1	
1,3-Dichlorobenzene	ND	ug/L	1.0	1		08/05/13 14:28	541-73-1	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		08/05/13 14:28	106-46-7	
1,1-Dichloroethane	ND	ug/L	1.0	1		08/05/13 14:28	75-34-3	
1,2-Dichloroethane	ND	ug/L	1.0	1		08/05/13 14:28	107-06-2	
1,1-Dichloroethene	ND	ug/L	1.0	1		08/05/13 14:28	75-35-4	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/13 14:28	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		08/05/13 14:28	156-60-5	
1,2-Dichloropropane	ND	ug/L	1.0	1		08/05/13 14:28	78-87-5	
cis-1,3-Dichloropropene	ND	ug/L	1.0	1		08/05/13 14:28	10061-01-5	
trans-1,3-Dichloropropene	ND	ug/L	1.0	1		08/05/13 14:28	10061-02-6	
Ethylbenzene	ND	ug/L	1.0	1		08/05/13 14:28	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		08/05/13 14:28	75-09-2	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		08/05/13 14:28	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	1		08/05/13 14:28	127-18-4	
Toluene	ND	ug/L	1.0	1		08/05/13 14:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		08/05/13 14:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		08/05/13 14:28	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		08/05/13 14:28	79-01-6	
Trichlorofluoromethane	ND	ug/L	1.0	1		08/05/13 14:28	75-69-4	
Vinyl chloride	ND	ug/L	1.0	1		08/05/13 14:28	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		08/05/13 14:28	1330-20-7	
<b>Surrogates</b>								
Dibromofluoromethane (S)	90 %		80-120	1		08/05/13 14:28	1868-53-7	
4-Bromofluorobenzene (S)	101 %		80-120	1		08/05/13 14:28	460-00-4	
Toluene-d8 (S)	94 %		80-120	1		08/05/13 14:28	2037-26-5	
1,2-Dichloroethane-d4 (S)	87 %		80-120	1		08/05/13 14:28	17060-07-0	
Preservation pH	7.0			1		08/05/13 14:28		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

QC Batch:	MERP/7563	Analysis Method:	EPA 245.1
QC Batch Method:	EPA 245.1	Analysis Description:	245.1 Mercury
Associated Lab Samples:	60150019001		

METHOD BLANK: 1229823 Matrix: Water

Associated Lab Samples: 60150019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	08/02/13 12:43	

LABORATORY CONTROL SAMPLE: 1229824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	112	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1229825 1229826

Parameter	Units	60150002001 Result	MS	MSD	MS	MSD	MS	MSD	% Rec	Max		Qual
			Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	
Mercury	ug/L	ND	5	5	4.7	4.6	93	92	70-130	1	20	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028  
Pace Project No.: 60150019

QC Batch: MERP/7576 Analysis Method: EPA 245.1  
QC Batch Method: EPA 245.1 Analysis Description: 245.1 Mercury - Dissolved  
Associated Lab Samples: 60150019001

METHOD BLANK: 1231932 Matrix: Water  
Associated Lab Samples: 60150019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	08/07/13 11:17	

LABORATORY CONTROL SAMPLE: 1231933

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.2	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1231934 1231935

Parameter	Units	60150362001 Result	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
			Spike Conc.	Conc.	Result	Result	% Rec	% Rec					
Mercury, Dissolved	ug/L	ND	5	5	3.8	4.0	77	80	70-130	4	20		

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028  
Pace Project No.: 60150019

QC Batch: MPRP/23696      Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7      Analysis Description: 200.7 Metals, Total  
Associated Lab Samples: 60150019001

METHOD BLANK: 1229559      Matrix: Water  
Associated Lab Samples: 60150019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	08/06/13 10:00	
Antimony	ug/L	ND	10.0	08/06/13 10:00	
Arsenic	ug/L	ND	10.0	08/06/13 10:00	
Beryllium	ug/L	ND	1.0	08/06/13 10:00	
Cadmium	ug/L	ND	5.0	08/06/13 10:00	
Chromium	ug/L	ND	5.0	08/06/13 10:00	
Cobalt	ug/L	ND	5.0	08/06/13 10:00	
Copper	ug/L	ND	10.0	08/06/13 10:00	
Iron	ug/L	ND	50.0	08/06/13 10:00	
Lead	ug/L	ND	5.0	08/06/13 10:00	
Nickel	ug/L	ND	5.0	08/06/13 10:00	
Selenium	ug/L	ND	15.0	08/06/13 10:00	
Silver	ug/L	ND	7.0	08/06/13 10:00	
Thallium	ug/L	ND	20.0	08/06/13 10:00	
Zinc	ug/L	ND	50.0	08/06/13 14:04	

LABORATORY CONTROL SAMPLE: 1229560

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10100	101	85-115	
Antimony	ug/L	1000	1050	105	85-115	
Arsenic	ug/L	1000	996	100	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	988	99	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	980	98	85-115	
Iron	ug/L	10000	10000	100	85-115	
Lead	ug/L	1000	1010	101	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1020	102	85-115	
Silver	ug/L	500	508	102	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1229561      1229562

Parameter	Units	60150002001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum	ug/L	1490	10000	10000	14600	14900	132	134	70-130	2	8	M1	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1229561 1229562												
Parameter	Units	60150002001 Result	MS		MSD		MS		MSD		Max RPD	Qual
			Spike Conc.	MSD Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits			
Antimony	ug/L	ND	1000	1000	1040	1050	104	105	70-130	1	7	
Arsenic	ug/L	ND	1000	1000	1000	1010	100	101	70-130	1	10	
Beryllium	ug/L	ND	1000	1000	1000	1010	100	101	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1000	1010	100	101	70-130	1	10	
Chromium	ug/L	ND	1000	1000	943	954	94	95	70-130	1	10	
Cobalt	ug/L	ND	1000	1000	985	997	98	100	70-130	1	6	
Copper	ug/L	ND	1000	1000	1000	1010	99	101	70-130	1	11	
Iron	ug/L	1160	10000	10000	12700	12800	116	116	70-130	1	10	
Lead	ug/L	9.5	1000	1000	970	980	96	97	70-130	1	10	
Nickel	ug/L	8.0	1000	1000	1000	1010	99	101	70-130	1	10	
Selenium	ug/L	17.0	1000	1000	1030	1050	101	103	70-130	2	10	
Silver	ug/L	ND	500	500	503	510	101	102	70-130	1	10	
Thallium	ug/L	ND	1000	1000	951	962	95	96	70-130	1	6	
Zinc	ug/L	118	1000	1000	1060	1080	94	96	70-130	2	11	

MATRIX SPIKE SAMPLE: 1229563								
Parameter	Units	60149964001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
Aluminum	ug/L	88.7	10000	10100	100	70-130		
Antimony	ug/L	ND	1000	1040	104	70-130		
Arsenic	ug/L	ND	1000	1000	100	70-130		
Beryllium	ug/L	ND	1000	1010	101	70-130		
Cadmium	ug/L	ND	1000	1010	101	70-130		
Chromium	ug/L	ND	1000	983	98	70-130		
Cobalt	ug/L	ND	1000	1000	100	70-130		
Copper	ug/L	109	1000	1110	100	70-130		
Iron	ug/L	2260	10000	11900	96	70-130		
Lead	ug/L	ND	1000	990	99	70-130		
Nickel	ug/L	ND	1000	1010	101	70-130		
Selenium	ug/L	ND	1000	1020	102	70-130		
Silver	ug/L	ND	500	508	101	70-130		
Thallium	ug/L	ND	1000	940	94	70-130		
Zinc	ug/L	53.4	1000	1030	97	70-130		

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028  
Pace Project No.: 60150019

QC Batch: MPRP/23720 Analysis Method: EPA 200.7  
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Dissolved  
Associated Lab Samples: 60150019001

METHOD BLANK: 1231216 Matrix: Water  
Associated Lab Samples: 60150019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	08/06/13 18:00	
Antimony, Dissolved	ug/L	ND	10.0	08/06/13 18:00	
Arsenic, Dissolved	ug/L	ND	10.0	08/06/13 18:00	
Beryllium, Dissolved	ug/L	ND	1.0	08/06/13 18:00	
Cadmium, Dissolved	ug/L	ND	5.0	08/06/13 18:00	
Chromium, Dissolved	ug/L	ND	5.0	08/06/13 18:00	
Cobalt, Dissolved	ug/L	ND	5.0	08/06/13 18:00	
Copper, Dissolved	ug/L	ND	10.0	08/07/13 10:33	
Iron, Dissolved	ug/L	ND	50.0	08/06/13 18:00	
Lead, Dissolved	ug/L	ND	5.0	08/06/13 18:00	
Nickel, Dissolved	ug/L	ND	5.0	08/06/13 18:00	
Selenium, Dissolved	ug/L	ND	15.0	08/06/13 18:00	
Silver, Dissolved	ug/L	ND	7.0	08/06/13 18:00	
Thallium, Dissolved	ug/L	ND	20.0	08/06/13 18:00	
Zinc, Dissolved	ug/L	ND	50.0	08/06/13 18:00	

LABORATORY CONTROL SAMPLE: 1231217

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10200	102	85-115	
Antimony, Dissolved	ug/L	1000	932	93	85-115	
Arsenic, Dissolved	ug/L	1000	890	89	85-115	
Beryllium, Dissolved	ug/L	1000	983	98	85-115	
Cadmium, Dissolved	ug/L	1000	936	94	85-115	
Chromium, Dissolved	ug/L	1000	988	99	85-115	
Cobalt, Dissolved	ug/L	1000	974	97	85-115	
Copper, Dissolved	ug/L	1000	960	96	85-115	
Iron, Dissolved	ug/L	10000	9700	97	85-115	
Lead, Dissolved	ug/L	1000	963	96	85-115	
Nickel, Dissolved	ug/L	1000	995	99	85-115	
Selenium, Dissolved	ug/L	1000	921	92	85-115	
Silver, Dissolved	ug/L	500	481	96	85-115	
Thallium, Dissolved	ug/L	1000	960	96	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1231218 1231219

Parameter	Units	60150136001		MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.								
Aluminum, Dissolved	ug/L	83.3	10000	10000	10000	10200	10000	101	100	70-130	1	8	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

Parameter	MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1231218			1231219			MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
	60150136001 Units	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					
Antimony, Dissolved	ug/L	ND	1000	1000	946	933	95	93	70-130	1	7
Arsenic, Dissolved	ug/L	ND	1000	1000	915	904	91	90	70-130	1	10
Beryllium, Dissolved	ug/L	ND	1000	1000	978	963	98	96	70-130	1	7
Cadmium, Dissolved	ug/L	ND	1000	1000	944	932	94	93	70-130	1	10
Chromium, Dissolved	ug/L	1.8J	1000	1000	968	954	97	95	70-130	1	10
Cobalt, Dissolved	ug/L	50.9	1000	1000	991	976	94	92	70-130	2	6
Copper, Dissolved	ug/L	ND	1000	1000	1010	992	101	99	70-130	2	11
Iron, Dissolved	ug/L	ND	10000	10000	9540	9480	95	95	70-130	1	10
Lead, Dissolved	ug/L	ND	1000	1000	947	930	95	93	70-130	2	10
Nickel, Dissolved	ug/L	212	1000	1000	1170	1150	96	94	70-130	2	10
Selenium, Dissolved	ug/L	ND	1000	1000	910	898	91	90	70-130	1	10
Silver, Dissolved	ug/L	ND	500	500	493	486	99	97	70-130	1	10
Thallium, Dissolved	ug/L	ND	1000	1000	950	935	95	93	70-130	2	6
Zinc, Dissolved	ug/L	547	1000	1000	1510	1490	96	94	70-130	1	11

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

QC Batch: MSV/55359 Analysis Method: EPA 624 Low

QC Batch Method: EPA 624 Low Analysis Description: 624 MSV

Associated Lab Samples: 60150019001, 60150019002

METHOD BLANK: 1231096 Matrix: Water

Associated Lab Samples: 60150019001, 60150019002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1,2-Trichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1-Dichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,1-Dichloroethene	ug/L	ND	1.0	08/05/13 11:49	
1,2-Dichlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
1,2-Dichloroethane	ug/L	ND	1.0	08/05/13 11:49	
1,2-Dichloropropane	ug/L	ND	1.0	08/05/13 11:49	
1,3-Dichlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
1,4-Dichlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
2-Chloroethylvinyl ether	ug/L	ND	10.0	08/05/13 11:49	
Benzene	ug/L	ND	1.0	08/05/13 11:49	
Bromodichloromethane	ug/L	ND	1.0	08/05/13 11:49	
Bromoform	ug/L	ND	1.0	08/05/13 11:49	
Bromomethane	ug/L	ND	5.0	08/05/13 11:49	
Carbon tetrachloride	ug/L	ND	1.0	08/05/13 11:49	
Chlorobenzene	ug/L	ND	1.0	08/05/13 11:49	
Chloroethane	ug/L	ND	1.0	08/05/13 11:49	
Chloroform	ug/L	ND	1.0	08/05/13 11:49	
Chloromethane	ug/L	ND	1.0	08/05/13 11:49	
cis-1,2-Dichloroethene	ug/L	ND	1.0	08/05/13 11:49	
cis-1,3-Dichloropropene	ug/L	ND	1.0	08/05/13 11:49	
Dibromochloromethane	ug/L	ND	1.0	08/05/13 11:49	
Ethylbenzene	ug/L	ND	1.0	08/05/13 11:49	
Methylene chloride	ug/L	ND	1.0	08/05/13 11:49	
Tetrachloroethene	ug/L	ND	1.0	08/05/13 11:49	
Toluene	ug/L	ND	1.0	08/05/13 11:49	
trans-1,2-Dichloroethene	ug/L	ND	1.0	08/05/13 11:49	
trans-1,3-Dichloropropene	ug/L	ND	1.0	08/05/13 11:49	
Trichloroethene	ug/L	ND	1.0	08/05/13 11:49	
Trichlorofluoromethane	ug/L	ND	1.0	08/05/13 11:49	
Vinyl chloride	ug/L	ND	1.0	08/05/13 11:49	
Xylene (Total)	ug/L	ND	3.0	08/05/13 11:49	
1,2-Dichloroethane-d4 (S)	%	85	80-120	08/05/13 11:49	
4-Bromofluorobenzene (S)	%	101	80-120	08/05/13 11:49	
Toluene-d8 (S)	%	95	80-120	08/05/13 11:49	

LABORATORY CONTROL SAMPLE: 1231097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	14.4	72	71-139	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

LABORATORY CONTROL SAMPLE: 1231097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,2,2-Tetrachloroethane	ug/L	20	22.0	110	59-138	
1,1,2-Trichloroethane	ug/L	20	17.6	88	69-127	
1,1-Dichloroethane	ug/L	20	14.8	74	69-126	
1,1-Dichloroethene	ug/L	20	18.1	90	65-153	
1,2-Dichlorobenzene	ug/L	20	19.7	98	66-126	
1,2-Dichloroethane	ug/L	20	16.2	81	71-129	
1,2-Dichloropropane	ug/L	20	17.5	88	66-140	
1,3-Dichlorobenzene	ug/L	20	19.5	97	63-127	
1,4-Dichlorobenzene	ug/L	20	19.2	96	68-124	
2-Chloroethylvinyl ether	ug/L	20	10.8	54	33-159	
Benzene	ug/L	20	18.8	94	73-129	
Bromodichloromethane	ug/L	20	15.3	76	63-129	
Bromoform	ug/L	20	18.7	93	52-123	
Bromomethane	ug/L	20	23.6	118	10-160	
Carbon tetrachloride	ug/L	20	15.1	76	70-140	
Chlorobenzene	ug/L	20	16.7	83	68-127	
Chloroethane	ug/L	20	16.8	84	42-160	
Chloroform	ug/L	20	14.8	74	60-120	
Chloromethane	ug/L	20	26.6	133	10-160	
cis-1,2-Dichloroethene	ug/L	20	15.5	78	70-125	
cis-1,3-Dichloropropene	ug/L	20	15.9	80	66-132	
Dibromochloromethane	ug/L	20	16.5	83	63-134	
Ethylbenzene	ug/L	20	17.0	85	66-133	
Methylene chloride	ug/L	20	16.9	85	56-135	
Tetrachloroethene	ug/L	20	18.7	93	64-143	
Toluene	ug/L	20	17.8	89	70-130	
trans-1,2-Dichloroethene	ug/L	20	17.3	86	67-149	
trans-1,3-Dichloropropene	ug/L	20	17.9	90	66-138	
Trichloroethene	ug/L	20	15.1	76	71-130	
Trichlorofluoromethane	ug/L	20	15.1	75	58-158	
Vinyl chloride	ug/L	20	19.8	99	41-160	
Xylene (Total)	ug/L	60	56.9	95	67-130	
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			92	80-120	

MATRIX SPIKE SAMPLE: 1231098

Parameter	Units	60149923001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	4000	2970	74	52-160	
1,1,2,2-Tetrachloroethane	ug/L	ND	4000	3760	94	46-157	
1,1,2-Trichloroethane	ug/L	ND	4000	3450	86	52-150	
1,1-Dichloroethane	ug/L	ND	4000	3080	77	59-155	
1,1-Dichloroethene	ug/L	ND	4000	3690	92	14-160	
1,2-Dichlorobenzene	ug/L	ND	4000	3470	87	18-145	
1,2-Dichloroethane	ug/L	ND	4000	3130	78	49-155	
1,2-Dichloropropane	ug/L	ND	4000	3650	91	12-160	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

MATRIX SPIKE SAMPLE:		1231098		60149923001		Spike		MS		MS		% Rec		Qualifiers	
Parameter	Units	Result	Conc.	Result	% Rec	Result	% Rec	Limits							
1,3-Dichlorobenzene	ug/L	ND	4000	3530	88	59-146									
1,4-Dichlorobenzene	ug/L	ND	4000	3520	88	18-147									
2-Chloroethylvinyl ether	ug/L	ND	4000	3350	84	10-160									
Benzene	ug/L	ND	4000	3760	94	37-151									
Bromodichloromethane	ug/L	ND	4000	3080	77	35-155									
Bromoform	ug/L	ND	4000	3440	86	45-133									
Bromomethane	ug/L	ND	4000	4000	100	10-160									
Carbon tetrachloride	ug/L	ND	4000	3050	76	70-140									
Chlorobenzene	ug/L	ND	4000	3340	84	37-153									
Chloroethane	ug/L	ND	4000	3320	83	14-160									
Chloroform	ug/L	ND	4000	2960	74	51-138									
Chloromethane	ug/L	ND	4000	5050	126	10-160									
cis-1,2-Dichloroethene	ug/L	ND	4000	3190	80	19-160									
cis-1,3-Dichloropropene	ug/L	ND	4000	3150	79	10-160									
Dibromochloromethane	ug/L	ND	4000	3190	80	53-149									
Ethylbenzene	ug/L	ND	4000	3430	86	37-154									
Methylene chloride	ug/L	ND	4000	3490	87	15-156									
Tetrachloroethene	ug/L	ND	4000	3620	90	64-148									
Toluene	ug/L	ND	4000	3590	90	47-150									
trans-1,2-Dichloroethene	ug/L	ND	4000	3540	89	54-156									
trans-1,3-Dichloropropene	ug/L	ND	4000	3490	87	17-160									
Trichloroethene	ug/L	ND	4000	3070	77	71-157									
Trichlorofluoromethane	ug/L	ND	4000	3100	78	17-160									
Vinyl chloride	ug/L	ND	4000	4040	101	10-160									
Xylene (Total)	ug/L	ND	12000	11100	92	12-153									
1,2-Dichloroethane-d4 (S)	%				88	80-120									
4-Bromofluorobenzene (S)	%				97	80-120									
Toluene-d8 (S)	%				93	80-120									
Preservation pH		7.0		7.0											

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028  
Pace Project No.: 60150019

QC Batch: OEXT/39618      Analysis Method: EPA 625  
QC Batch Method: EPA 625      Analysis Description: 625 MSS  
Associated Lab Samples: 60150019001

METHOD BLANK: 1229715      Matrix: Water  
Associated Lab Samples: 60150019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	08/04/13 21:00	
2,4,6-Trichlorophenol	ug/L	ND	5.0	08/04/13 21:00	
2,4-Dichlorophenol	ug/L	ND	5.0	08/04/13 21:00	
2,4-Dimethylphenol	ug/L	ND	5.0	08/04/13 21:00	
2,4-Dinitrophenol	ug/L	ND	50.0	08/04/13 21:00	
2,4-Dinitrotoluene	ug/L	ND	6.0	08/04/13 21:00	
2,6-Dinitrotoluene	ug/L	ND	5.0	08/04/13 21:00	
2-Chloronaphthalene	ug/L	ND	5.0	08/04/13 21:00	
2-Chlorophenol	ug/L	ND	5.0	08/04/13 21:00	
2-Nitrophenol	ug/L	ND	5.0	08/04/13 21:00	
3,3'-Dichlorobenzidine	ug/L	ND	20.0	08/04/13 21:00	
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	08/04/13 21:00	
4-Bromophenylphenyl ether	ug/L	ND	5.0	08/04/13 21:00	
4-Chloro-3-methylphenol	ug/L	ND	5.0	08/04/13 21:00	
4-Chlorophenylphenyl ether	ug/L	ND	5.0	08/04/13 21:00	
4-Nitrophenol	ug/L	ND	5.0	08/04/13 21:00	
Acenaphthene	ug/L	ND	5.0	08/04/13 21:00	
Acenaphthylene	ug/L	ND	5.0	08/04/13 21:00	
Anthracene	ug/L	ND	5.0	08/04/13 21:00	
Benzidine	ug/L	ND	50.0	08/04/13 21:00	
Benzo(a)anthracene	ug/L	ND	5.0	08/04/13 21:00	
Benzo(a)pyrene	ug/L	ND	5.0	08/04/13 21:00	
Benzo(b)fluoranthene	ug/L	ND	5.0	08/04/13 21:00	
Benzo(g,h,i)perylene	ug/L	ND	5.0	08/04/13 21:00	
Benzo(k)fluoranthene	ug/L	ND	5.0	08/04/13 21:00	
bis(2-Chloroethoxy)methane	ug/L	ND	5.0	08/04/13 21:00	
bis(2-Chloroethyl) ether	ug/L	ND	6.0	08/04/13 21:00	
bis(2-Chloroisopropyl) ether	ug/L	ND	6.0	08/04/13 21:00	
bis(2-Ethylhexyl)phthalate	ug/L	ND	5.0	08/04/13 21:00	
Butylbenzylphthalate	ug/L	ND	5.0	08/04/13 21:00	
Chrysene	ug/L	ND	5.0	08/04/13 21:00	
Di-n-butylphthalate	ug/L	ND	5.0	08/04/13 21:00	
Di-n-octylphthalate	ug/L	ND	5.0	08/04/13 21:00	
Dibenz(a,h)anthracene	ug/L	ND	5.0	08/04/13 21:00	
Diethylphthalate	ug/L	ND	5.0	08/04/13 21:00	
Dimethylphthalate	ug/L	ND	5.0	08/04/13 21:00	
Fluoranthene	ug/L	ND	5.0	08/04/13 21:00	
Fluorene	ug/L	ND	5.0	08/04/13 21:00	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	08/04/13 21:00	
Hexachlorobenzene	ug/L	ND	5.0	08/04/13 21:00	
Hexachlorocyclopentadiene	ug/L	ND	5.0	08/04/13 21:00	
Hexachloroethane	ug/L	ND	5.0	08/04/13 21:00	
Indeno(1,2,3-cd)pyrene	ug/L	ND	5.0	08/04/13 21:00	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

METHOD BLANK: 1229715

Matrix: Water

Associated Lab Samples: 60150019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Isophorone	ug/L	ND	5.0	08/04/13 21:00	
N-Nitroso-di-n-propylamine	ug/L	ND	5.0	08/04/13 21:00	
N-Nitrosodimethylamine	ug/L	ND	5.0	08/04/13 21:00	
N-Nitrosodiphenylamine	ug/L	ND	5.0	08/04/13 21:00	
Naphthalene	ug/L	ND	5.0	08/04/13 21:00	
Nitrobenzene	ug/L	ND	5.0	08/04/13 21:00	
Pentachlorophenol	ug/L	ND	5.0	08/04/13 21:00	
Phenanthrene	ug/L	ND	5.0	08/04/13 21:00	
Phenol	ug/L	ND	5.0	08/04/13 21:00	
Pyrene	ug/L	ND	5.0	08/04/13 21:00	
2,4,6-Tribromophenol (S)	%	73	39-119	08/04/13 21:00	
2-Fluorobiphenyl (S)	%	75	36-120	08/04/13 21:00	
2-Fluorophenol (S)	%	45	18-120	08/04/13 21:00	
Nitrobenzene-d5 (S)	%	69	32-120	08/04/13 21:00	
Phenol-d6 (S)	%	31	12-120	08/04/13 21:00	
Terphenyl-d14 (S)	%	82	44-120	08/04/13 21:00	

LABORATORY CONTROL SAMPLE: 1229716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	25.0	50	44-120	
2,4,6-Trichlorophenol	ug/L	50	28.7	57	48-120	
2,4-Dichlorophenol	ug/L	50	26.4	53	48-120	
2,4-Dimethylphenol	ug/L	50	26.4	53	37-119	
2,4-Dinitrophenol	ug/L	50	27.7J	55	15-153	
2,4-Dinitrotoluene	ug/L	50	32.8	66	54-120	
2,6-Dinitrotoluene	ug/L	50	32.4	65	52-120	
2-Chloronaphthalene	ug/L	50	28.6	57	60-118	1e,L0
2-Chlorophenol	ug/L	50	25.8	52	44-120	
2-Nitrophenol	ug/L	50	27.5	55	43-120	
3,3'-Dichlorobenzidine	ug/L	50	36.6	73	23-160	
4,6-Dinitro-2-methylphenol	ug/L	50	33.9	68	31-147	
4-Bromophenylphenyl ether	ug/L	50	32.5	65	53-120	
4-Chloro-3-methylphenol	ug/L	50	27.5	55	50-120	
4-Chlorophenylphenyl ether	ug/L	50	31.0	62	54-120	
4-Nitrophenol	ug/L	50	12.3	25	10-120	
Acenaphthene	ug/L	50	29.3	59	51-120	
Acenaphthylene	ug/L	50	29.3	59	51-120	
Anthracene	ug/L	50	33.2	66	54-120	
Benzidine	ug/L	50	22.1J	44	1-124	
Benzo(a)anthracene	ug/L	50	34.4	69	54-120	
Benzo(a)pyrene	ug/L	50	33.3	67	54-120	
Benzo(b)fluoranthene	ug/L	50	35.9	72	57-120	
Benzo(g,h,i)perylene	ug/L	50	33.2	66	54-120	
Benzo(k)fluoranthene	ug/L	50	31.6	63	52-121	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

LABORATORY CONTROL SAMPLE: 1229716

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
bis(2-Chloroethoxy)methane	ug/L	50	27.5	55	51-120	
bis(2-Chloroethyl) ether	ug/L	50	26.4	53	48-120	
bis(2-Chloroisopropyl) ether	ug/L	50	28.2	56	43-120	
bis(2-Ethylhexyl)phthalate	ug/L	50	36.7	73	51-126	
Butylbenzylphthalate	ug/L	50	35.9	72	45-129	
Chrysene	ug/L	50	34.0	68	54-120	
Di-n-butylphthalate	ug/L	50	35.7	71	57-118	
Di-n-octylphthalate	ug/L	50	37.3	75	48-130	
Dibenz(a,h)anthracene	ug/L	50	34.1	68	56-119	
Diethylphthalate	ug/L	50	32.9	66	55-114	
Dimethylphthalate	ug/L	50	31.4	63	54-112	
Fluoranthene	ug/L	50	33.4	67	56-120	
Fluorene	ug/L	50	31.4	63	59-120	
Hexachloro-1,3-butadiene	ug/L	50	23.9	48	41-116	
Hexachlorobenzene	ug/L	50	30.8	62	53-120	
Hexachlorocyclopentadiene	ug/L	100	40.9	41	31-120	
Hexachloroethane	ug/L	50	23.0	46	40-113	
Indeno(1,2,3-cd)pyrene	ug/L	50	32.9	66	55-120	
Isophorone	ug/L	50	27.4	55	51-120	
N-Nitroso-di-n-propylamine	ug/L	50	26.6	53	47-120	
N-Nitrosodimethylamine	ug/L	50	19.9	40	28-120	
N-Nitrosodiphenylamine	ug/L	50	31.9	64	53-120	
Naphthalene	ug/L	50	26.7	53	48-120	
Nitrobenzene	ug/L	50	26.2	52	47-120	
Pentachlorophenol	ug/L	50	31.5	63	43-127	
Phenanthrene	ug/L	50	32.6	65	55-120	
Phenol	ug/L	50	11.7	23	15-112	
Pyrene	ug/L	50	34.0	68	55-115	
2,4,6-Tribromophenol (S)	%			61	39-119	
2-Fluorobiphenyl (S)	%			56	36-120	
2-Fluorophenol (S)	%			32	18-120	
Nitrobenzene-d5 (S)	%			50	32-120	
Phenol-d6 (S)	%			22	12-120	
Terphenyl-d14 (S)	%			67	44-120	

MATRIX SPIKE SAMPLE: 1229717

Parameter	Units	60150002001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	34.2	68	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	37.3	75	37-121	
2,4-Dichlorophenol	ug/L	ND	50	35.1	70	39-120	
2,4-Dimethylphenol	ug/L	ND	50	32.4	65	32-119	
2,4-Dinitrophenol	ug/L	ND	50	8.6J	17	20-157	M1
2,4-Dinitrotoluene	ug/L	ND	50	35.1	70	39-130	
2,6-Dinitrotoluene	ug/L	ND	50	35.6	71	50-128	
2-Chloronaphthalene	ug/L	ND	50	35.4	71	60-118	
2-Chlorophenol	ug/L	ND	50	33.2	66	35-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

MATRIX SPIKE SAMPLE:		1229717						
Parameter	Units	60150002001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers	
2-Nitrophenol	ug/L	ND	50	36.0	72	29-123		
3,3'-Dichlorobenzidine	ug/L	ND	50	12.7J	25	10-160		
4,6-Dinitro-2-methylphenol	ug/L	ND	50	10.7J	21	27-146	M1	
4-Bromophenylphenyl ether	ug/L	ND	50	39.2	78	53-124		
4-Chloro-3-methylphenol	ug/L	ND	50	35.4	71	33-123		
4-Chlorophenylphenyl ether	ug/L	ND	50	35.7	71	34-125		
4-Nitrophenol	ug/L	ND	50	15.4	31	10-120		
Acenaphthene	ug/L	ND	50	35.2	70	47-120		
Acenaphthylene	ug/L	ND	50	35.3	71	33-120		
Anthracene	ug/L	ND	50	37.0	74	36-121		
Benzidine	ug/L	ND	50	ND	0	1-120	M1	
Benzo(a)anthracene	ug/L	ND	50	37.6	75	37-127		
Benzo(a)pyrene	ug/L	ND	50	37.0	74	34-125		
Benzo(b)fluoranthene	ug/L	ND	50	38.7	77	37-131		
Benzo(g,h,i)perylene	ug/L	ND	50	37.4	75	35-128		
Benzo(k)fluoranthene	ug/L	ND	50	36.8	74	34-130		
bis(2-Chloroethoxy)methane	ug/L	ND	50	33.9	68	33-120		
bis(2-Chloroethyl) ether	ug/L	ND	50	33.7	67	32-120		
bis(2-Chloroisopropyl) ether	ug/L	ND	50	35.3	71	36-120		
bis(2-Ethylhexyl)phthalate	ug/L	ND	50	43.8	88	38-137		
Butylbenzylphthalate	ug/L	ND	50	43.8	88	43-136		
Chrysene	ug/L	ND	50	37.0	74	36-127		
Di-n-butylphthalate	ug/L	ND	50	40.5	81	38-118		
Di-n-octylphthalate	ug/L	ND	50	47.4	95	40-140		
Dibenz(a,h)anthracene	ug/L	ND	50	38.9	78	35-131		
Diethylphthalate	ug/L	ND	50	36.2	72	33-114		
Dimethylphthalate	ug/L	ND	50	36.0	72	34-112		
Fluoranthene	ug/L	ND	50	36.4	73	38-125		
Fluorene	ug/L	ND	50	36.3	73	59-121		
Hexachloro-1,3-butadiene	ug/L	ND	50	32.4	65	27-116		
Hexachlorobenzene	ug/L	ND	50	36.2	72	34-124		
Hexachlorocyclopentadiene	ug/L	ND	100	40.2	40	11-120		
Hexachloroethane	ug/L	ND	50	31.6	63	40-113		
Indeno(1,2,3-cd)pyrene	ug/L	ND	50	37.4	75	38-127		
Isophorone	ug/L	ND	50	34.0	68	31-120		
N-Nitroso-di-n-propylamine	ug/L	ND	50	33.5	67	30-120		
N-Nitrosodimethylamine	ug/L	ND	50	24.6	49	29-120		
N-Nitrosodiphenylamine	ug/L	ND	50	31.4	63	10-139		
Naphthalene	ug/L	ND	50	34.2	68	32-120		
Nitrobenzene	ug/L	ND	50	34.0	68	35-128		
Pentachlorophenol	ug/L	ND	50	37.2	74	38-133		
Phenanthrene	ug/L	ND	50	36.7	73	54-120		
Phenol	ug/L	ND	50	14.8	30	13-112		
Pyrene	ug/L	ND	50	40.7	81	52-115		
2,4,6-Tribromophenol (S)	%				70	39-119		
2-Fluorobiphenyl (S)	%				68	36-120		
2-Fluorophenol (S)	%				40	18-120		
Nitrobenzene-d5 (S)	%				63	32-120		

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

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MATRIX SPIKE SAMPLE:		1229717					
Parameter	Units	60150002001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenol-d6 (S)	%				28	12-120	
Terphenyl-d14 (S)	%				73	44-120	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

QC Batch:	WET/42674	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 HEM, Oil and Grease
Associated Lab Samples:	60150019001		

METHOD BLANK: 1229734 Matrix: Water  
Associated Lab Samples: 60150019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	08/02/13 09:41	

LABORATORY CONTROL SAMPLE: 1229735

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	37.7	94	78-114	

MATRIX SPIKE SAMPLE: 1229736

Parameter	Units	60150106001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.7	40.2	93	78-114	

SAMPLE DUPLICATE: 1229737

Parameter	Units	60150011002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	ND		18	

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

QC Batch:	WET/42743	Analysis Method:	EPA 1664A
QC Batch Method:	EPA 1664A	Analysis Description:	1664 SGT-HEM, TPH
Associated Lab Samples:	60150019001		

METHOD BLANK: 1231879 Matrix: Water

Associated Lab Samples: 60150019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	08/07/13 07:27	

LABORATORY CONTROL SAMPLE: 1231880

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	19.6	98	64-132	

MATRIX SPIKE SAMPLE: 1231912

Parameter	Units	60150085001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.7	22.1	95	64-132	

SAMPLE DUPLICATE: 1231915

Parameter	Units	60149960001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	70.0	51.9	30	34	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

QC Batch:	WET/42678	Analysis Method:	SM 2540D
QC Batch Method:	SM 2540D	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	60150019001		

METHOD BLANK: 1229759 Matrix: Water

Associated Lab Samples: 60150019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	08/02/13 08:23	

SAMPLE DUPLICATE: 1229760

Parameter	Units	60149941001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	419	438	4	25	

SAMPLE DUPLICATE: 1229761

Parameter	Units	60150070003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	16.0	13.0	21	25	

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**QUALITY CONTROL DATA**

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

QC Batch: WET/42688 Analysis Method: SM 4500-H+B

QC Batch Method: SM 4500-H+B Analysis Description: 4500H+B pH

Associated Lab Samples: 60150019001

SAMPLE DUPLICATE: 1230063

Parameter	Units	60149917001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.8	7.8	0	5	H1,H6

**REPORT OF LABORATORY ANALYSIS**

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

QC Batch:	WETA/25696	Analysis Method:	EPA 350.1
QC Batch Method:	EPA 350.1	Analysis Description:	350.1 Ammonia
Associated Lab Samples:	60150019001		

METHOD BLANK: 1231628 Matrix: Water  
Associated Lab Samples: 60150019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	08/06/13 14:54	

LABORATORY CONTROL SAMPLE: 1231629

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	101	90-110	

MATRIX SPIKE SAMPLE: 1231630

Parameter	Units	60150002001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1.6	2	3.3	86	90-110	M1

MATRIX SPIKE SAMPLE: 1231632

Parameter	Units	60150026001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5.2	2	8.3	152	90-110	M1

SAMPLE DUPLICATE: 1231631

Parameter	Units	60149920001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.44	0.43	3	18	

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

QC Batch:	WETA/25674	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	60150019001		

METHOD BLANK: 1230978 Matrix: Water

Associated Lab Samples: 60150019001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	08/06/13 08:46	

LABORATORY CONTROL SAMPLE: 1230979

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	46.7	93	90-110	

MATRIX SPIKE SAMPLE: 1230980

Parameter	Units	60149921001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	21.8	50	79.0	114	90-110	M1

MATRIX SPIKE SAMPLE: 1230982

Parameter	Units	60150085001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	12.0	50	61.2	98	90-110	

SAMPLE DUPLICATE: 1230981

Parameter	Units	60149968001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	72.5	76.6	6	25	

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## QUALIFIERS

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

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

TNI - The NELAC Institute.

### ANALYTE QUALIFIERS

- |    |   |
|----|---|
| 1e | The LCS recovery was below QC limits. The successful recovery of the MS demonstrates that the analytical system was in control for this QA/QC sample group. |
| D3 | Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.  |
| D9 | Dissolved result is greater than the total. Data is within laboratory control limits.   |
| H1 | Analysis conducted outside the EPA method holding time.   |
| H6 | Analysis initiated outside of the 15 minute EPA recommended holding time.   |
| L0 | Analyte recovery in the laboratory control sample (LCS) was outside QC limits.  |
| L2 | Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.              |
| M1 | Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.   |
| S4 | Surrogate recovery not evaluated against control limits due to sample dilution.   |

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-028

Pace Project No.: 60150019

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60150019001	316-028	EPA 200.7	MPRP/23696	EPA 200.7	ICP/18586
60150019001	316-028	EPA 200.7	MPRP/23720	EPA 200.7	ICP/18609
60150019001	316-028	EPA 245.1	MERP/7563	EPA 245.1	MERC/7520
60150019001	316-028	EPA 245.1	MERP/7576	EPA 245.1	MERC/7531
60150019001	316-028	EPA 625	OEXT/39618	EPA 625	MSSV/12573
60150019001	316-028	EPA 624 Low	MSV/55359		
60150019002	TRIP BLANK	EPA 624 Low	MSV/55359		
60150019001	316-028	EPA 1664A	WET/42674		
60150019001	316-028	EPA 1664A	WET/42743		
60150019001	316-028	SM 2540D	WET/42678		
60150019001	316-028	SM 4500-H+B	WET/42688		
60150019001	316-028	EPA 350.1	WETA/25696		
60150019001	316-028	EPA 410.4	WETA/25674		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO#: 60150019**  
  
60150019

Client Name: Barr Enjin

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  x-roads

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  zpk

Thermometer Used: T-112 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun. (circle one)

Cooler Temperature: 4.3  
Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: 8/1/13 [Signature]

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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>ph</u>	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.	
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>collected @ 0830</u>	
Includes date/time/ID/analyses Matrix: <u>WT</u>			
All containers needing preservation have been checked.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	14. <u>Both BP3N &amp; BP55 initial ph 5.0, frnal on both 4.0, added 2.5ml preserv.</u>	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		
Exceptions: <u>VOA</u> , coliform, TOC, O&G, WI-DRO (water), Phenolics	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed	Lot # of added preservative
Trip Blank present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Pace Trip Blank lot # (if purchased): <u>covered</u>		15.	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	16.	
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: [Signature] Date: 8/1/13



August 07, 2013

Ed Galbraith  
Barr Engineering Company  
1001 Diamond Ridge, Ste 1100  
Jefferson City, MO 65101

RE: Project: BRIDGETON LF 316-028  
Pace Project No.: 60150020

Dear Ed Galbraith:

Enclosed are the analytical results for sample(s) received by the laboratory on August 01, 2013. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI 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,



Angie Brown

Angie.Brown@pacelabs.com  
Project Manager

Enclosures

cc: Dana Baker, Barr Engineering Co.  
Scott Fedak, Feezor Engineering  
Margaret Treanor, Barr Engineering Company



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: BRIDGETON LF 316-028

Pace Project No.: 60150020

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: BRIDGETON LF 316-028

Pace Project No.: 60150020

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60150020001	316-028	Water	07/31/13 08:30	08/01/13 01:30

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-028

Pace Project No.: 60150020

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Lab ID	Sample ID	Method	Analysts	Analytes Reported
60150020001	316-028	SM 5210B	JML	1

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: BRIDGETON LF 316-028

Pace Project No.: 60150020

Sample: 316-028	Lab ID: 60150020001	Collected: 07/31/13 08:30	Received: 08/01/13 01:30	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>5210B BOD, 5 day</b>								
Analytical Method: SM 5210B Preparation Method: SM 5210B								
BOD, 5 day	<b>33400</b>	mg/L	2.0	1	08/01/13 14:32	08/06/13 11:59		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: BRIDGETON LF 316-028

Pace Project No.: 60150020

QC Batch: WET/42662

Analysis Method: SM 5210B

QC Batch Method: SM 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 60150020001

METHOD BLANK: 1229202

Matrix: Water

Associated Lab Samples: 60150020001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	08/06/13 11:10	

LABORATORY CONTROL SAMPLE: 1229203

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	171	86	85-115	

SAMPLE DUPLICATE: 1229204

Parameter	Units	60150008001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	421	501	17	17	

### REPORT OF LABORATORY ANALYSIS

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## QUALIFIERS

Project: BRIDGETON LF 316-028

Pace Project No.: 60150020

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

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.

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.

## REPORT OF LABORATORY ANALYSIS

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-028

Pace Project No.: 60150020

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Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60150020001	316-028	SM 5210B	WET/42662	SM 5210B	WET/42736

## REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

**WO# : 60150020**  
  
 60150020

Client Name: Barr Engin.

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other  X-Books

Tracking #: \_\_\_\_\_ Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  epc

Thermometer Used: T-112 / T-194 Type of Ice:  Wet  Blue  None  Samples received on ice, cooling process has begun.

Cooler Temperature: 4.3  
 Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: 8/1/13

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 holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Short Hold Time analyses (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6. <u>Boo</u>	
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input 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	9.	
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.	
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <u>Collected @ 0830</u>	
Includes date/time/ID/analyses Matrix: <u>WT</u>		13.	
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.	
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed	Lot # of added preservative
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.	
Pace Trip Blank lot # (if purchased):		15.	
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.	
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:	

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review: Mue Sr (AKB) Date: 8/1/13



