Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

May 09, 2014

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

RE: Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 02, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

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 CB 05-01-14
Pace Project No.: 60168278

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168278001	**CB 05-01-14**	Water	05/01/14 13:14	05/02/14 01:20
60168278002	**TRIP BLANK**	Water	05/01/14 13:14	05/02/14 01:20

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168278001	**CB 05-01-14**	EPA 200.7	TDS	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	RAH	1
		SM 4500-H+B	JML	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60168278002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

Sample: CB 05-01-14 **Lab ID: 60168278001** Collected: 05/01/14 13:14 Received: 05/02/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**12800**	ug/L	750	2	05/02/14 15:50	05/05/14 14:38	7429-90-5	
Antimony	**62.8**	ug/L	50.0	1	05/02/14 15:50	05/05/14 14:35	7440-36-0	
Arsenic	**1320**	ug/L	50.0	1	05/02/14 15:50	05/05/14 14:35	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/02/14 15:50	05/05/14 14:35	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/02/14 15:50	05/05/14 14:35	7440-43-9	
Chromium	**293**	ug/L	25.0	1	05/02/14 15:50	05/05/14 14:35	7440-47-3	
Cobalt	**42.6**	ug/L	25.0	1	05/02/14 15:50	05/05/14 14:35	7440-48-4	
Copper	ND	ug/L	50.0	1	05/02/14 15:50	05/05/14 14:35	7440-50-8	
Iron	**818000**	ug/L	250	1	05/02/14 15:50	05/05/14 14:35	7439-89-6	
Lead	**100**	ug/L	25.0	1	05/02/14 15:50	05/05/14 14:35	7439-92-1	
Nickel	**118**	ug/L	25.0	1	05/02/14 15:50	05/05/14 14:35	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/02/14 15:50	05/05/14 14:35	7782-49-2	
Silver	ND	ug/L	35.0	1	05/02/14 15:50	05/05/14 14:35	7440-22-4	
Thallium	ND	ug/L	100	1	05/02/14 15:50	05/05/14 14:35	7440-28-0	
Zinc	**6510**	ug/L	500	2	05/02/14 15:50	05/05/14 14:38	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1060**	ug/L	750	2	05/02/14 15:50	05/06/14 12:06	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/02/14 15:50	05/06/14 12:06	7440-36-0	D3
Arsenic, Dissolved	**777**	ug/L	50.0	1	05/02/14 15:50	05/06/14 12:03	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/02/14 15:50	05/06/14 12:03	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/02/14 15:50	05/06/14 12:03	7440-43-9	
Chromium, Dissolved	**159**	ug/L	25.0	1	05/02/14 15:50	05/06/14 12:03	7440-47-3	
Cobalt, Dissolved	ND	ug/L	25.0	1	05/02/14 15:50	05/06/14 12:03	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/02/14 15:50	05/06/14 12:03	7440-50-8	
Iron, Dissolved	**319000**	ug/L	250	1	05/02/14 15:50	05/06/14 12:03	7439-89-6	
Lead, Dissolved	**32.2**	ug/L	25.0	1	05/02/14 15:50	05/06/14 12:03	7439-92-1	
Nickel, Dissolved	**84.0**	ug/L	25.0	1	05/02/14 15:50	05/06/14 12:03	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/02/14 15:50	05/06/14 12:03	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/02/14 15:50	05/06/14 12:03	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/02/14 15:50	05/06/14 12:03	7440-28-0	
Zinc, Dissolved	**4410**	ug/L	500	2	05/02/14 15:50	05/06/14 12:06	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/07/14 16:30	05/08/14 10:19	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/06/14 17:00	05/07/14 11:03	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/05/14 00:00	05/06/14 11:37	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:37	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:37	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:37	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/05/14 00:00	05/06/14 11:37	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**10600**	ug/L	4000	2	05/05/14 00:00	05/06/14 11:37		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

Sample: CB 05-01-14 **Lab ID: 60168278001** Collected: 05/01/14 13:14 Received: 05/02/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**2120**	ug/L	1000	2	05/05/14 00:00	05/06/14 11:37	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:37	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:37	87-86-5	
Phenol	**14300**	ug/L	1000	2	05/05/14 00:00	05/06/14 11:37	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:37	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:37	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	166	%	33-120	2	05/05/14 00:00	05/06/14 11:37	4165-60-0	S0
2-Fluorobiphenyl (S)	81	%	39-120	2	05/05/14 00:00	05/06/14 11:37	321-60-8	
Terphenyl-d14 (S)	81	%	45-120	2	05/05/14 00:00	05/06/14 11:37	1718-51-0	
Phenol-d6 (S)	52	%	11-120	2	05/05/14 00:00	05/06/14 11:37	13127-88-3	
2-Fluorophenol (S)	36	%	17-120	2	05/05/14 00:00	05/06/14 11:37	367-12-4	
2,4,6-Tribromophenol (S)	97	%	39-120	2	05/05/14 00:00	05/06/14 11:37	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**154000**	ug/L	2500	250		05/05/14 13:41	67-64-1	N2
Benzene	ND	ug/L	250	250		05/05/14 13:41	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/05/14 13:41	75-27-4	
Bromoform	ND	ug/L	250	250		05/05/14 13:41	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/05/14 13:41	74-83-9	
2-Butanone (MEK)	**64200**	ug/L	2500	250		05/05/14 13:41	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/05/14 13:41	56-23-5	
Chloroethane	ND	ug/L	250	250		05/05/14 13:41	75-00-3	
Chloroform	ND	ug/L	250	250		05/05/14 13:41	67-66-3	
1,4-Dichlorobenzene	**322**	ug/L	250	250		05/05/14 13:41	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/05/14 13:41	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/05/14 13:41	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/05/14 13:41	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/05/14 13:41	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/05/14 13:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/05/14 13:41	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/05/14 13:41	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/05/14 13:41	127-18-4	
Toluene	ND	ug/L	250	250		05/05/14 13:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/05/14 13:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/05/14 13:41	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/05/14 13:41	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/05/14 13:41	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/05/14 13:41	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	250		05/05/14 13:41	460-00-4	
Toluene-d8 (S)	99	%	80-120	250		05/05/14 13:41	2037-26-5	
1,2-Dichloroethane-d4 (S)	98	%	80-120	250		05/05/14 13:41	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/05/14 13:41		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1320**	mg/L	5.0	1		05/07/14 08:04		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

Sample: CB 05-01-14 **Lab ID: 60168278001** Collected: 05/01/14 13:14 Received: 05/02/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**6.9**	mg/L	5.0	1		05/09/14 07:20		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**2620**	mg/L	5.0	1		05/05/14 10:09		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.3**	Std. Units	0.10	1		05/06/14 14:46		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**31800**	mg/L	200	100	05/02/14 15:15	05/07/14 16:01		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**581**	mg/L	20.0	200		05/04/14 15:09	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**61300**	mg/L	5000	500		05/09/14 10:52		

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

Sample: TRIP BLANK **Lab ID: 60168278002** Collected: 05/01/14 13:14 Received: 05/02/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/05/14 12:54	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/05/14 12:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/05/14 12:54	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/05/14 12:54	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/05/14 12:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/05/14 12:54	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/05/14 12:54	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/05/14 12:54	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/05/14 12:54	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/05/14 12:54	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/05/14 12:54	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/05/14 12:54	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/05/14 12:54	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/05/14 12:54	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/05/14 12:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/05/14 12:54	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/05/14 12:54	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/05/14 12:54	127-18-4	
Toluene	ND	ug/L	1.0	1		05/05/14 12:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/05/14 12:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/05/14 12:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/05/14 12:54	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/05/14 12:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/05/14 12:54	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	102	%	80-120	1		05/05/14 12:54	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		05/05/14 12:54	2037-26-5	
1,2-Dichloroethane-d4 (S)	100	%	80-120	1		05/05/14 12:54	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/05/14 12:54		

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: MERP/8374 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60168278001

METHOD BLANK: 1373669 | Matrix: Water
Associated Lab Samples: 60168278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/08/14 10:04	

LABORATORY CONTROL SAMPLE: 1373670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373671 1373672

Parameter	Units	60168100001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.9	5.0	99	99	70-130	0	20	

MATRIX SPIKE SAMPLE: 1373673

Parameter	Units	60168161002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.7	114	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: MERP/8371
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60168278001

METHOD BLANK: 1373053
Matrix: Water
Associated Lab Samples: 60168278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/07/14 10:36	

LABORATORY CONTROL SAMPLE: 1373054

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.1	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373055 1373056

Parameter	Units	60168186001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	120	121	80	81	70-130	1	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: MPRP/27097
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60168278001

METHOD BLANK: 1371179
Matrix: Water
Associated Lab Samples: 60168278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/05/14 14:05	
Antimony	ug/L	ND	10.0	05/05/14 14:05	
Arsenic	ug/L	ND	10.0	05/05/14 14:05	
Beryllium	ug/L	ND	1.0	05/05/14 14:05	
Cadmium	ug/L	ND	5.0	05/05/14 14:05	
Chromium	ug/L	ND	5.0	05/05/14 14:05	
Cobalt	ug/L	ND	5.0	05/05/14 14:05	
Copper	ug/L	ND	10.0	05/05/14 14:05	
Iron	ug/L	ND	50.0	05/05/14 14:05	
Lead	ug/L	ND	5.0	05/05/14 14:05	
Nickel	ug/L	ND	5.0	05/05/14 14:05	
Selenium	ug/L	ND	15.0	05/05/14 14:05	
Silver	ug/L	ND	7.0	05/05/14 14:05	
Thallium	ug/L	ND	20.0	05/05/14 14:05	
Zinc	ug/L	ND	50.0	05/05/14 14:05	

LABORATORY CONTROL SAMPLE: 1371180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9900	99	85-115	
Antimony	ug/L	1000	975	97	85-115	
Arsenic	ug/L	1000	960	96	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	974	97	85-115	
Chromium	ug/L	1000	1010	101	85-115	
Cobalt	ug/L	1000	992	99	85-115	
Copper	ug/L	1000	937	94	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	996	100	85-115	
Nickel	ug/L	1000	999	100	85-115	
Selenium	ug/L	1000	973	97	85-115	
Silver	ug/L	500	478	96	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1371181 1371182

Parameter	Units	60168180001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L		10000	10000	10100	10100	100	100	70-130	0	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1371181 1371182

Parameter	Units	60168180001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L		1000	1000	987	991	99	99	70-130	0	7	
Arsenic	ug/L		1000	1000	979	987	98	99	70-130	1	10	
Beryllium	ug/L		1000	1000	999	996	100	100	70-130	0	7	
Cadmium	ug/L	ND	1000	1000	976	988	98	99	70-130	1	10	
Chromium	ug/L		1000	1000	984	995	98	99	70-130	1	10	
Cobalt	ug/L		1000	1000	967	978	97	98	70-130	1	6	
Copper	ug/L	4.1J	1000	1000	944	947	94	94	70-130	0	11	
Iron	ug/L		10000	10000	10600	10600	100	100	70-130	0	10	
Lead	ug/L	36.5	1000	1000	1020	1020	98	99	70-130	1	10	
Nickel	ug/L		1000	1000	971	979	97	98	70-130	1	10	
Selenium	ug/L		1000	1000	976	976	98	98	70-130	0	10	
Silver	ug/L		500	500	479	480	96	96	70-130	0	10	
Thallium	ug/L		1000	1000	975	989	98	99	70-130	1	6	
Zinc	ug/L	ND	1000	1000	995	1000	99	100	70-130	1	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: MPRP/27096
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60168278001

METHOD BLANK: 1371162
Matrix: Water
Associated Lab Samples: 60168278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/06/14 11:07	
Antimony, Dissolved	ug/L	ND	10.0	05/06/14 11:07	
Arsenic, Dissolved	ug/L	ND	10.0	05/06/14 11:07	
Beryllium, Dissolved	ug/L	ND	1.0	05/06/14 11:07	
Cadmium, Dissolved	ug/L	ND	5.0	05/06/14 11:07	
Chromium, Dissolved	ug/L	ND	5.0	05/06/14 11:07	
Cobalt, Dissolved	ug/L	ND	5.0	05/06/14 11:07	
Copper, Dissolved	ug/L	ND	10.0	05/06/14 11:07	
Iron, Dissolved	ug/L	ND	50.0	05/06/14 11:07	
Lead, Dissolved	ug/L	ND	5.0	05/06/14 11:07	
Nickel, Dissolved	ug/L	ND	5.0	05/06/14 11:07	
Selenium, Dissolved	ug/L	ND	15.0	05/06/14 11:07	
Silver, Dissolved	ug/L	ND	7.0	05/06/14 11:07	
Thallium, Dissolved	ug/L	ND	20.0	05/06/14 11:07	
Zinc, Dissolved	ug/L	ND	50.0	05/06/14 11:07	

LABORATORY CONTROL SAMPLE: 1371163

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	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	986	99	85-115	
Beryllium, Dissolved	ug/L	1000	1030	103	85-115	
Cadmium, Dissolved	ug/L	1000	1010	101	85-115	
Chromium, Dissolved	ug/L	1000	1010	101	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1000	100	85-115	
Iron, Dissolved	ug/L	10000	10300	103	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	1020	102	85-115	
Silver, Dissolved	ug/L	500	498	100	85-115	
Thallium, Dissolved	ug/L	1000	1010	101	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1371164 1371165

Parameter	Units	60168079001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1300	50000	50000	52000	51200	101	100	70-130	1	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1371164 1371165

Parameter	Units	60168079001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	5000	5000	5200	5130	104	102	70-130	2	7	
Arsenic, Dissolved	ug/L	764	5000	5000	5760	5680	100	98	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4910	4860	98	97	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5100	5020	102	100	70-130	2	10	
Chromium, Dissolved	ug/L	160	5000	5000	5020	4950	97	96	70-130	1	10	
Cobalt, Dissolved	ug/L	ND	5000	5000	4850	4780	97	95	70-130	1	6	
Copper, Dissolved	ug/L	ND	5000	5000	5260	5180	104	103	70-130	1	11	
Iron, Dissolved	ug/L	326000	50000	50000	322000	314000	-9	-24	70-130	2	10	M1
Lead, Dissolved	ug/L	32.5	5000	5000	4700	4640	93	92	70-130	1	10	
Nickel, Dissolved	ug/L	88.4	5000	5000	4870	4830	96	95	70-130	1	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5500	5470	109	108	70-130	1	10	
Silver, Dissolved	ug/L	ND	2500	2500	2610	2580	104	103	70-130	1	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4500	4420	90	88	70-130	2	6	
Zinc, Dissolved	ug/L	4620	5000	5000	8630	8500	80	77	70-130	2	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: MSV/61370 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60168278001, 60168278002

METHOD BLANK: 1372175 | Matrix: Water
Associated Lab Samples: 60168278001, 60168278002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/05/14 12:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/05/14 12:23	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/05/14 12:23	
1,2-Dichloroethane	ug/L	ND	1.0	05/05/14 12:23	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/05/14 12:23	
2-Butanone (MEK)	ug/L	ND	10.0	05/05/14 12:23	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/05/14 12:23	N2
Acetone	ug/L	ND	10.0	05/05/14 12:23	N2
Benzene	ug/L	ND	1.0	05/05/14 12:23	
Bromodichloromethane	ug/L	ND	1.0	05/05/14 12:23	
Bromoform	ug/L	ND	1.0	05/05/14 12:23	
Bromomethane	ug/L	ND	5.0	05/05/14 12:23	
Carbon tetrachloride	ug/L	ND	1.0	05/05/14 12:23	
Chloroethane	ug/L	ND	1.0	05/05/14 12:23	
Chloroform	ug/L	ND	1.0	05/05/14 12:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/05/14 12:23	N2
Ethylbenzene	ug/L	ND	1.0	05/05/14 12:23	
Methylene chloride	ug/L	ND	1.0	05/05/14 12:23	
Tetrachloroethene	ug/L	ND	1.0	05/05/14 12:23	
Toluene	ug/L	ND	1.0	05/05/14 12:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/05/14 12:23	
Trichloroethene	ug/L	ND	1.0	05/05/14 12:23	
Vinyl chloride	ug/L	ND	1.0	05/05/14 12:23	
Xylene (Total)	ug/L	ND	3.0	05/05/14 12:23	N2
1,2-Dichloroethane-d4 (S)	%	104	80-120	05/05/14 12:23	
4-Bromofluorobenzene (S)	%	106	80-120	05/05/14 12:23	
Toluene-d8 (S)	%	101	80-120	05/05/14 12:23	

LABORATORY CONTROL SAMPLE: 1372176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.8	99	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	97	67-127	N2
1,1,2-Trichloroethane	ug/L	20	19.8	99	67-124	
1,2-Dichloroethane	ug/L	20	20.5	103	70-126	
1,4-Dichlorobenzene	ug/L	20	19.1	96	74-120	
2-Butanone (MEK)	ug/L	100	102	102	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	112	112	59-131	N2
Acetone	ug/L	100	94.6	95	38-134	N2
Benzene	ug/L	20	19.7	98	75-120	
Bromodichloromethane	ug/L	20	21.1	106	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

LABORATORY CONTROL SAMPLE: 1372176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	19.5	97	65-127	
Bromomethane	ug/L	20	13.9	69	13-157	
Carbon tetrachloride	ug/L	20	19.9	99	70-131	
Chloroethane	ug/L	20	22.5	112	47-133	
Chloroform	ug/L	20	19.7	98	65-127	
cis-1,2-Dichloroethene	ug/L	20	20.3	102	68-127	N2
Ethylbenzene	ug/L	20	20.0	100	74-122	
Methylene chloride	ug/L	20	21.0	105	64-129	
Tetrachloroethene	ug/L	20	18.5	93	73-125	
Toluene	ug/L	20	19.8	99	69-126	
trans-1,2-Dichloroethene	ug/L	20	19.7	98	66-129	
Trichloroethene	ug/L	20	19.5	97	71-123	
Vinyl chloride	ug/L	20	22.0	110	43-129	
Xylene (Total)	ug/L	60	60.5	101	75-121	N2
1,2-Dichloroethane-d4 (S)	%			105	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1372177

Parameter	Units	60168278001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4570	91	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5010	100	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4900	98	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4750	95	49-144	
1,4-Dichlorobenzene	ug/L	322	5000	4710	88	33-140	
2-Butanone (MEK)	ug/L	64200	25000	88000	95	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	29600	116	40-160	N2
Acetone	ug/L	154000	25000	174000	77	10-160	N2
Benzene	ug/L	ND	5000	4160	83	37-151	
Bromodichloromethane	ug/L	ND	5000	4890	98	35-142	
Bromoform	ug/L	ND	5000	4760	95	45-142	
Bromomethane	ug/L	ND	5000	1700	34	10-158	
Carbon tetrachloride	ug/L	ND	5000	4580	92	70-140	
Chloroethane	ug/L	ND	5000	3450	69	19-152	
Chloroform	ug/L	ND	5000	4630	93	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4460	89	34-147	N2
Ethylbenzene	ug/L	ND	5000	4490	90	40-142	
Methylene chloride	ug/L	ND	5000	4110	82	31-144	
Tetrachloroethene	ug/L	ND	5000	3970	79	64-148	
Toluene	ug/L	ND	5000	4320	86	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3770	75	54-151	
Trichloroethene	ug/L	ND	5000	4190	84	71-149	
Vinyl chloride	ug/L	ND	5000	2990	60	22-146	
Xylene (Total)	ug/L	ND	15000	13600	91	37-144	N2
1,2-Dichloroethane-d4 (S)	%				101	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

MATRIX SPIKE SAMPLE: 1372177

Parameter	Units	60168278001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				103	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: OEXT/43987 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60168278001

METHOD BLANK: 1371975 | Matrix: Water
Associated Lab Samples: 60168278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/06/14 09:12	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/06/14 09:12	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/06/14 09:12	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/06/14 09:12	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/06/14 09:12	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/06/14 09:12	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/06/14 09:12	
Hexachloroethane	ug/L	ND	5.0	05/06/14 09:12	
Naphthalene	ug/L	ND	5.0	05/06/14 09:12	
Nitrobenzene	ug/L	ND	5.0	05/06/14 09:12	
Pentachlorophenol	ug/L	ND	5.0	05/06/14 09:12	
Phenol	ug/L	ND	5.0	05/06/14 09:12	
2,4,6-Tribromophenol (S)	%	69	39-120	05/06/14 09:12	
2-Fluorobiphenyl (S)	%	68	39-120	05/06/14 09:12	
2-Fluorophenol (S)	%	42	17-120	05/06/14 09:12	
Nitrobenzene-d5 (S)	%	67	33-120	05/06/14 09:12	
Phenol-d6 (S)	%	26	11-120	05/06/14 09:12	
Terphenyl-d14 (S)	%	70	45-120	05/06/14 09:12	

LABORATORY CONTROL SAMPLE: 1371976

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	36.3	73	46-120	
2,4,6-Trichlorophenol	ug/L	50	36.4	73	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.3	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	30.0	60	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	43.6	87	40-133	
Hexachloro-1,3-butadiene	ug/L	50	32.5	65	44-116	
Hexachlorocyclopentadiene	ug/L	100	57.4	57	24-120	
Hexachloroethane	ug/L	50	34.3	69	43-113	
Naphthalene	ug/L	50	37.2	74	48-120	
Nitrobenzene	ug/L	50	37.0	74	48-120	
Pentachlorophenol	ug/L	50	40.1	80	47-120	
Phenol	ug/L	50	16.2	32	16-112	
2,4,6-Tribromophenol (S)	%			85	39-120	
2-Fluorobiphenyl (S)	%			74	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			76	33-120	
Phenol-d6 (S)	%			30	11-120	
Terphenyl-d14 (S)	%			82	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

MATRIX SPIKE SAMPLE: 1371977

Parameter	Units	60168161002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	33.6	67	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	37.7	75	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	30.8	62	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	28.3	57	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	42.6	85	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	33.0	66	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	59.0	59	11-120	
Hexachloroethane	ug/L	ND	50	32.4	65	40-113	
Naphthalene	ug/L	ND	50	35.8	72	45-120	
Nitrobenzene	ug/L	ND	50	34.8	70	38-120	
Pentachlorophenol	ug/L	ND	50	40.8	82	43-135	
Phenol	ug/L	ND	50	14.5	29	13-112	
2,4,6-Tribromophenol (S)	%				86	39-120	
2-Fluorobiphenyl (S)	%				74	39-120	
2-Fluorophenol (S)	%				41	17-120	
Nitrobenzene-d5 (S)	%				70	33-120	
Phenol-d6 (S)	%				26	11-120	
Terphenyl-d14 (S)	%				79	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: WET/47717 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168278001

METHOD BLANK: 1373218 | Matrix: Water
Associated Lab Samples: 60168278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/07/14 08:00	

LABORATORY CONTROL SAMPLE: 1373219

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	39.1	98	78-114	

MATRIX SPIKE SAMPLE: 1373220

Parameter	Units	60168019001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.4	30.3	67	78-114	M1

SAMPLE DUPLICATE: 1373222

Parameter	Units	60168106001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	5.5	2.6J		18	

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(913)599-5665

QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: WET/47757 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60168278001

METHOD BLANK: 1374748 | Matrix: Water
Associated Lab Samples: 60168278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/09/14 07:19	

LABORATORY CONTROL SAMPLE: 1374749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	18.7	94	64-132	

MATRIX SPIKE SAMPLE: 1374750

Parameter	Units	60168099002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	22.7	25.8	99	64-132	

SAMPLE DUPLICATE: 1374751

Parameter	Units	60168106001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	2.6J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: WET/47665 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60168278001

METHOD BLANK: 1372005 | Matrix: Water
Associated Lab Samples: 60168278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/05/14 10:24	

SAMPLE DUPLICATE: 1372006

Parameter	Units	60168247001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	287	284	1	10	

SAMPLE DUPLICATE: 1372007

Parameter	Units	60168281001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6840	6820	0	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: WET/47713
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60168278001

SAMPLE DUPLICATE: 1372974

Parameter	Units	60168278001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.3	5.3	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: WET/47656 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60168278001

METHOD BLANK: 1371099 | Matrix: Water
Associated Lab Samples: 60168278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/07/14 15:23	

LABORATORY CONTROL SAMPLE: 1371100

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	207	105	85-115	

SAMPLE DUPLICATE: 1371101

Parameter	Units	60168282002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	11.6	11.4	2	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: WETA/29272 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60168278001

METHOD BLANK: 1371950 | Matrix: Water
Associated Lab Samples: 60168278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/04/14 13:43	

LABORATORY CONTROL SAMPLE: 1371951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1371952

Parameter	Units	60167918001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.15	2	2.5	118	90-110	M1

MATRIX SPIKE SAMPLE: 1371953

Parameter	Units	60167983001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.31	2	1.3	48	90-110	M1

SAMPLE DUPLICATE: 1371954

Parameter	Units	60168004003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	9.2	9.0	3	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

QC Batch: WETA/29350 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60168278001

METHOD BLANK: 1374557 | Matrix: Water
Associated Lab Samples: 60168278001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/09/14 10:41	

LABORATORY CONTROL SAMPLE: 1374558

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	46.8	94	90-110	

MATRIX SPIKE SAMPLE: 1374559

Parameter	Units	60167990001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	7450	5000	11300	76	90-110	M1

SAMPLE DUPLICATE: 1374560

Parameter	Units	60167990005 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	2200	2000	10	25	

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QUALIFIERS

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF CB 05-01-14
Pace Project No.: 60168278

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168278001	**CB 05-01-14**	EPA 200.7	MPRP/27097	EPA 200.7	ICP/20552
60168278001	**CB 05-01-14**	EPA 200.7	MPRP/27096	EPA 200.7	ICP/20550
60168278001	**CB 05-01-14**	EPA 245.1	MERP/8374	EPA 245.1	MERC/8328
60168278001	**CB 05-01-14**	EPA 245.1	MERP/8371	EPA 245.1	MERC/8324
60168278001	**CB 05-01-14**	EPA 625	OEXT/43987	EPA 625	MSSV/14062
60168278001	**CB 05-01-14**	EPA 624 Low	MSV/61370		
60168278002	**TRIP BLANK**	EPA 624 Low	MSV/61370		
60168278001	**CB 05-01-14**	EPA 1664A	WET/47717		
60168278001	**CB 05-01-14**	EPA 1664A	WET/47757		
60168278001	**CB 05-01-14**	SM 2540D	WET/47665		
60168278001	**CB 05-01-14**	SM 4500-H+B	WET/47713		
60168278001	**CB 05-01-14**	SM 5210B	WET/47656	SM 5210B	WET/47727
60168278001	**CB 05-01-14**	EPA 350.1	WETA/29272		
60168278001	**CB 05-01-14**	EPA 410.4	WETA/29350		

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Sample Condition Upon Receipt

WO#: 60168278

60168278

Client Name: Barr Engineering

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☑ Hands

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-239 / T-194 **Type of Ice:** Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 3.4

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/2/14

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. BOD, ph
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes	☐No	☐N/A	13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	Initial ph HNO3 4.5, added 2.5mL final 4.0 initial ph H2SO4 4.0, added 2.5mL final 3.5
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☑No	☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed: Lot # of added preservative: 12517-23.2 - HNO3, 12520-2-7 H2SO4
Trip Blank present: Pace Trip Blank lot # (if purchased): Covered	☑Yes	☐No	☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes	☑No	☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☑N/A	17. List State: MO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

F-KS-C-003-Rev.7, 04December2012

Pace Analytical

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
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	

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B		Residual Chlorine (Y/N)	
1	GB 05-01-14 2BP2U 3A6J3	OT	G	5/1/14	1314	—	—		15	10	4	1	0	5DG4U	2A6J4				X	X	X	X	X	X	X	X	X	X	BP3U	BP3N	BP3S	Col Cal 2DD
2	TRIP BLANK	—	—	—	—	—	—		2	2			2	DG4U	CTB											X						
3																																
4																																
5																																
6																															METALS LIST total & LF Dis:	
7																															Al,Sb,As,Be,Cd,Cr,	
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn	
9																															and Mercury	
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-1-14	3:20	Nanette Jeerth	5-1-14	3:20				
SITE ADDRESS: BRIDGETON LF				E Brackett / Pace	5/2/14	0120	3.4	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:	WILLIAM ABERNATHY					
SIGNATURE of SAMPLER:		DATE Signed: 5/1/14				

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May 09, 2014

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

RE: Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 02, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

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 316-286
Pace Project No.: 60168281

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168281001	**316-286**	Water	05/01/14 13:33	05/02/14 01:20
60168281002	**TRIP BLANK**	Water	05/01/14 13:33	05/02/14 01:20

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168281001	**316-286**	EPA 200.7	TDS	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	RAH	1
		SM 4500-H+B	JML	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60168281002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

Sample: 316-286 **Lab ID: 60168281001** Collected: 05/01/14 13:33 Received: 05/02/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**13900**	ug/L	750	2	05/02/14 15:50	05/05/14 14:46	7429-90-5	
Antimony	ND	ug/L	50.0	1	05/02/14 15:50	05/05/14 14:44	7440-36-0	
Arsenic	**1220**	ug/L	50.0	1	05/02/14 15:50	05/05/14 14:44	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/02/14 15:50	05/05/14 14:44	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/02/14 15:50	05/05/14 14:44	7440-43-9	
Chromium	**261**	ug/L	25.0	1	05/02/14 15:50	05/05/14 14:44	7440-47-3	
Cobalt	**36.2**	ug/L	25.0	1	05/02/14 15:50	05/05/14 14:44	7440-48-4	
Copper	ND	ug/L	50.0	1	05/02/14 15:50	05/05/14 14:44	7440-50-8	
Iron	**704000**	ug/L	250	1	05/02/14 15:50	05/05/14 14:44	7439-89-6	
Lead	**86.6**	ug/L	25.0	1	05/02/14 15:50	05/05/14 14:44	7439-92-1	
Nickel	**103**	ug/L	25.0	1	05/02/14 15:50	05/05/14 14:44	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/02/14 15:50	05/05/14 14:44	7782-49-2	
Silver	ND	ug/L	35.0	1	05/02/14 15:50	05/05/14 14:44	7440-22-4	
Thallium	ND	ug/L	100	1	05/02/14 15:50	05/05/14 14:44	7440-28-0	
Zinc	**4910**	ug/L	500	2	05/02/14 15:50	05/05/14 14:46	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1200**	ug/L	750	2	05/02/14 15:50	05/06/14 12:13	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/02/14 15:50	05/06/14 12:13	7440-36-0	D3
Arsenic, Dissolved	**796**	ug/L	50.0	1	05/02/14 15:50	05/06/14 12:10	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/02/14 15:50	05/06/14 12:10	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/02/14 15:50	05/06/14 12:10	7440-43-9	
Chromium, Dissolved	**157**	ug/L	25.0	1	05/02/14 15:50	05/06/14 12:10	7440-47-3	
Cobalt, Dissolved	ND	ug/L	25.0	1	05/02/14 15:50	05/06/14 12:10	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/02/14 15:50	05/06/14 12:10	7440-50-8	
Iron, Dissolved	**315000**	ug/L	250	1	05/02/14 15:50	05/06/14 12:10	7439-89-6	
Lead, Dissolved	**30.5**	ug/L	25.0	1	05/02/14 15:50	05/06/14 12:10	7439-92-1	
Nickel, Dissolved	**76.6**	ug/L	25.0	1	05/02/14 15:50	05/06/14 12:10	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/02/14 15:50	05/06/14 12:10	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/02/14 15:50	05/06/14 12:10	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/02/14 15:50	05/06/14 12:10	7440-28-0	
Zinc, Dissolved	**3560**	ug/L	500	2	05/02/14 15:50	05/06/14 12:13	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/07/14 16:30	05/08/14 10:22	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/06/14 17:00	05/07/14 11:05	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/05/14 00:00	05/06/14 11:57	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:57	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:57	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:57	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/05/14 00:00	05/06/14 11:57	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**12400**	ug/L	4000	2	05/05/14 00:00	05/06/14 11:57		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

Sample: 316-286 **Lab ID: 60168281001** Collected: 05/01/14 13:33 Received: 05/02/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**2510**	ug/L	1000	2	05/05/14 00:00	05/06/14 11:57	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:57	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:57	87-86-5	
Phenol	**15900**	ug/L	1000	2	05/05/14 00:00	05/06/14 11:57	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:57	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/05/14 00:00	05/06/14 11:57	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	191	%	33-120	2	05/05/14 00:00	05/06/14 11:57	4165-60-0	S0
2-Fluorobiphenyl (S)	87	%	39-120	2	05/05/14 00:00	05/06/14 11:57	321-60-8	
Terphenyl-d14 (S)	86	%	45-120	2	05/05/14 00:00	05/06/14 11:57	1718-51-0	
Phenol-d6 (S)	59	%	11-120	2	05/05/14 00:00	05/06/14 11:57	13127-88-3	
2-Fluorophenol (S)	56	%	17-120	2	05/05/14 00:00	05/06/14 11:57	367-12-4	
2,4,6-Tribromophenol (S)	104	%	39-120	2	05/05/14 00:00	05/06/14 11:57	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**156000**	ug/L	2500	250		05/05/14 14:13	67-64-1	N2
Benzene	ND	ug/L	250	250		05/05/14 14:13	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/05/14 14:13	75-27-4	
Bromoform	ND	ug/L	250	250		05/05/14 14:13	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/05/14 14:13	74-83-9	
2-Butanone (MEK)	**64800**	ug/L	2500	250		05/05/14 14:13	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/05/14 14:13	56-23-5	
Chloroethane	ND	ug/L	250	250		05/05/14 14:13	75-00-3	
Chloroform	ND	ug/L	250	250		05/05/14 14:13	67-66-3	
1,4-Dichlorobenzene	**261**	ug/L	250	250		05/05/14 14:13	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/05/14 14:13	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/05/14 14:13	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/05/14 14:13	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/05/14 14:13	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/05/14 14:13	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/05/14 14:13	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/05/14 14:13	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/05/14 14:13	127-18-4	
Toluene	ND	ug/L	250	250		05/05/14 14:13	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/05/14 14:13	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/05/14 14:13	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/05/14 14:13	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/05/14 14:13	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/05/14 14:13	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	250		05/05/14 14:13	460-00-4	
Toluene-d8 (S)	101	%	80-120	250		05/05/14 14:13	2037-26-5	
1,2-Dichloroethane-d4 (S)	99	%	80-120	250		05/05/14 14:13	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/05/14 14:13		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1110**	mg/L	5.0	1		05/07/14 08:05		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

Sample: 316-286 **Lab ID: 60168281001** Collected: 05/01/14 13:33 Received: 05/02/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**5.6**	mg/L	5.0	1		05/09/14 07:20		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**6840**	mg/L	5.0	1		05/05/14 10:10		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.3**	Std. Units	0.10	1		05/06/14 14:46		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**31300**	mg/L	200	100	05/02/14 15:30	05/07/14 16:08		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**597**	mg/L	20.0	200		05/04/14 15:10	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**60500**	mg/L	5000	500		05/09/14 10:53		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

Sample: TRIP BLANK **Lab ID: 60168281002** Collected: 05/01/14 13:33 Received: 05/02/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/05/14 13:10	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/05/14 13:10	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/05/14 13:10	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/05/14 13:10	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/05/14 13:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/05/14 13:10	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/05/14 13:10	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/05/14 13:10	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/05/14 13:10	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/05/14 13:10	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/05/14 13:10	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/05/14 13:10	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/05/14 13:10	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/05/14 13:10	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/05/14 13:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/05/14 13:10	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/05/14 13:10	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/05/14 13:10	127-18-4	
Toluene	ND	ug/L	1.0	1		05/05/14 13:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/05/14 13:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/05/14 13:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/05/14 13:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/05/14 13:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/05/14 13:10	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	1		05/05/14 13:10	460-00-4	
Toluene-d8 (S)	99	%	80-120	1		05/05/14 13:10	2037-26-5	
1,2-Dichloroethane-d4 (S)	100	%	80-120	1		05/05/14 13:10	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/05/14 13:10		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: MERP/8374 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60168281001

METHOD BLANK: 1373669 | Matrix: Water
Associated Lab Samples: 60168281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/08/14 10:04	

LABORATORY CONTROL SAMPLE: 1373670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373671 1373672

Parameter	Units	60168100001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.9	5.0	99	99	70-130	0	20	

MATRIX SPIKE SAMPLE: 1373673

Parameter	Units	60168161002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.7	114	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: MERP/8371
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60168281001

METHOD BLANK: 1373053
Matrix: Water
Associated Lab Samples: 60168281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/07/14 10:36	

LABORATORY CONTROL SAMPLE: 1373054

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.1	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373055 1373056

Parameter	Units	60168186001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	120	121	80	81	70-130	1	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: MPRP/27097
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60168281001

METHOD BLANK: 1371179
Matrix: Water
Associated Lab Samples: 60168281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/05/14 14:05	
Antimony	ug/L	ND	10.0	05/05/14 14:05	
Arsenic	ug/L	ND	10.0	05/05/14 14:05	
Beryllium	ug/L	ND	1.0	05/05/14 14:05	
Cadmium	ug/L	ND	5.0	05/05/14 14:05	
Chromium	ug/L	ND	5.0	05/05/14 14:05	
Cobalt	ug/L	ND	5.0	05/05/14 14:05	
Copper	ug/L	ND	10.0	05/05/14 14:05	
Iron	ug/L	ND	50.0	05/05/14 14:05	
Lead	ug/L	ND	5.0	05/05/14 14:05	
Nickel	ug/L	ND	5.0	05/05/14 14:05	
Selenium	ug/L	ND	15.0	05/05/14 14:05	
Silver	ug/L	ND	7.0	05/05/14 14:05	
Thallium	ug/L	ND	20.0	05/05/14 14:05	
Zinc	ug/L	ND	50.0	05/05/14 14:05	

LABORATORY CONTROL SAMPLE: 1371180

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9900	99	85-115	
Antimony	ug/L	1000	975	97	85-115	
Arsenic	ug/L	1000	960	96	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	974	97	85-115	
Chromium	ug/L	1000	1010	101	85-115	
Cobalt	ug/L	1000	992	99	85-115	
Copper	ug/L	1000	937	94	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	996	100	85-115	
Nickel	ug/L	1000	999	100	85-115	
Selenium	ug/L	1000	973	97	85-115	
Silver	ug/L	500	478	96	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1371181 1371182

Parameter	Units	60168180001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L		10000	10000	10100	10100	100	100	70-130	0	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1371181 1371182

Parameter	Units	60168180001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L		1000	1000	987	991	99	99	70-130	0	7	
Arsenic	ug/L		1000	1000	979	987	98	99	70-130	1	10	
Beryllium	ug/L		1000	1000	999	996	100	100	70-130	0	7	
Cadmium	ug/L	ND	1000	1000	976	988	98	99	70-130	1	10	
Chromium	ug/L		1000	1000	984	995	98	99	70-130	1	10	
Cobalt	ug/L		1000	1000	967	978	97	98	70-130	1	6	
Copper	ug/L	4.1J	1000	1000	944	947	94	94	70-130	0	11	
Iron	ug/L		10000	10000	10600	10600	100	100	70-130	0	10	
Lead	ug/L	36.5	1000	1000	1020	1020	98	99	70-130	1	10	
Nickel	ug/L		1000	1000	971	979	97	98	70-130	1	10	
Selenium	ug/L		1000	1000	976	976	98	98	70-130	0	10	
Silver	ug/L		500	500	479	480	96	96	70-130	0	10	
Thallium	ug/L		1000	1000	975	989	98	99	70-130	1	6	
Zinc	ug/L	ND	1000	1000	995	1000	99	100	70-130	1	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: MPRP/27096
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60168281001

METHOD BLANK: 1371162
Matrix: Water
Associated Lab Samples: 60168281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/06/14 11:07	
Antimony, Dissolved	ug/L	ND	10.0	05/06/14 11:07	
Arsenic, Dissolved	ug/L	ND	10.0	05/06/14 11:07	
Beryllium, Dissolved	ug/L	ND	1.0	05/06/14 11:07	
Cadmium, Dissolved	ug/L	ND	5.0	05/06/14 11:07	
Chromium, Dissolved	ug/L	ND	5.0	05/06/14 11:07	
Cobalt, Dissolved	ug/L	ND	5.0	05/06/14 11:07	
Copper, Dissolved	ug/L	ND	10.0	05/06/14 11:07	
Iron, Dissolved	ug/L	ND	50.0	05/06/14 11:07	
Lead, Dissolved	ug/L	ND	5.0	05/06/14 11:07	
Nickel, Dissolved	ug/L	ND	5.0	05/06/14 11:07	
Selenium, Dissolved	ug/L	ND	15.0	05/06/14 11:07	
Silver, Dissolved	ug/L	ND	7.0	05/06/14 11:07	
Thallium, Dissolved	ug/L	ND	20.0	05/06/14 11:07	
Zinc, Dissolved	ug/L	ND	50.0	05/06/14 11:07	

LABORATORY CONTROL SAMPLE: 1371163

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	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	986	99	85-115	
Beryllium, Dissolved	ug/L	1000	1030	103	85-115	
Cadmium, Dissolved	ug/L	1000	1010	101	85-115	
Chromium, Dissolved	ug/L	1000	1010	101	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1000	100	85-115	
Iron, Dissolved	ug/L	10000	10300	103	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	1020	102	85-115	
Silver, Dissolved	ug/L	500	498	100	85-115	
Thallium, Dissolved	ug/L	1000	1010	101	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1371164 1371165

Parameter	Units	60168079001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1300	50000	50000	52000	51200	101	100	70-130	1	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1371164 1371165

Parameter	Units	60168079001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	5000	5000	5200	5130	104	102	70-130	2	7	
Arsenic, Dissolved	ug/L	764	5000	5000	5760	5680	100	98	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4910	4860	98	97	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5100	5020	102	100	70-130	2	10	
Chromium, Dissolved	ug/L	160	5000	5000	5020	4950	97	96	70-130	1	10	
Cobalt, Dissolved	ug/L	ND	5000	5000	4850	4780	97	95	70-130	1	6	
Copper, Dissolved	ug/L	ND	5000	5000	5260	5180	104	103	70-130	1	11	
Iron, Dissolved	ug/L	326000	50000	50000	322000	314000	-9	-24	70-130	2	10	M1
Lead, Dissolved	ug/L	32.5	5000	5000	4700	4640	93	92	70-130	1	10	
Nickel, Dissolved	ug/L	88.4	5000	5000	4870	4830	96	95	70-130	1	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5500	5470	109	108	70-130	1	10	
Silver, Dissolved	ug/L	ND	2500	2500	2610	2580	104	103	70-130	1	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4500	4420	90	88	70-130	2	6	
Zinc, Dissolved	ug/L	4620	5000	5000	8630	8500	80	77	70-130	2	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: MSV/61370 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60168281001, 60168281002

METHOD BLANK: 1372175 | Matrix: Water
Associated Lab Samples: 60168281001, 60168281002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/05/14 12:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/05/14 12:23	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/05/14 12:23	
1,2-Dichloroethane	ug/L	ND	1.0	05/05/14 12:23	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/05/14 12:23	
2-Butanone (MEK)	ug/L	ND	10.0	05/05/14 12:23	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/05/14 12:23	N2
Acetone	ug/L	ND	10.0	05/05/14 12:23	N2
Benzene	ug/L	ND	1.0	05/05/14 12:23	
Bromodichloromethane	ug/L	ND	1.0	05/05/14 12:23	
Bromoform	ug/L	ND	1.0	05/05/14 12:23	
Bromomethane	ug/L	ND	5.0	05/05/14 12:23	
Carbon tetrachloride	ug/L	ND	1.0	05/05/14 12:23	
Chloroethane	ug/L	ND	1.0	05/05/14 12:23	
Chloroform	ug/L	ND	1.0	05/05/14 12:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/05/14 12:23	N2
Ethylbenzene	ug/L	ND	1.0	05/05/14 12:23	
Methylene chloride	ug/L	ND	1.0	05/05/14 12:23	
Tetrachloroethene	ug/L	ND	1.0	05/05/14 12:23	
Toluene	ug/L	ND	1.0	05/05/14 12:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/05/14 12:23	
Trichloroethene	ug/L	ND	1.0	05/05/14 12:23	
Vinyl chloride	ug/L	ND	1.0	05/05/14 12:23	
Xylene (Total)	ug/L	ND	3.0	05/05/14 12:23	N2
1,2-Dichloroethane-d4 (S)	%	104	80-120	05/05/14 12:23	
4-Bromofluorobenzene (S)	%	106	80-120	05/05/14 12:23	
Toluene-d8 (S)	%	101	80-120	05/05/14 12:23	

LABORATORY CONTROL SAMPLE: 1372176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.8	99	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	97	67-127	N2
1,1,2-Trichloroethane	ug/L	20	19.8	99	67-124	
1,2-Dichloroethane	ug/L	20	20.5	103	70-126	
1,4-Dichlorobenzene	ug/L	20	19.1	96	74-120	
2-Butanone (MEK)	ug/L	100	102	102	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	112	112	59-131	N2
Acetone	ug/L	100	94.6	95	38-134	N2
Benzene	ug/L	20	19.7	98	75-120	
Bromodichloromethane	ug/L	20	21.1	106	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

LABORATORY CONTROL SAMPLE: 1372176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	19.5	97	65-127	
Bromomethane	ug/L	20	13.9	69	13-157	
Carbon tetrachloride	ug/L	20	19.9	99	70-131	
Chloroethane	ug/L	20	22.5	112	47-133	
Chloroform	ug/L	20	19.7	98	65-127	
cis-1,2-Dichloroethene	ug/L	20	20.3	102	68-127	N2
Ethylbenzene	ug/L	20	20.0	100	74-122	
Methylene chloride	ug/L	20	21.0	105	64-129	
Tetrachloroethene	ug/L	20	18.5	93	73-125	
Toluene	ug/L	20	19.8	99	69-126	
trans-1,2-Dichloroethene	ug/L	20	19.7	98	66-129	
Trichloroethene	ug/L	20	19.5	97	71-123	
Vinyl chloride	ug/L	20	22.0	110	43-129	
Xylene (Total)	ug/L	60	60.5	101	75-121	N2
1,2-Dichloroethane-d4 (S)	%			105	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1372177

Parameter	Units	60168278001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4570	91	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5010	100	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4900	98	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4750	95	49-144	
1,4-Dichlorobenzene	ug/L	322	5000	4710	88	33-140	
2-Butanone (MEK)	ug/L	64200	25000	88000	95	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	29600	116	40-160	N2
Acetone	ug/L	154000	25000	174000	77	10-160	N2
Benzene	ug/L	ND	5000	4160	83	37-151	
Bromodichloromethane	ug/L	ND	5000	4890	98	35-142	
Bromoform	ug/L	ND	5000	4760	95	45-142	
Bromomethane	ug/L	ND	5000	1700	34	10-158	
Carbon tetrachloride	ug/L	ND	5000	4580	92	70-140	
Chloroethane	ug/L	ND	5000	3450	69	19-152	
Chloroform	ug/L	ND	5000	4630	93	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4460	89	34-147	N2
Ethylbenzene	ug/L	ND	5000	4490	90	40-142	
Methylene chloride	ug/L	ND	5000	4110	82	31-144	
Tetrachloroethene	ug/L	ND	5000	3970	79	64-148	
Toluene	ug/L	ND	5000	4320	86	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3770	75	54-151	
Trichloroethene	ug/L	ND	5000	4190	84	71-149	
Vinyl chloride	ug/L	ND	5000	2990	60	22-146	
Xylene (Total)	ug/L	ND	15000	13600	91	37-144	N2
1,2-Dichloroethane-d4 (S)	%				101	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

MATRIX SPIKE SAMPLE: 1372177

Parameter	Units	60168278001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				103	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: OEXT/43987 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60168281001

METHOD BLANK: 1371975 | Matrix: Water
Associated Lab Samples: 60168281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/06/14 09:12	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/06/14 09:12	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/06/14 09:12	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/06/14 09:12	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/06/14 09:12	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/06/14 09:12	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/06/14 09:12	
Hexachloroethane	ug/L	ND	5.0	05/06/14 09:12	
Naphthalene	ug/L	ND	5.0	05/06/14 09:12	
Nitrobenzene	ug/L	ND	5.0	05/06/14 09:12	
Pentachlorophenol	ug/L	ND	5.0	05/06/14 09:12	
Phenol	ug/L	ND	5.0	05/06/14 09:12	
2,4,6-Tribromophenol (S)	%	69	39-120	05/06/14 09:12	
2-Fluorobiphenyl (S)	%	68	39-120	05/06/14 09:12	
2-Fluorophenol (S)	%	42	17-120	05/06/14 09:12	
Nitrobenzene-d5 (S)	%	67	33-120	05/06/14 09:12	
Phenol-d6 (S)	%	26	11-120	05/06/14 09:12	
Terphenyl-d14 (S)	%	70	45-120	05/06/14 09:12	

LABORATORY CONTROL SAMPLE: 1371976

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	36.3	73	46-120	
2,4,6-Trichlorophenol	ug/L	50	36.4	73	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.3	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	30.0	60	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	43.6	87	40-133	
Hexachloro-1,3-butadiene	ug/L	50	32.5	65	44-116	
Hexachlorocyclopentadiene	ug/L	100	57.4	57	24-120	
Hexachloroethane	ug/L	50	34.3	69	43-113	
Naphthalene	ug/L	50	37.2	74	48-120	
Nitrobenzene	ug/L	50	37.0	74	48-120	
Pentachlorophenol	ug/L	50	40.1	80	47-120	
Phenol	ug/L	50	16.2	32	16-112	
2,4,6-Tribromophenol (S)	%			85	39-120	
2-Fluorobiphenyl (S)	%			74	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			76	33-120	
Phenol-d6 (S)	%			30	11-120	
Terphenyl-d14 (S)	%			82	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

MATRIX SPIKE SAMPLE: 1371977

Parameter	Units	60168161002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	33.6	67	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	37.7	75	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	30.8	62	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	28.3	57	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	42.6	85	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	33.0	66	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	59.0	59	11-120	
Hexachloroethane	ug/L	ND	50	32.4	65	40-113	
Naphthalene	ug/L	ND	50	35.8	72	45-120	
Nitrobenzene	ug/L	ND	50	34.8	70	38-120	
Pentachlorophenol	ug/L	ND	50	40.8	82	43-135	
Phenol	ug/L	ND	50	14.5	29	13-112	
2,4,6-Tribromophenol (S)	%				86	39-120	
2-Fluorobiphenyl (S)	%				74	39-120	
2-Fluorophenol (S)	%				41	17-120	
Nitrobenzene-d5 (S)	%				70	33-120	
Phenol-d6 (S)	%				26	11-120	
Terphenyl-d14 (S)	%				79	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: WET/47717 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168281001

METHOD BLANK: 1373218 | Matrix: Water
Associated Lab Samples: 60168281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/07/14 08:00	

LABORATORY CONTROL SAMPLE: 1373219

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	39.1	98	78-114	

MATRIX SPIKE SAMPLE: 1373220

Parameter	Units	60168019001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.4	30.3	67	78-114	M1

SAMPLE DUPLICATE: 1373222

Parameter	Units	60168106001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	5.5	2.6J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: WET/47757 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60168281001

METHOD BLANK: 1374748 | Matrix: Water
Associated Lab Samples: 60168281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/09/14 07:19	

LABORATORY CONTROL SAMPLE: 1374749

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	18.7	94	64-132	

MATRIX SPIKE SAMPLE: 1374750

Parameter	Units	60168099002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	22.7	25.8	99	64-132	

SAMPLE DUPLICATE: 1374751

Parameter	Units	60168106001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	2.6J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: WET/47665
QC Batch Method: SM 2540D
Analysis Method: SM 2540D
Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60168281001

METHOD BLANK: 1372005
Matrix: Water
Associated Lab Samples: 60168281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/05/14 10:24	

SAMPLE DUPLICATE: 1372006

Parameter	Units	60168247001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	287	284	1	10	

SAMPLE DUPLICATE: 1372007

Parameter	Units	60168281001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6840	6820	0	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: WET/47713
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60168281001

SAMPLE DUPLICATE: 1372974

Parameter	Units	60168278001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.3	5.3	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: WET/47656 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60168281001

METHOD BLANK: 1371099 | Matrix: Water
Associated Lab Samples: 60168281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/07/14 15:23	

LABORATORY CONTROL SAMPLE: 1371100

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	207	105	85-115	

SAMPLE DUPLICATE: 1371101

Parameter	Units	60168282002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	11.6	11.4	2	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: WETA/29272 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60168281001

METHOD BLANK: 1371950 | Matrix: Water
Associated Lab Samples: 60168281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/04/14 13:43	

LABORATORY CONTROL SAMPLE: 1371951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	107	90-110	

MATRIX SPIKE SAMPLE: 1371952

Parameter	Units	60167918001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.15	2	2.5	118	90-110	M1

MATRIX SPIKE SAMPLE: 1371953

Parameter	Units	60167983001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.31	2	1.3	48	90-110	M1

SAMPLE DUPLICATE: 1371954

Parameter	Units	60168004003 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	9.2	9.0	3	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

QC Batch: WETA/29350 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60168281001

METHOD BLANK: 1374557 | Matrix: Water
Associated Lab Samples: 60168281001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/09/14 10:41	

LABORATORY CONTROL SAMPLE: 1374558

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	46.8	94	90-110	

MATRIX SPIKE SAMPLE: 1374559

Parameter	Units	60167990001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	7450	5000	11300	76	90-110	M1

SAMPLE DUPLICATE: 1374560

Parameter	Units	60167990005 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	2200	2000	10	25	

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QUALIFIERS

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

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.

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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-286
Pace Project No.: 60168281

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168281001	**316-286**	EPA 200.7	MPRP/27097	EPA 200.7	ICP/20552
60168281001	**316-286**	EPA 200.7	MPRP/27096	EPA 200.7	ICP/20550
60168281001	**316-286**	EPA 245.1	MERP/8374	EPA 245.1	MERC/8328
60168281001	**316-286**	EPA 245.1	MERP/8371	EPA 245.1	MERC/8324
60168281001	**316-286**	EPA 625	OEXT/43987	EPA 625	MSSV/14062
60168281001	**316-286**	EPA 624 Low	MSV/61370		
60168281002	**TRIP BLANK**	EPA 624 Low	MSV/61370		
60168281001	**316-286**	EPA 1664A	WET/47717		
60168281001	**316-286**	EPA 1664A	WET/47757		
60168281001	**316-286**	SM 2540D	WET/47665		
60168281001	**316-286**	SM 4500-H+B	WET/47713		
60168281001	**316-286**	SM 5210B	WET/47656	SM 5210B	WET/47727
60168281001	**316-286**	EPA 350.1	WETA/29272		
60168281001	**316-286**	EPA 410.4	WETA/29350		

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Sample Condition Upon Receipt

WO#: 60168281

60168281

Client Name: Barr Engineering

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☑ tribeads

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-239 / T-194 Type of Ice: Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 2-4

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: 5/2/14 [illegible]

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. BOD, ph
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes	☐No	☐N/A	13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	initial ph HNO3 4.5, added 2.5mL final 4.0
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☑No	☐N/A	initial ph H2SO4 4.5, added 2.5mL final 3.0 14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed [illegible] Lot # of added preservative 125222-2-7 H2SO4 125123-23-2 HNO3
Trip Blank present: Pace Trip Blank lot # (if purchased): covered	☑Yes	☐No	☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes	☑No	☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☑N/A	17. List State: MN

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [illegible] Date: 5/2/14

F-KS-C-003-Rev.7, 04December2012

Pace Analytical

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

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:	AMY HARGROVE/BRIAN POWER
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

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B	Residual Chlorine (Y/N)	60168281
1	316-286 2BPJ4, 3AG35, 2AG4U	OT	G	5/1/14	1333				15	10	4	1	0	BPJ4		SDG4		4	X	X	X	X	X	X	X	X	X	X	X	BP3N	4.0, BP3S2.0
2	TRIP BLANK								2	2					2DG4U			TB								X					
3																															
4																															
5																															
6																															METALS LIST total & LF Dis:
7																															Al,Sb,As,Be,Cd,Cr,
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																															and Mercury
10																															
11																															
12																															

Preservatives

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-1-14	3:20	Jeanette Martin	5-1-14	3:20				
SITE ADDRESS: BRIDGETON LF				EBrockett / Pace	5/2/14	0130	2.4	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:	WILLIAM ABERNATHY				
SIGNATURE of SAMPLER:	DATE Signed: 5/1/14				

Pace Analytical Services, Inc.
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May 12, 2014

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

RE: Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 03, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

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 CB 05-02-14
Pace Project No.: 60168364

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168364001	**CB 05-02-14**	Water	05/02/14 07:11	05/03/14 00:55
60168364002	**TRIP BLANK**	Water	05/02/14 08:00	05/03/14 00:55

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168364001	**CB 05-02-14**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	RAH	1
		SM 4500-H+B	RAH	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60168364002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

Sample: CB 05-02-14 **Lab ID: 60168364001** Collected: 05/02/14 07:11 Received: 05/03/14 00:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**17200**	ug/L	750	2	05/06/14 09:55	05/08/14 12:40	7429-90-5	
Antimony	ND	ug/L	100	2	05/06/14 09:55	05/08/14 12:40	7440-36-0	D3
Arsenic	**1240**	ug/L	50.0	1	05/06/14 09:55	05/08/14 12:36	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/06/14 09:55	05/08/14 12:36	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/06/14 09:55	05/08/14 12:36	7440-43-9	
Chromium	**295**	ug/L	25.0	1	05/06/14 09:55	05/08/14 12:36	7440-47-3	
Cobalt	**55.4**	ug/L	25.0	1	05/06/14 09:55	05/08/14 12:36	7440-48-4	
Copper	ND	ug/L	50.0	1	05/06/14 09:55	05/08/14 12:36	7440-50-8	
Iron	**888000**	ug/L	250	1	05/06/14 09:55	05/08/14 12:36	7439-89-6	
Lead	**120**	ug/L	25.0	1	05/06/14 09:55	05/08/14 12:36	7439-92-1	
Nickel	**152**	ug/L	25.0	1	05/06/14 09:55	05/08/14 12:36	7440-02-0	
Selenium	**98.6**	ug/L	75.0	1	05/06/14 09:55	05/08/14 12:36	7782-49-2	
Silver	ND	ug/L	35.0	1	05/06/14 09:55	05/08/14 12:36	7440-22-4	
Thallium	ND	ug/L	100	1	05/06/14 09:55	05/08/14 12:36	7440-28-0	
Zinc	**5940**	ug/L	500	2	05/06/14 09:55	05/08/14 12:40	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1070**	ug/L	750	2	05/06/14 17:48	05/07/14 11:12	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/06/14 17:48	05/07/14 11:12	7440-36-0	
Arsenic, Dissolved	**901**	ug/L	50.0	1	05/06/14 17:48	05/07/14 11:09	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/06/14 17:48	05/07/14 11:09	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:09	7440-43-9	
Chromium, Dissolved	**185**	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:09	7440-47-3	
Cobalt, Dissolved	**27.3**	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:09	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/06/14 17:48	05/07/14 11:09	7440-50-8	
Iron, Dissolved	**364000**	ug/L	250	1	05/06/14 17:48	05/07/14 11:09	7439-89-6	
Lead, Dissolved	**35.3**	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:09	7439-92-1	
Nickel, Dissolved	**93.2**	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:09	7440-02-0	
Selenium, Dissolved	**80.8**	ug/L	75.0	1	05/06/14 17:48	05/07/14 11:09	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/06/14 17:48	05/07/14 11:09	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/06/14 17:48	05/07/14 11:09	7440-28-0	
Zinc, Dissolved	**4940**	ug/L	500	2	05/06/14 17:48	05/07/14 11:12	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**27.0**	ug/L	6.0	1	05/07/14 16:30	05/08/14 10:48	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/12/14 08:45	05/12/14 12:15	7439-97-6	M1
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	50.0	2	05/07/14 00:00	05/08/14 11:12	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:12	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:12	77-47-4	
Hexachloroethane	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:12	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	20.0	2	05/07/14 00:00	05/08/14 11:12	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**98.2**	ug/L	40.0	2	05/07/14 00:00	05/08/14 11:12		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

Sample: CB 05-02-14 **Lab ID: 60168364001** Collected: 05/02/14 07:11 Received: 05/03/14 00:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:12	91-20-3	
Nitrobenzene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:12	98-95-3	
Pentachlorophenol	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:12	87-86-5	
Phenol	**141**	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:12	108-95-2	M1
1,2,4-Trichlorobenzene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:12	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:12	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	179	%	33-120	2	05/07/14 00:00	05/08/14 11:12	4165-60-0	S0
2-Fluorobiphenyl (S)	88	%	39-120	2	05/07/14 00:00	05/08/14 11:12	321-60-8	
Terphenyl-d14 (S)	85	%	45-120	2	05/07/14 00:00	05/08/14 11:12	1718-51-0	
Phenol-d6 (S)	53	%	11-120	2	05/07/14 00:00	05/08/14 11:12	13127-88-3	
2-Fluorophenol (S)	52	%	17-120	2	05/07/14 00:00	05/08/14 11:12	367-12-4	
2,4,6-Tribromophenol (S)	98	%	39-120	2	05/07/14 00:00	05/08/14 11:12	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**149000**	ug/L	2500	250		05/05/14 14:29	67-64-1	N2
Benzene	ND	ug/L	250	250		05/05/14 14:29	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/05/14 14:29	75-27-4	
Bromoform	ND	ug/L	250	250		05/05/14 14:29	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/05/14 14:29	74-83-9	
2-Butanone (MEK)	**63300**	ug/L	2500	250		05/05/14 14:29	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/05/14 14:29	56-23-5	
Chloroethane	ND	ug/L	250	250		05/05/14 14:29	75-00-3	
Chloroform	ND	ug/L	250	250		05/05/14 14:29	67-66-3	
1,4-Dichlorobenzene	**312**	ug/L	250	250		05/05/14 14:29	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/05/14 14:29	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/05/14 14:29	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/05/14 14:29	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/05/14 14:29	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/05/14 14:29	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/05/14 14:29	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/05/14 14:29	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/05/14 14:29	127-18-4	
Toluene	ND	ug/L	250	250		05/05/14 14:29	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/05/14 14:29	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/05/14 14:29	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/05/14 14:29	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/05/14 14:29	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/05/14 14:29	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	250		05/05/14 14:29	460-00-4	
Toluene-d8 (S)	100	%	80-120	250		05/05/14 14:29	2037-26-5	
1,2-Dichloroethane-d4 (S)	100	%	80-120	250		05/05/14 14:29	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/05/14 14:29		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1290**	mg/L	5.0	1		05/10/14 08:31		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

Sample: CB 05-02-14 **Lab ID: 60168364001** Collected: 05/02/14 07:11 Received: 05/03/14 00:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	ND	mg/L	5.0	1		05/10/14 11:00		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4340**	mg/L	5.0	1		05/06/14 12:28		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.2**	Std. Units	0.10	1		05/09/14 12:35		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**29300**	mg/L	2.0	1	05/03/14 11:27	05/08/14 13:32		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**604**	mg/L	20.0	200		05/07/14 14:18	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**59900**	mg/L	5000	500		05/12/14 12:46		

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

Sample: TRIP BLANK **Lab ID: 60168364002** Collected: 05/02/14 08:00 Received: 05/03/14 00:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/05/14 13:26	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/05/14 13:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/05/14 13:26	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/05/14 13:26	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/05/14 13:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/05/14 13:26	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/05/14 13:26	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/05/14 13:26	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/05/14 13:26	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/05/14 13:26	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/05/14 13:26	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/05/14 13:26	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/05/14 13:26	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/05/14 13:26	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/05/14 13:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/05/14 13:26	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/05/14 13:26	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/05/14 13:26	127-18-4	
Toluene	ND	ug/L	1.0	1		05/05/14 13:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/05/14 13:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/05/14 13:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/05/14 13:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/05/14 13:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/05/14 13:26	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	1		05/05/14 13:26	460-00-4	
Toluene-d8 (S)	99	%	80-120	1		05/05/14 13:26	2037-26-5	
1,2-Dichloroethane-d4 (S)	102	%	80-120	1		05/05/14 13:26	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/05/14 13:26		

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: MERP/8374 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60168364001

METHOD BLANK: 1373669 | Matrix: Water
Associated Lab Samples: 60168364001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/08/14 10:04	

LABORATORY CONTROL SAMPLE: 1373670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373671 1373672

Parameter	Units	60168100001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.9	5.0	99	99	70-130	0	20	

MATRIX SPIKE SAMPLE: 1373673

Parameter	Units	60168161002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.7	114	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: MERP/8386
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60168364001

METHOD BLANK: 1375925
Matrix: Water
Associated Lab Samples: 60168364001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/12/14 12:10	

LABORATORY CONTROL SAMPLE: 1375926

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: 1375927 1375928

Parameter	Units	60168364001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	100	114	67	76	70-130	13	20	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: MPRP/27115
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60168364001

METHOD BLANK: 1372209
Matrix: Water
Associated Lab Samples: 60168364001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/08/14 12:20	
Antimony	ug/L	ND	10.0	05/08/14 12:20	
Arsenic	ug/L	ND	10.0	05/08/14 12:20	
Beryllium	ug/L	ND	1.0	05/08/14 12:20	
Cadmium	ug/L	ND	5.0	05/08/14 12:20	
Chromium	ug/L	ND	5.0	05/08/14 12:20	
Cobalt	ug/L	ND	5.0	05/08/14 12:20	
Copper	ug/L	ND	10.0	05/08/14 12:20	
Iron	ug/L	ND	50.0	05/08/14 12:20	
Lead	ug/L	ND	5.0	05/08/14 12:20	
Nickel	ug/L	ND	5.0	05/08/14 12:20	
Selenium	ug/L	ND	15.0	05/08/14 12:20	
Silver	ug/L	ND	7.0	05/08/14 12:20	
Thallium	ug/L	ND	20.0	05/08/14 12:20	
Zinc	ug/L	ND	50.0	05/08/14 12:20	

LABORATORY CONTROL SAMPLE: 1372210

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10200	102	85-115	
Antimony	ug/L	1000	1050	105	85-115	
Arsenic	ug/L	1000	1000	100	85-115	
Beryllium	ug/L	1000	1020	102	85-115	
Cadmium	ug/L	1000	1020	102	85-115	
Chromium	ug/L	1000	1020	102	85-115	
Cobalt	ug/L	1000	1030	103	85-115	
Copper	ug/L	1000	1010	101	85-115	
Iron	ug/L	10000	10200	102	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	500	100	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1372211 1372212

Parameter	Units	60168222001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	<32.3	10000	10000	10100	10200	101	102	70-130	0	8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1372211 1372212

Parameter	Units	60168222001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<3.6	1000	1000	1040	1050	104	104	70-130	1	7	
Arsenic	ug/L	<3.4	1000	1000	1010	1020	101	101	70-130	1	10	
Beryllium	ug/L	<0.30	1000	1000	1010	1000	101	100	70-130	0	7	
Cadmium	ug/L	<0.56	1000	1000	1010	1020	101	102	70-130	0	10	
Chromium	ug/L	<0.89	1000	1000	996	1010	100	101	70-130	1	10	
Cobalt	ug/L	2.0J	1000	1000	1000	1010	100	100	70-130	0	6	
Copper	ug/L	3.2J	1000	1000	1010	1000	100	100	70-130	0	11	
Iron	ug/L	419	10000	10000	10400	10500	100	101	70-130	1	10	
Lead	ug/L	<2.2	1000	1000	990	988	99	99	70-130	0	10	
Nickel	ug/L	3.4J	1000	1000	996	993	99	99	70-130	0	10	
Selenium	ug/L	<1.9	1000	1000	1010	1010	101	101	70-130	0	10	
Silver	ug/L	<1.4	500	500	496	495	99	99	70-130	0	10	
Thallium	ug/L	<3.0	1000	1000	960	953	96	95	70-130	1	6	
Zinc	ug/L	71.1	1000	1000	1050	1040	98	97	70-130	0	11	

MATRIX SPIKE SAMPLE: 1372213

Parameter	Units	60168240003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	ND	10000	10500	105	70-130	
Antimony	ug/L	ND	1000	1040	104	70-130	
Arsenic	ug/L	ND	1000	1020	102	70-130	
Beryllium	ug/L	ND	1000	1030	103	70-130	
Cadmium	ug/L	ND	1000	1020	102	70-130	
Chromium	ug/L	13.5	1000	1050	104	70-130	
Cobalt	ug/L	ND	1000	1010	101	70-130	
Copper	ug/L	ND	1000	1020	102	70-130	
Iron	ug/L	117	10000	10400	103	70-130	
Lead	ug/L	ND	1000	1010	100	70-130	
Nickel	ug/L	7.9	1000	1010	100	70-130	
Selenium	ug/L	ND	1000	1010	101	70-130	
Silver	ug/L	ND	500	514	103	70-130	
Thallium	ug/L	ND	1000	958	96	70-130	
Zinc	ug/L	ND	1000	1020	100	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: MPRP/27137
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60168364001

METHOD BLANK: 1373141
Matrix: Water
Associated Lab Samples: 60168364001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/07/14 11:02	
Antimony, Dissolved	ug/L	ND	10.0	05/07/14 11:02	
Arsenic, Dissolved	ug/L	ND	10.0	05/07/14 11:02	
Beryllium, Dissolved	ug/L	ND	1.0	05/07/14 11:02	
Cadmium, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Chromium, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Cobalt, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Copper, Dissolved	ug/L	ND	10.0	05/07/14 11:02	
Iron, Dissolved	ug/L	ND	50.0	05/07/14 11:02	
Lead, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Nickel, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Selenium, Dissolved	ug/L	ND	15.0	05/07/14 11:02	
Silver, Dissolved	ug/L	ND	7.0	05/07/14 11:02	
Thallium, Dissolved	ug/L	ND	20.0	05/07/14 11:02	
Zinc, Dissolved	ug/L	ND	50.0	05/07/14 11:02	

LABORATORY CONTROL SAMPLE: 1373142

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9800	98	85-115	
Antimony, Dissolved	ug/L	1000	895	90	85-115	
Arsenic, Dissolved	ug/L	1000	859	86	85-115	
Beryllium, Dissolved	ug/L	1000	1010	101	85-115	
Cadmium, Dissolved	ug/L	1000	878	88	85-115	
Chromium, Dissolved	ug/L	1000	977	98	85-115	
Cobalt, Dissolved	ug/L	1000	896	90	85-115	
Copper, Dissolved	ug/L	1000	969	97	85-115	
Iron, Dissolved	ug/L	10000	9860	99	85-115	
Lead, Dissolved	ug/L	1000	901	90	85-115	
Nickel, Dissolved	ug/L	1000	923	92	85-115	
Selenium, Dissolved	ug/L	1000	901	90	85-115	
Silver, Dissolved	ug/L	500	482	96	85-115	
Thallium, Dissolved	ug/L	1000	882	88	85-115	
Zinc, Dissolved	ug/L	1000	903	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373143 1373144

Parameter	Units	60168488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	10000	10000	9540	9600	95	96	70-130	1	8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373143 1373144

Parameter	Units	60168488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	1000	1000	983	988	98	99	70-130	0	7	
Arsenic, Dissolved	ug/L	ND	1000	1000	954	960	95	96	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	954	956	95	96	70-130	0	10	
Chromium, Dissolved	ug/L	ND	1000	1000	938	944	94	94	70-130	1	10	
Cobalt, Dissolved	ug/L	ND	1000	1000	946	945	95	94	70-130	0	6	
Copper, Dissolved	ug/L	ND	1000	1000	962	970	96	97	70-130	1	11	
Iron, Dissolved	ug/L	ND	10000	10000	9570	9630	95	96	70-130	1	10	
Lead, Dissolved	ug/L	ND	1000	1000	935	933	93	93	70-130	0	10	
Nickel, Dissolved	ug/L	ND	1000	1000	962	964	96	96	70-130	0	10	
Selenium, Dissolved	ug/L	ND	1000	1000	971	980	97	98	70-130	1	10	
Silver, Dissolved	ug/L	ND	500	500	477	480	95	96	70-130	1	10	
Thallium, Dissolved	ug/L	ND	1000	1000	892	897	89	90	70-130	1	6	
Zinc, Dissolved	ug/L	ND	1000	1000	948	946	94	94	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: MSV/61370 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60168364001, 60168364002

METHOD BLANK: 1372175 | Matrix: Water
Associated Lab Samples: 60168364001, 60168364002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/05/14 12:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/05/14 12:23	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/05/14 12:23	
1,2-Dichloroethane	ug/L	ND	1.0	05/05/14 12:23	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/05/14 12:23	
2-Butanone (MEK)	ug/L	ND	10.0	05/05/14 12:23	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/05/14 12:23	N2
Acetone	ug/L	ND	10.0	05/05/14 12:23	N2
Benzene	ug/L	ND	1.0	05/05/14 12:23	
Bromodichloromethane	ug/L	ND	1.0	05/05/14 12:23	
Bromoform	ug/L	ND	1.0	05/05/14 12:23	
Bromomethane	ug/L	ND	5.0	05/05/14 12:23	
Carbon tetrachloride	ug/L	ND	1.0	05/05/14 12:23	
Chloroethane	ug/L	ND	1.0	05/05/14 12:23	
Chloroform	ug/L	ND	1.0	05/05/14 12:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/05/14 12:23	N2
Ethylbenzene	ug/L	ND	1.0	05/05/14 12:23	
Methylene chloride	ug/L	ND	1.0	05/05/14 12:23	
Tetrachloroethene	ug/L	ND	1.0	05/05/14 12:23	
Toluene	ug/L	ND	1.0	05/05/14 12:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/05/14 12:23	
Trichloroethene	ug/L	ND	1.0	05/05/14 12:23	
Vinyl chloride	ug/L	ND	1.0	05/05/14 12:23	
Xylene (Total)	ug/L	ND	3.0	05/05/14 12:23	N2
1,2-Dichloroethane-d4 (S)	%	104	80-120	05/05/14 12:23	
4-Bromofluorobenzene (S)	%	106	80-120	05/05/14 12:23	
Toluene-d8 (S)	%	101	80-120	05/05/14 12:23	

LABORATORY CONTROL SAMPLE: 1372176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.8	99	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	97	67-127	N2
1,1,2-Trichloroethane	ug/L	20	19.8	99	67-124	
1,2-Dichloroethane	ug/L	20	20.5	103	70-126	
1,4-Dichlorobenzene	ug/L	20	19.1	96	74-120	
2-Butanone (MEK)	ug/L	100	102	102	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	112	112	59-131	N2
Acetone	ug/L	100	94.6	95	38-134	N2
Benzene	ug/L	20	19.7	98	75-120	
Bromodichloromethane	ug/L	20	21.1	106	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

LABORATORY CONTROL SAMPLE: 1372176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	19.5	97	65-127	
Bromomethane	ug/L	20	13.9	69	13-157	
Carbon tetrachloride	ug/L	20	19.9	99	70-131	
Chloroethane	ug/L	20	22.5	112	47-133	
Chloroform	ug/L	20	19.7	98	65-127	
cis-1,2-Dichloroethene	ug/L	20	20.3	102	68-127	N2
Ethylbenzene	ug/L	20	20.0	100	74-122	
Methylene chloride	ug/L	20	21.0	105	64-129	
Tetrachloroethene	ug/L	20	18.5	93	73-125	
Toluene	ug/L	20	19.8	99	69-126	
trans-1,2-Dichloroethene	ug/L	20	19.7	98	66-129	
Trichloroethene	ug/L	20	19.5	97	71-123	
Vinyl chloride	ug/L	20	22.0	110	43-129	
Xylene (Total)	ug/L	60	60.5	101	75-121	N2
1,2-Dichloroethane-d4 (S)	%			105	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1372177

Parameter	Units	60168278001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4570	91	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5010	100	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4900	98	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4750	95	49-144	
1,4-Dichlorobenzene	ug/L	322	5000	4710	88	33-140	
2-Butanone (MEK)	ug/L	64200	25000	88000	95	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	29600	116	40-160	N2
Acetone	ug/L	154000	25000	174000	77	10-160	N2
Benzene	ug/L	ND	5000	4160	83	37-151	
Bromodichloromethane	ug/L	ND	5000	4890	98	35-142	
Bromoform	ug/L	ND	5000	4760	95	45-142	
Bromomethane	ug/L	ND	5000	1700	34	10-158	
Carbon tetrachloride	ug/L	ND	5000	4580	92	70-140	
Chloroethane	ug/L	ND	5000	3450	69	19-152	
Chloroform	ug/L	ND	5000	4630	93	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4460	89	34-147	N2
Ethylbenzene	ug/L	ND	5000	4490	90	40-142	
Methylene chloride	ug/L	ND	5000	4110	82	31-144	
Tetrachloroethene	ug/L	ND	5000	3970	79	64-148	
Toluene	ug/L	ND	5000	4320	86	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3770	75	54-151	
Trichloroethene	ug/L	ND	5000	4190	84	71-149	
Vinyl chloride	ug/L	ND	5000	2990	60	22-146	
Xylene (Total)	ug/L	ND	15000	13600	91	37-144	N2
1,2-Dichloroethane-d4 (S)	%				101	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

MATRIX SPIKE SAMPLE: 1372177

Parameter	Units	60168278001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				103	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: OEXT/44034 Analysis Method: EPA 625
QC Batch Method: EPA 625 Analysis Description: 625 MSS
Associated Lab Samples: 60168364001

METHOD BLANK: 1373174 Matrix: Water
Associated Lab Samples: 60168364001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/08/14 09:26	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/08/14 09:26	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/08/14 09:26	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/08/14 09:26	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/08/14 09:26	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/08/14 09:26	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/08/14 09:26	
Hexachloroethane	ug/L	ND	5.0	05/08/14 09:26	
Naphthalene	ug/L	ND	5.0	05/08/14 09:26	
Nitrobenzene	ug/L	ND	5.0	05/08/14 09:26	
Pentachlorophenol	ug/L	ND	5.0	05/08/14 09:26	
Phenol	ug/L	ND	5.0	05/08/14 09:26	
2,4,6-Tribromophenol (S)	%	82	39-120	05/08/14 09:26	
2-Fluorobiphenyl (S)	%	82	39-120	05/08/14 09:26	
2-Fluorophenol (S)	%	48	17-120	05/08/14 09:26	
Nitrobenzene-d5 (S)	%	82	33-120	05/08/14 09:26	
Phenol-d6 (S)	%	30	11-120	05/08/14 09:26	
Terphenyl-d14 (S)	%	77	45-120	05/08/14 09:26	

LABORATORY CONTROL SAMPLE: 1373175

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	38.4	77	46-120	
2,4,6-Trichlorophenol	ug/L	50	43.0	86	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	37.7	75	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	33.8	68	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	44.1	88	40-133	
Hexachloro-1,3-butadiene	ug/L	50	36.8	74	44-116	
Hexachlorocyclopentadiene	ug/L	100	69.6	70	24-120	
Hexachloroethane	ug/L	50	39.5	79	43-113	
Naphthalene	ug/L	50	40.3	81	48-120	
Nitrobenzene	ug/L	50	40.8	82	48-120	
Pentachlorophenol	ug/L	50	48.2	96	47-120	
Phenol	ug/L	50	17.1	34	16-112	
2,4,6-Tribromophenol (S)	%			90	39-120	
2-Fluorobiphenyl (S)	%			85	39-120	
2-Fluorophenol (S)	%			48	17-120	
Nitrobenzene-d5 (S)	%			82	33-120	
Phenol-d6 (S)	%			31	11-120	
Terphenyl-d14 (S)	%			88	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

MATRIX SPIKE SAMPLE: 1373176

Parameter	Units	60168364001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	40.5	81	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	46.4	93	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	42.2	84	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	98.2	50	122	47	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	39J	78	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	39.9	80	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	72.3	72	11-120	
Hexachloroethane	ug/L	ND	50	39.0	78	40-113	
Naphthalene	ug/L	ND	50	55.4	94	45-120	
Nitrobenzene	ug/L	ND	50	46.5	93	38-120	
Pentachlorophenol	ug/L	ND	50	46.9	94	43-135	
Phenol	ug/L	141	50	142	2	13-112	M1
2,4,6-Tribromophenol (S)	%				92	39-120	
2-Fluorobiphenyl (S)	%				82	39-120	
2-Fluorophenol (S)	%				48	17-120	
Nitrobenzene-d5 (S)	%				175	33-120	S0
Phenol-d6 (S)	%				48	11-120	
Terphenyl-d14 (S)	%				78	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: WET/47774 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168364001

METHOD BLANK: 1375638 | Matrix: Water
Associated Lab Samples: 60168364001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/10/14 08:30	

LABORATORY CONTROL SAMPLE: 1375639

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: 1375640

Parameter	Units	60168192002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	1.3J	40.8	37.1	88	78-114	

SAMPLE DUPLICATE: 1375642

Parameter	Units	60168039001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	1.9J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: WET/47777 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60168364001

METHOD BLANK: 1375731 | Matrix: Water
Associated Lab Samples: 60168364001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/10/14 10:59	

LABORATORY CONTROL SAMPLE: 1375732

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	18.8	94	64-132	

MATRIX SPIKE SAMPLE: 1375733

Parameter	Units	60168277001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20	18.7	89	64-132	

SAMPLE DUPLICATE: 1375734

Parameter	Units	60168208002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	2.2J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: WET/47693
QC Batch Method: SM 2540D
Analysis Method: SM 2540D
Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60168364001

METHOD BLANK: 1372472
Matrix: Water
Associated Lab Samples: 60168364001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/06/14 12:27	

SAMPLE DUPLICATE: 1372473

Parameter	Units	60168360001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	33.0	31.0	6	10	

SAMPLE DUPLICATE: 1372474

Parameter	Units	60168395002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: WET/47758
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60168364001

SAMPLE DUPLICATE: 1374784

Parameter	Units	60168216002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	0	5	H1,H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: WET/47659 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60168364001

METHOD BLANK: 1371707 | Matrix: Water
Associated Lab Samples: 60168364001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/08/14 13:12	

LABORATORY CONTROL SAMPLE: 1371708

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	177	89	85-115	

SAMPLE DUPLICATE: 1371709

Parameter	Units	60168364001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	29300	29600	1	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: WETA/29320 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60168364001

METHOD BLANK: 1373302 | Matrix: Water
Associated Lab Samples: 60168364001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/07/14 14:13	

LABORATORY CONTROL SAMPLE: 1373303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	99	90-110	

MATRIX SPIKE SAMPLE: 1373304

Parameter	Units	60168394001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.11	2	1.4	65	90-110	M1

MATRIX SPIKE SAMPLE: 1373305

Parameter	Units	60168425002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	9.2	10	16.9	77	90-110	M1

SAMPLE DUPLICATE: 1373306

Parameter	Units	60168497001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.78	0.73	7	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

QC Batch: WETA/29368 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60168364001

METHOD BLANK: 1375467 | Matrix: Water
Associated Lab Samples: 60168364001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/12/14 12:28	

LABORATORY CONTROL SAMPLE: 1375468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	48.9	98	90-110	

MATRIX SPIKE SAMPLE: 1375469

Parameter	Units	60168051003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	2820	2500	5140	93	90-110	

MATRIX SPIKE SAMPLE: 1375471

Parameter	Units	60168437001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	58400	25000	79400	84	90-110	M1

SAMPLE DUPLICATE: 1375470

Parameter	Units	60168158001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	2190	2150	2	25	

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QUALIFIERS

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

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.
H1	Analysis conducted outside the EPA method holding time.
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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF CB 05-02-14
Pace Project No.: 60168364

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168364001	**CB 05-02-14**	EPA 200.7	MPRP/27115	EPA 200.7	ICP/20561
60168364001	**CB 05-02-14**	EPA 200.7	MPRP/27137	EPA 200.7	ICP/20565
60168364001	**CB 05-02-14**	EPA 245.1	MERP/8374	EPA 245.1	MERC/8328
60168364001	**CB 05-02-14**	EPA 245.1	MERP/8386	EPA 245.1	MERC/8342
60168364001	**CB 05-02-14**	EPA 625	OEXT/44034	EPA 625	MSSV/14079
60168364001	**CB 05-02-14**	EPA 624 Low	MSV/61370		
60168364002	**TRIP BLANK**	EPA 624 Low	MSV/61370		
60168364001	**CB 05-02-14**	EPA 1664A	WET/47774		
60168364001	**CB 05-02-14**	EPA 1664A	WET/47777		
60168364001	**CB 05-02-14**	SM 2540D	WET/47693		
60168364001	**CB 05-02-14**	SM 4500-H+B	WET/47758		
60168364001	**CB 05-02-14**	SM 5210B	WET/47659	SM 5210B	WET/47749
60168364001	**CB 05-02-14**	EPA 350.1	WETA/29320		
60168364001	**CB 05-02-14**	EPA 410.4	WETA/29368		

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Sample Condition Upon Receipt

WO# : 60168364

60168364

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 ☑ zpl c

Thermometer Used: T-239 / T-194 Type of Ice: Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 4.2

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: pv 5/3/14

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. BOD pH
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10. DHAT received for VOC.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes	☐No	☐N/A	13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	Added 2.5 mL of HNO3 to BP3N. pH 6-0/4.0 Added 2.0 mL of H2SO4 to BP3S. pH 6-0/1.5
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☑No	☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed pv; Lot # of added preservative 12513 12522
Trip Blank present: Pace Trip Blank lot # (if purchased): Cover	☑Yes	☐No	☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes	☑No	☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☑N/A	17. List State: MO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical

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

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:	AMY HARGROVE/BRIAN POWER
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

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

Preservatives: Unpreserved; H2SO4; HNO3; HCl; NaOH; Na2S2O3; Methanol; Other

Requested Analysis Filtered (Y/N): 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; BOD SM 5210B

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N) 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	BOD SM 5210B	Residual Chlorine (Y/N)	6016836A
1	2A/14 CB 05-02-14 1BP3u 3A635	OT	G	5/2/14	0711	—	—		12	10	4	1	0	1BP3S1-5			1BP3u	X	X	X	X	X	X	X	X	X	X	X		2BP2u 5D69T 001
2	TRIP BLANK	—	—	—	—	—	—		2	2															X					2D/49u 002
3																														
4																														
5																														
6																														METALS LIST total & LF Dis:
7																														Al,Sb,As,Be,Cd,Cr,
8																														Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																														and Mercury
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
SITE CONTACT: BILL ABERNATHY 314-502-1299	[illegible] / FCI	5/2/14	2:30	[illegible]	5/2/14	2:30	
SITE ADDRESS: BRIDGETON LF				[illegible] PRASE	5/2/14	0255	4.2 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:	WILLIAM ABERNATHY				
SIGNATURE of SAMPLER:	[signature] DATE Signed: 5/2/14				

Pace Analytical Services, Inc.
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(913)599-5665

May 12, 2014

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

RE: Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 05, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

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 CB 05-04-14
Pace Project No.: 60168436

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168436001	**CB 05-04-14**	Water	05/04/14 16:30	05/05/14 13:15
60168436002	**TRIP BLANK**	Water	05/04/14 08:00	05/05/14 13:15

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168436001	**CB 05-04-14**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	RAH	1
		SM 4500-H+B	RAH	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60168436002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

Sample: CB 05-04-14 **Lab ID: 60168436001** Collected: 05/04/14 16:30 Received: 05/05/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**33100**	ug/L	750	2	05/09/14 11:10	05/12/14 11:43	7429-90-5	M1
Antimony	ND	ug/L	100	2	05/09/14 11:10	05/12/14 11:43	7440-36-0	D3
Arsenic	**1090**	ug/L	50.0	1	05/09/14 11:10	05/12/14 11:40	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/09/14 11:10	05/12/14 11:40	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/09/14 11:10	05/12/14 11:40	7440-43-9	
Chromium	**299**	ug/L	25.0	1	05/09/14 11:10	05/12/14 11:40	7440-47-3	
Cobalt	**62.8**	ug/L	25.0	1	05/09/14 11:10	05/12/14 11:40	7440-48-4	
Copper	**119**	ug/L	50.0	1	05/09/14 11:10	05/12/14 11:40	7440-50-8	
Iron	**898000**	ug/L	250	1	05/09/14 11:10	05/12/14 11:40	7439-89-6	M1
Lead	**136**	ug/L	25.0	1	05/09/14 11:10	05/12/14 11:40	7439-92-1	
Nickel	**167**	ug/L	25.0	1	05/09/14 11:10	05/12/14 11:40	7440-02-0	
Selenium	**78.4**	ug/L	75.0	1	05/09/14 11:10	05/12/14 11:40	7782-49-2	
Silver	ND	ug/L	35.0	1	05/09/14 11:10	05/12/14 11:40	7440-22-4	
Thallium	ND	ug/L	100	1	05/09/14 11:10	05/12/14 11:40	7440-28-0	
Zinc	**5380**	ug/L	500	2	05/09/14 11:10	05/12/14 11:43	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**976**	ug/L	750	2	05/06/14 17:48	05/07/14 11:29	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/06/14 17:48	05/07/14 11:29	7440-36-0	
Arsenic, Dissolved	**848**	ug/L	50.0	1	05/06/14 17:48	05/07/14 11:25	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/06/14 17:48	05/07/14 11:25	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:25	7440-43-9	
Chromium, Dissolved	**176**	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:25	7440-47-3	
Cobalt, Dissolved	**26.6**	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:25	7440-48-4	
Copper, Dissolved	**123**	ug/L	50.0	1	05/06/14 17:48	05/07/14 11:25	7440-50-8	D9
Iron, Dissolved	**353000**	ug/L	250	1	05/06/14 17:48	05/07/14 11:25	7439-89-6	
Lead, Dissolved	**31.1**	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:25	7439-92-1	
Nickel, Dissolved	**96.8**	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:25	7440-02-0	
Selenium, Dissolved	**81.6**	ug/L	75.0	1	05/06/14 17:48	05/07/14 11:25	7782-49-2	D9
Silver, Dissolved	ND	ug/L	35.0	1	05/06/14 17:48	05/07/14 11:25	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/06/14 17:48	05/07/14 11:25	7440-28-0	
Zinc, Dissolved	**4400**	ug/L	500	2	05/06/14 17:48	05/07/14 11:29	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**11.1**	ug/L	6.0	1	05/07/14 16:30	05/08/14 10:51	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/12/14 08:45	05/12/14 12:21	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	50.0	2	05/07/14 00:00	05/08/14 11:33	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:33	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:33	77-47-4	
Hexachloroethane	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:33	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	20.0	2	05/07/14 00:00	05/08/14 11:33	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**90.5**	ug/L	40.0	2	05/07/14 00:00	05/08/14 11:33		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

Sample: CB 05-04-14 **Lab ID: 60168436001** Collected: 05/04/14 16:30 Received: 05/05/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**12.6**	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:33	91-20-3	
Nitrobenzene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:33	98-95-3	
Pentachlorophenol	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:33	87-86-5	
Phenol	**125**	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:33	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:33	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:33	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	161	%	33-120	2	05/07/14 00:00	05/08/14 11:33	4165-60-0	S0
2-Fluorobiphenyl (S)	77	%	39-120	2	05/07/14 00:00	05/08/14 11:33	321-60-8	
Terphenyl-d14 (S)	76	%	45-120	2	05/07/14 00:00	05/08/14 11:33	1718-51-0	
Phenol-d6 (S)	47	%	11-120	2	05/07/14 00:00	05/08/14 11:33	13127-88-3	
2-Fluorophenol (S)	47	%	17-120	2	05/07/14 00:00	05/08/14 11:33	367-12-4	
2,4,6-Tribromophenol (S)	83	%	39-120	2	05/07/14 00:00	05/08/14 11:33	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**157000**	ug/L	2500	250		05/07/14 14:57	67-64-1	N2
Benzene	ND	ug/L	250	250		05/07/14 14:57	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/07/14 14:57	75-27-4	
Bromoform	ND	ug/L	250	250		05/07/14 14:57	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/07/14 14:57	74-83-9	
2-Butanone (MEK)	**65600**	ug/L	2500	250		05/07/14 14:57	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/07/14 14:57	56-23-5	
Chloroethane	ND	ug/L	250	250		05/07/14 14:57	75-00-3	
Chloroform	ND	ug/L	250	250		05/07/14 14:57	67-66-3	
1,4-Dichlorobenzene	**252**	ug/L	250	250		05/07/14 14:57	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/07/14 14:57	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/07/14 14:57	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/07/14 14:57	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/07/14 14:57	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/07/14 14:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/07/14 14:57	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/07/14 14:57	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/07/14 14:57	127-18-4	
Toluene	ND	ug/L	250	250		05/07/14 14:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/07/14 14:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/07/14 14:57	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/07/14 14:57	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/07/14 14:57	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/07/14 14:57	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	101	%	80-120	250		05/07/14 14:57	460-00-4	
Toluene-d8 (S)	99	%	80-120	250		05/07/14 14:57	2037-26-5	
1,2-Dichloroethane-d4 (S)	105	%	80-120	250		05/07/14 14:57	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/07/14 14:57		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1140**	mg/L	5.0	1		05/10/14 08:31		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

Sample: CB 05-04-14 **Lab ID: 60168436001** Collected: 05/04/14 16:30 Received: 05/05/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**7.3**	mg/L	5.0	1		05/10/14 11:01		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**6360**	mg/L	5.0	1		05/06/14 12:28		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.2**	Std. Units	0.10	1		05/09/14 12:35		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**29500**	mg/L	2.0	1	05/05/14 17:04	05/10/14 13:10		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**599**	mg/L	20.0	200		05/07/14 14:26	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**54400**	mg/L	5000	500		05/12/14 12:47		

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

Sample: TRIP BLANK **Lab ID: 60168436002** Collected: 05/04/14 08:00 Received: 05/05/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/07/14 14:09	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/07/14 14:09	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/07/14 14:09	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/07/14 14:09	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/07/14 14:09	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/07/14 14:09	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/07/14 14:09	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/07/14 14:09	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/07/14 14:09	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/07/14 14:09	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/07/14 14:09	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/07/14 14:09	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/07/14 14:09	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/07/14 14:09	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/07/14 14:09	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/07/14 14:09	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/07/14 14:09	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/07/14 14:09	127-18-4	
Toluene	ND	ug/L	1.0	1		05/07/14 14:09	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/07/14 14:09	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/07/14 14:09	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/07/14 14:09	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/07/14 14:09	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/07/14 14:09	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	1		05/07/14 14:09	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		05/07/14 14:09	2037-26-5	
1,2-Dichloroethane-d4 (S)	105	%	80-120	1		05/07/14 14:09	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/07/14 14:09		

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: MERP/8374 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60168436001

METHOD BLANK: 1373669 | Matrix: Water
Associated Lab Samples: 60168436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/08/14 10:04	

LABORATORY CONTROL SAMPLE: 1373670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373671 1373672

Parameter	Units	60168100001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.9	5.0	99	99	70-130	0	20	

MATRIX SPIKE SAMPLE: 1373673

Parameter	Units	60168161002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.7	114	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: MERP/8386
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60168436001

METHOD BLANK: 1375925
Matrix: Water
Associated Lab Samples: 60168436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/12/14 12:10	

LABORATORY CONTROL SAMPLE: 1375926

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: 1375927 1375928

Parameter	Units	60168364001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	100	114	67	76	70-130	13	20	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: MPRP/27176
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60168436001

METHOD BLANK: 1375036
Matrix: Water
Associated Lab Samples: 60168436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/12/14 11:30	
Antimony	ug/L	ND	10.0	05/12/14 11:30	
Arsenic	ug/L	ND	10.0	05/12/14 11:30	
Beryllium	ug/L	ND	1.0	05/12/14 11:30	
Cadmium	ug/L	ND	5.0	05/12/14 11:30	
Chromium	ug/L	ND	5.0	05/12/14 11:30	
Cobalt	ug/L	ND	5.0	05/12/14 11:30	
Copper	ug/L	ND	10.0	05/12/14 11:30	
Iron	ug/L	ND	50.0	05/12/14 11:30	
Lead	ug/L	ND	5.0	05/12/14 11:30	
Nickel	ug/L	ND	5.0	05/12/14 11:30	
Selenium	ug/L	ND	15.0	05/12/14 11:30	
Silver	ug/L	ND	7.0	05/12/14 11:30	
Thallium	ug/L	ND	20.0	05/12/14 11:30	
Zinc	ug/L	ND	50.0	05/12/14 11:30	

LABORATORY CONTROL SAMPLE: 1375037

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9810	98	85-115	
Antimony	ug/L	1000	1010	101	85-115	
Arsenic	ug/L	1000	968	97	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	983	98	85-115	
Chromium	ug/L	1000	1000	100	85-115	
Cobalt	ug/L	1000	997	100	85-115	
Copper	ug/L	1000	982	98	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	992	99	85-115	
Nickel	ug/L	1000	1010	101	85-115	
Selenium	ug/L	1000	1000	100	85-115	
Silver	ug/L	500	490	98	85-115	
Thallium	ug/L	1000	973	97	85-115	
Zinc	ug/L	1000	1000	100	85-115	

MATRIX SPIKE SAMPLE: 1375038

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	33100	50000	105000	144	70-130	M1
Antimony	ug/L	ND	5000	5010	99	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

MATRIX SPIKE SAMPLE: 1375038

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1090	5000	6300	104	70-130	
Beryllium	ug/L	ND	5000	4910	98	70-130	
Cadmium	ug/L	ND	5000	5000	100	70-130	
Chromium	ug/L	299	5000	5080	96	70-130	
Cobalt	ug/L	62.8	5000	4800	95	70-130	
Copper	ug/L	119	5000	5240	102	70-130	
Iron	ug/L	898000	50000	990000	183	70-130	M1
Lead	ug/L	136	5000	4700	91	70-130	
Nickel	ug/L	167	5000	4870	94	70-130	
Selenium	ug/L	78.4	5000	5680	112	70-130	
Silver	ug/L	ND	2500	2570	102	70-130	
Thallium	ug/L	ND	5000	4290	86	70-130	
Zinc	ug/L	5380	5000	10400	100	70-130	

MATRIX SPIKE SAMPLE: 1375039

Parameter	Units	60168440002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	0.16 mg/L	10000	10300	102	70-130	
Antimony	ug/L	ND	1000	1020	102	70-130	
Arsenic	ug/L	ND	1000	989	98	70-130	
Beryllium	ug/L	ND	1000	1010	101	70-130	
Cadmium	ug/L	ND	1000	1000	100	70-130	
Chromium	ug/L	ND	1000	965	96	70-130	
Cobalt	ug/L	0.010 mg/L	1000	973	96	70-130	
Copper	ug/L	ND	1000	1020	101	70-130	
Iron	ug/L	11.3 mg/L	10000	21000	97	70-130	
Lead	ug/L	ND	1000	969	97	70-130	
Nickel	ug/L	0.018 mg/L	1000	983	96	70-130	
Selenium	ug/L	ND	1000	984	98	70-130	
Silver	ug/L	ND	500	503	101	70-130	
Thallium	ug/L	ND	1000	937	94	70-130	
Zinc	ug/L	ND	1000	947	94	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: MPRP/27137
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60168436001

METHOD BLANK: 1373141
Matrix: Water
Associated Lab Samples: 60168436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/07/14 11:02	
Antimony, Dissolved	ug/L	ND	10.0	05/07/14 11:02	
Arsenic, Dissolved	ug/L	ND	10.0	05/07/14 11:02	
Beryllium, Dissolved	ug/L	ND	1.0	05/07/14 11:02	
Cadmium, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Chromium, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Cobalt, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Copper, Dissolved	ug/L	ND	10.0	05/07/14 11:02	
Iron, Dissolved	ug/L	ND	50.0	05/07/14 11:02	
Lead, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Nickel, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Selenium, Dissolved	ug/L	ND	15.0	05/07/14 11:02	
Silver, Dissolved	ug/L	ND	7.0	05/07/14 11:02	
Thallium, Dissolved	ug/L	ND	20.0	05/07/14 11:02	
Zinc, Dissolved	ug/L	ND	50.0	05/07/14 11:02	

LABORATORY CONTROL SAMPLE: 1373142

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9800	98	85-115	
Antimony, Dissolved	ug/L	1000	895	90	85-115	
Arsenic, Dissolved	ug/L	1000	859	86	85-115	
Beryllium, Dissolved	ug/L	1000	1010	101	85-115	
Cadmium, Dissolved	ug/L	1000	878	88	85-115	
Chromium, Dissolved	ug/L	1000	977	98	85-115	
Cobalt, Dissolved	ug/L	1000	896	90	85-115	
Copper, Dissolved	ug/L	1000	969	97	85-115	
Iron, Dissolved	ug/L	10000	9860	99	85-115	
Lead, Dissolved	ug/L	1000	901	90	85-115	
Nickel, Dissolved	ug/L	1000	923	92	85-115	
Selenium, Dissolved	ug/L	1000	901	90	85-115	
Silver, Dissolved	ug/L	500	482	96	85-115	
Thallium, Dissolved	ug/L	1000	882	88	85-115	
Zinc, Dissolved	ug/L	1000	903	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373143 1373144

Parameter	Units	60168488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	10000	10000	9540	9600	95	96	70-130	1	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373143 1373144

Parameter	Units	60168488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	1000	1000	983	988	98	99	70-130	0	7	
Arsenic, Dissolved	ug/L	ND	1000	1000	954	960	95	96	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	954	956	95	96	70-130	0	10	
Chromium, Dissolved	ug/L	ND	1000	1000	938	944	94	94	70-130	1	10	
Cobalt, Dissolved	ug/L	ND	1000	1000	946	945	95	94	70-130	0	6	
Copper, Dissolved	ug/L	ND	1000	1000	962	970	96	97	70-130	1	11	
Iron, Dissolved	ug/L	ND	10000	10000	9570	9630	95	96	70-130	1	10	
Lead, Dissolved	ug/L	ND	1000	1000	935	933	93	93	70-130	0	10	
Nickel, Dissolved	ug/L	ND	1000	1000	962	964	96	96	70-130	0	10	
Selenium, Dissolved	ug/L	ND	1000	1000	971	980	97	98	70-130	1	10	
Silver, Dissolved	ug/L	ND	500	500	477	480	95	96	70-130	1	10	
Thallium, Dissolved	ug/L	ND	1000	1000	892	897	89	90	70-130	1	6	
Zinc, Dissolved	ug/L	ND	1000	1000	948	946	94	94	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: MSV/61426 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60168436001, 60168436002

METHOD BLANK: 1373368 | Matrix: Water
Associated Lab Samples: 60168436001, 60168436002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/07/14 11:16	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,2-Dichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/07/14 11:16	
2-Butanone (MEK)	ug/L	ND	10.0	05/07/14 11:16	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/07/14 11:16	N2
Acetone	ug/L	ND	10.0	05/07/14 11:16	N2
Benzene	ug/L	ND	1.0	05/07/14 11:16	
Bromodichloromethane	ug/L	ND	1.0	05/07/14 11:16	
Bromoform	ug/L	ND	1.0	05/07/14 11:16	
Bromomethane	ug/L	ND	5.0	05/07/14 11:16	
Carbon tetrachloride	ug/L	ND	1.0	05/07/14 11:16	
Chloroethane	ug/L	ND	1.0	05/07/14 11:16	
Chloroform	ug/L	ND	1.0	05/07/14 11:16	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/07/14 11:16	N2
Ethylbenzene	ug/L	ND	1.0	05/07/14 11:16	
Methylene chloride	ug/L	ND	1.0	05/07/14 11:16	
Tetrachloroethene	ug/L	ND	1.0	05/07/14 11:16	
Toluene	ug/L	ND	1.0	05/07/14 11:16	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/07/14 11:16	
Trichloroethene	ug/L	ND	1.0	05/07/14 11:16	
Vinyl chloride	ug/L	ND	1.0	05/07/14 11:16	
Xylene (Total)	ug/L	ND	3.0	05/07/14 11:16	N2
1,2-Dichloroethane-d4 (S)	%	106	80-120	05/07/14 11:16	
4-Bromofluorobenzene (S)	%	103	80-120	05/07/14 11:16	
Toluene-d8 (S)	%	105	80-120	05/07/14 11:16	

LABORATORY CONTROL SAMPLE: 1373369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.8	94	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	67-127	N2
1,1,2-Trichloroethane	ug/L	20	20.8	104	67-124	
1,2-Dichloroethane	ug/L	20	20.6	103	70-126	
1,4-Dichlorobenzene	ug/L	20	18.5	92	74-120	
2-Butanone (MEK)	ug/L	100	109	109	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	124	124	59-131	N2
Acetone	ug/L	100	104	104	38-134	N2
Benzene	ug/L	20	18.7	94	75-120	
Bromodichloromethane	ug/L	20	20.4	102	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

LABORATORY CONTROL SAMPLE: 1373369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	19.0	95	65-127	
Bromomethane	ug/L	20	11.4	57	13-157	
Carbon tetrachloride	ug/L	20	18.6	93	70-131	
Chloroethane	ug/L	20	19.3	96	47-133	
Chloroform	ug/L	20	19.0	95	65-127	
cis-1,2-Dichloroethene	ug/L	20	19.5	97	68-127	N2
Ethylbenzene	ug/L	20	19.7	99	74-122	
Methylene chloride	ug/L	20	19.3	96	64-129	
Tetrachloroethene	ug/L	20	17.5	87	73-125	
Toluene	ug/L	20	18.8	94	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.5	93	66-129	
Trichloroethene	ug/L	20	18.4	92	71-123	
Vinyl chloride	ug/L	20	17.7	88	43-129	
Xylene (Total)	ug/L	60	60.1	100	75-121	N2
1,2-Dichloroethane-d4 (S)	%			106	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1373370

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4460	89	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5470	109	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	5020	100	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4690	94	49-144	
1,4-Dichlorobenzene	ug/L	252	5000	4760	90	33-140	
2-Butanone (MEK)	ug/L	65600	25000	90800	101	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	31800	124	40-160	N2
Acetone	ug/L	157000	25000	182000	98	10-160	N2
Benzene	ug/L	ND	5000	4020	80	37-151	
Bromodichloromethane	ug/L	ND	5000	5070	101	35-142	
Bromoform	ug/L	ND	5000	4780	96	45-142	
Bromomethane	ug/L	ND	5000	1330	27	10-158	
Carbon tetrachloride	ug/L	ND	5000	4550	91	70-140	
Chloroethane	ug/L	ND	5000	3400	68	19-152	
Chloroform	ug/L	ND	5000	4620	92	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4370	87	34-147	N2
Ethylbenzene	ug/L	ND	5000	4420	88	40-142	
Methylene chloride	ug/L	ND	5000	3920	78	31-144	
Tetrachloroethene	ug/L	ND	5000	3930	79	64-148	
Toluene	ug/L	ND	5000	4280	86	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3510	70	54-151	
Trichloroethene	ug/L	ND	5000	4430	89	71-149	
Vinyl chloride	ug/L	ND	5000	2630	53	22-146	
Xylene (Total)	ug/L	ND	15000	13600	91	37-144	N2
1,2-Dichloroethane-d4 (S)	%				105	80-120	
4-Bromofluorobenzene (S)	%				103	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

MATRIX SPIKE SAMPLE: 1373370

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				102	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: OEXT/44034 Analysis Method: EPA 625
QC Batch Method: EPA 625 Analysis Description: 625 MSS
Associated Lab Samples: 60168436001

METHOD BLANK: 1373174 Matrix: Water
Associated Lab Samples: 60168436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/08/14 09:26	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/08/14 09:26	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/08/14 09:26	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/08/14 09:26	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/08/14 09:26	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/08/14 09:26	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/08/14 09:26	
Hexachloroethane	ug/L	ND	5.0	05/08/14 09:26	
Naphthalene	ug/L	ND	5.0	05/08/14 09:26	
Nitrobenzene	ug/L	ND	5.0	05/08/14 09:26	
Pentachlorophenol	ug/L	ND	5.0	05/08/14 09:26	
Phenol	ug/L	ND	5.0	05/08/14 09:26	
2,4,6-Tribromophenol (S)	%	82	39-120	05/08/14 09:26	
2-Fluorobiphenyl (S)	%	82	39-120	05/08/14 09:26	
2-Fluorophenol (S)	%	48	17-120	05/08/14 09:26	
Nitrobenzene-d5 (S)	%	82	33-120	05/08/14 09:26	
Phenol-d6 (S)	%	30	11-120	05/08/14 09:26	
Terphenyl-d14 (S)	%	77	45-120	05/08/14 09:26	

LABORATORY CONTROL SAMPLE: 1373175

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	38.4	77	46-120	
2,4,6-Trichlorophenol	ug/L	50	43.0	86	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	37.7	75	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	33.8	68	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	44.1	88	40-133	
Hexachloro-1,3-butadiene	ug/L	50	36.8	74	44-116	
Hexachlorocyclopentadiene	ug/L	100	69.6	70	24-120	
Hexachloroethane	ug/L	50	39.5	79	43-113	
Naphthalene	ug/L	50	40.3	81	48-120	
Nitrobenzene	ug/L	50	40.8	82	48-120	
Pentachlorophenol	ug/L	50	48.2	96	47-120	
Phenol	ug/L	50	17.1	34	16-112	
2,4,6-Tribromophenol (S)	%			90	39-120	
2-Fluorobiphenyl (S)	%			85	39-120	
2-Fluorophenol (S)	%			48	17-120	
Nitrobenzene-d5 (S)	%			82	33-120	
Phenol-d6 (S)	%			31	11-120	
Terphenyl-d14 (S)	%			88	45-120	

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

MATRIX SPIKE SAMPLE: 1373176

Parameter	Units	60168364001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	40.5	81	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	46.4	93	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	42.2	84	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	98.2	50	122	47	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	39J	78	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	39.9	80	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	72.3	72	11-120	
Hexachloroethane	ug/L	ND	50	39.0	78	40-113	
Naphthalene	ug/L	ND	50	55.4	94	45-120	
Nitrobenzene	ug/L	ND	50	46.5	93	38-120	
Pentachlorophenol	ug/L	ND	50	46.9	94	43-135	
Phenol	ug/L	141	50	142	2	13-112	M1
2,4,6-Tribromophenol (S)	%				92	39-120	
2-Fluorobiphenyl (S)	%				82	39-120	
2-Fluorophenol (S)	%				48	17-120	
Nitrobenzene-d5 (S)	%				175	33-120	S0
Phenol-d6 (S)	%				48	11-120	
Terphenyl-d14 (S)	%				78	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: WET/47774 — Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A — Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168436001

METHOD BLANK: 1375638 — Matrix: Water
Associated Lab Samples: 60168436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/10/14 08:30	

LABORATORY CONTROL SAMPLE: 1375639

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: 1375640

Parameter	Units	60168192002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	1.3J	40.8	37.1	88	78-114	

SAMPLE DUPLICATE: 1375642

Parameter	Units	60168039001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	1.9J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: WET/47777 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60168436001

METHOD BLANK: 1375731 | Matrix: Water
Associated Lab Samples: 60168436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/10/14 10:59	

LABORATORY CONTROL SAMPLE: 1375732

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	18.8	94	64-132	

MATRIX SPIKE SAMPLE: 1375733

Parameter	Units	60168277001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20	18.7	89	64-132	

SAMPLE DUPLICATE: 1375734

Parameter	Units	60168208002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	2.2J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: WET/47693
QC Batch Method: SM 2540D
Analysis Method: SM 2540D
Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60168436001

METHOD BLANK: 1372472
Matrix: Water
Associated Lab Samples: 60168436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/06/14 12:27	

SAMPLE DUPLICATE: 1372473

Parameter	Units	60168360001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	33.0	31.0	6	10	

SAMPLE DUPLICATE: 1372474

Parameter	Units	60168395002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: WET/47758
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60168436001

SAMPLE DUPLICATE: 1374784

Parameter	Units	60168216002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	0	5	H1,H6

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: WET/47679 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60168436001

METHOD BLANK: 1372292 | Matrix: Water
Associated Lab Samples: 60168436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/10/14 12:53	

LABORATORY CONTROL SAMPLE: 1372293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	196	99	85-115	

SAMPLE DUPLICATE: 1372294

Parameter	Units	60168429001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	1070	1040	3	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: WETA/29320 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60168436001

METHOD BLANK: 1373302 | Matrix: Water
Associated Lab Samples: 60168436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/07/14 14:13	

LABORATORY CONTROL SAMPLE: 1373303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	99	90-110	

MATRIX SPIKE SAMPLE: 1373304

Parameter	Units	60168394001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.11	2	1.4	65	90-110	M1

MATRIX SPIKE SAMPLE: 1373305

Parameter	Units	60168425002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	9.2	10	16.9	77	90-110	M1

SAMPLE DUPLICATE: 1373306

Parameter	Units	60168497001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.78	0.73	7	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

QC Batch: WETA/29368 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60168436001

METHOD BLANK: 1375467 | Matrix: Water
Associated Lab Samples: 60168436001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/12/14 12:28	

LABORATORY CONTROL SAMPLE: 1375468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	48.9	98	90-110	

MATRIX SPIKE SAMPLE: 1375469

Parameter	Units	60168051003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	2820	2500	5140	93	90-110	

MATRIX SPIKE SAMPLE: 1375471

Parameter	Units	60168437001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	58400	25000	79400	84	90-110	M1

SAMPLE DUPLICATE: 1375470

Parameter	Units	60168158001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	2190	2150	2	25	

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QUALIFIERS

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

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.
H1	Analysis conducted outside the EPA method holding time.
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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF CB 05-04-14
Pace Project No.: 60168436

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168436001	**CB 05-04-14**	EPA 200.7	MPRP/27176	EPA 200.7	ICP/20601
60168436001	**CB 05-04-14**	EPA 200.7	MPRP/27137	EPA 200.7	ICP/20565
60168436001	**CB 05-04-14**	EPA 245.1	MERP/8374	EPA 245.1	MERC/8328
60168436001	**CB 05-04-14**	EPA 245.1	MERP/8386	EPA 245.1	MERC/8342
60168436001	**CB 05-04-14**	EPA 625	OEXT/44034	EPA 625	MSSV/14079
60168436001	**CB 05-04-14**	EPA 624 Low	MSV/61426		
60168436002	**TRIP BLANK**	EPA 624 Low	MSV/61426		
60168436001	**CB 05-04-14**	EPA 1664A	WET/47774		
60168436001	**CB 05-04-14**	EPA 1664A	WET/47777		
60168436001	**CB 05-04-14**	SM 2540D	WET/47693		
60168436001	**CB 05-04-14**	SM 4500-H+B	WET/47758		
60168436001	**CB 05-04-14**	SM 5210B	WET/47679	SM 5210B	WET/47782
60168436001	**CB 05-04-14**	EPA 350.1	WETA/29320		
60168436001	**CB 05-04-14**	EPA 410.4	WETA/29368		

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Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt

WO#: 60168436

60168436

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-239 / T-194 Type of Ice: Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 2.2

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: JNS 5/5/14 1335

Chain of Custody present:	☑Yes	☐No	☐N/A	1.	
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.	
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.	
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.	
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.	
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6.	BOD
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.	
Sufficient volume:	☑Yes	☐No	☐N/A	8.	
Correct containers used:	☑Yes	☐No	☐N/A		
Pace containers used:	☑Yes	☐No	☐N/A	9.	
Containers intact:	☑Yes	☐No	☐N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.	
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.	
Sample labels match COC: Includes date/time/ID/analyses Matrix: water	☑Yes	☐No	☐N/A	13.	
All containers needing preservation have been checked	☐Yes	☐No	☑N/A		
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☑N/A	14.	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed N/A	Lot # of added preservative
Trip Blank present: 032414-3	☑Yes	☐No	☐N/A		
Pace Trip Blank lot # (if purchased): Cooler or N/A				15.	
Headspace in VOA vials (>6mm):	☐Yes	☑No	☐N/A	16.	
Project sampled in USDA Regulated Area:	☐Yes	☐No	☐N/A	17. List State: ND	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/6/14

Pace Analytical

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:	AMY HARGROVE/BRIAN POWER
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

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N): 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	BOD SM 5210B	Residual Chlorine (Y/N)	60168436
1	CB 05-04-14	OT	G	05/04/14	4:30PM	—			14	10	4	1	0					X	X	X	X	X	X	X	X	X	X			2(VOAun) 2(VOAZ) 1(BTEX) 1(GRO) 5(OGun) 2(BOZun) 1(BOZun) 001
2	TRIP BLANK								2	2															X					2(OGun) 002
3																														
4																														
5																														
6																														METALS LIST total & LF Dis:
7																														Al,Sb,As,Be,Cd,Cr,
8																														Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																														and Mercury
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
SITE CONTACT: BILL ABERNATHY 314-502-1299	[signature] FEI	5-5-14	9:00am	Bill Stone 412	5-5-14	9:00am
SITE ADDRESS: BRIDGETON LF				[signature]	5/5/14	~~1115~~ 1315
13570 ST. CHARLES ROCK RD						
BRIDGETON MO 63044						

SAMPLE CONDITIONS			
TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
2.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Paul Grascoff

SIGNATURE of SAMPLER: [signature] DATE Signed: 05/04/14

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May 12, 2014

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

RE: Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 05, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

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 CB 05-03-14
Pace Project No.: 60168437

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168437001	**CB 05-03-14**	Water	05/03/14 17:10	05/05/14 13:15
60168437002	**TRIP BLANK**	Water	05/03/14 08:00	05/05/14 13:15

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168437001	**CB 05-03-14**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	RAH	1
		SM 4500-H+B	RAH	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60168437002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

Sample: CB 05-03-14 **Lab ID: 60168437001** Collected: 05/03/14 17:10 Received: 05/05/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**17000**	ug/L	750	2	05/09/14 11:10	05/12/14 11:56	7429-90-5	
Antimony	ND	ug/L	100	2	05/09/14 11:10	05/12/14 11:56	7440-36-0	D3
Arsenic	**1060**	ug/L	50.0	1	05/09/14 11:10	05/12/14 11:53	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/09/14 11:10	05/12/14 11:53	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/09/14 11:10	05/12/14 11:53	7440-43-9	
Chromium	**266**	ug/L	25.0	1	05/09/14 11:10	05/12/14 11:53	7440-47-3	
Cobalt	**49.8**	ug/L	25.0	1	05/09/14 11:10	05/12/14 11:53	7440-48-4	
Copper	ND	ug/L	50.0	1	05/09/14 11:10	05/12/14 11:53	7440-50-8	
Iron	**830000**	ug/L	250	1	05/09/14 11:10	05/12/14 11:53	7439-89-6	
Lead	**120**	ug/L	25.0	1	05/09/14 11:10	05/12/14 11:53	7439-92-1	
Nickel	**146**	ug/L	25.0	1	05/09/14 11:10	05/12/14 11:53	7440-02-0	
Selenium	**97.2**	ug/L	75.0	1	05/09/14 11:10	05/12/14 11:53	7782-49-2	
Silver	ND	ug/L	35.0	1	05/09/14 11:10	05/12/14 11:53	7440-22-4	
Thallium	ND	ug/L	100	1	05/09/14 11:10	05/12/14 11:53	7440-28-0	
Zinc	**5150**	ug/L	500	2	05/09/14 11:10	05/12/14 11:56	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**877**	ug/L	750	2	05/06/14 17:48	05/07/14 11:42	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/06/14 17:48	05/07/14 11:42	7440-36-0	
Arsenic, Dissolved	**760**	ug/L	50.0	1	05/06/14 17:48	05/07/14 11:32	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/06/14 17:48	05/07/14 11:32	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:32	7440-43-9	
Chromium, Dissolved	**168**	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:32	7440-47-3	
Cobalt, Dissolved	ND	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:32	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/06/14 17:48	05/07/14 11:32	7440-50-8	
Iron, Dissolved	**306000**	ug/L	250	1	05/06/14 17:48	05/07/14 11:32	7439-89-6	
Lead, Dissolved	**34.7**	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:32	7439-92-1	
Nickel, Dissolved	**78.0**	ug/L	25.0	1	05/06/14 17:48	05/07/14 11:32	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/06/14 17:48	05/07/14 11:32	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/06/14 17:48	05/07/14 11:32	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/06/14 17:48	05/07/14 11:32	7440-28-0	
Zinc, Dissolved	**3960**	ug/L	500	2	05/06/14 17:48	05/07/14 11:42	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/07/14 16:30	05/08/14 10:57	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/12/14 08:45	05/12/14 12:23	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	50.0	2	05/07/14 00:00	05/08/14 11:54	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:54	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:54	77-47-4	
Hexachloroethane	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:54	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	20.0	2	05/07/14 00:00	05/08/14 11:54	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**91.4**	ug/L	40.0	2	05/07/14 00:00	05/08/14 11:54		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

Sample: CB 05-03-14 **Lab ID: 60168437001** Collected: 05/03/14 17:10 Received: 05/05/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**19.4**	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:54	91-20-3	
Nitrobenzene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:54	98-95-3	
Pentachlorophenol	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:54	87-86-5	
Phenol	**130**	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:54	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:54	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	10.0	2	05/07/14 00:00	05/08/14 11:54	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	187	%	33-120	2	05/07/14 00:00	05/08/14 11:54	4165-60-0	S0
2-Fluorobiphenyl (S)	87	%	39-120	2	05/07/14 00:00	05/08/14 11:54	321-60-8	
Terphenyl-d14 (S)	79	%	45-120	2	05/07/14 00:00	05/08/14 11:54	1718-51-0	
Phenol-d6 (S)	49	%	11-120	2	05/07/14 00:00	05/08/14 11:54	13127-88-3	
2-Fluorophenol (S)	53	%	17-120	2	05/07/14 00:00	05/08/14 11:54	367-12-4	
2,4,6-Tribromophenol (S)	94	%	39-120	2	05/07/14 00:00	05/08/14 11:54	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**149000**	ug/L	2500	250		05/07/14 15:28	67-64-1	N2
Benzene	ND	ug/L	250	250		05/07/14 15:28	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/07/14 15:28	75-27-4	
Bromoform	ND	ug/L	250	250		05/07/14 15:28	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/07/14 15:28	74-83-9	
2-Butanone (MEK)	**61200**	ug/L	2500	250		05/07/14 15:28	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/07/14 15:28	56-23-5	
Chloroethane	ND	ug/L	250	250		05/07/14 15:28	75-00-3	
Chloroform	ND	ug/L	250	250		05/07/14 15:28	67-66-3	
1,4-Dichlorobenzene	**256**	ug/L	250	250		05/07/14 15:28	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/07/14 15:28	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/07/14 15:28	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/07/14 15:28	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/07/14 15:28	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/07/14 15:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/07/14 15:28	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/07/14 15:28	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/07/14 15:28	127-18-4	
Toluene	ND	ug/L	250	250		05/07/14 15:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/07/14 15:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/07/14 15:28	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/07/14 15:28	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/07/14 15:28	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/07/14 15:28	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	104	%	80-120	250		05/07/14 15:28	460-00-4	
Toluene-d8 (S)	98	%	80-120	250		05/07/14 15:28	2037-26-5	
1,2-Dichloroethane-d4 (S)	104	%	80-120	250		05/07/14 15:28	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/07/14 15:28		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1550**	mg/L	5.0	1		05/10/14 08:32		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

Sample: CB 05-03-14 **Lab ID: 60168437001** Collected: 05/03/14 17:10 Received: 05/05/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**6.8**	mg/L	5.0	1		05/10/14 11:01		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**5480**	mg/L	5.0	1		05/06/14 12:29		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.2**	Std. Units	0.10	1		05/09/14 12:35		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**30000**	mg/L	2.0	1	05/05/14 16:58	05/10/14 13:04		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**602**	mg/L	20.0	200		05/07/14 14:27	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**58400**	mg/L	5000	500		05/12/14 12:47		M1

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

Sample: TRIP BLANK **Lab ID: 60168437002** Collected: 05/03/14 08:00 Received: 05/05/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/07/14 14:25	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/07/14 14:25	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/07/14 14:25	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/07/14 14:25	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/07/14 14:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/07/14 14:25	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/07/14 14:25	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/07/14 14:25	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/07/14 14:25	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/07/14 14:25	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/07/14 14:25	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/07/14 14:25	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/07/14 14:25	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/07/14 14:25	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/07/14 14:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/07/14 14:25	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/07/14 14:25	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/07/14 14:25	127-18-4	
Toluene	ND	ug/L	1.0	1		05/07/14 14:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/07/14 14:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/07/14 14:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/07/14 14:25	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/07/14 14:25	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/07/14 14:25	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	102	%	80-120	1		05/07/14 14:25	460-00-4	
Toluene-d8 (S)	102	%	80-120	1		05/07/14 14:25	2037-26-5	
1,2-Dichloroethane-d4 (S)	107	%	80-120	1		05/07/14 14:25	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/07/14 14:25		

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: MERP/8374 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60168437001

METHOD BLANK: 1373669 | Matrix: Water
Associated Lab Samples: 60168437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/08/14 10:04	

LABORATORY CONTROL SAMPLE: 1373670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373671 1373672

Parameter	Units	60168100001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.9	5.0	99	99	70-130	0	20	

MATRIX SPIKE SAMPLE: 1373673

Parameter	Units	60168161002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.7	114	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: MERP/8386
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60168437001

METHOD BLANK: 1375925
Matrix: Water
Associated Lab Samples: 60168437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/12/14 12:10	

LABORATORY CONTROL SAMPLE: 1375926

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: 1375927 1375928

Parameter	Units	60168364001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	100	114	67	76	70-130	13	20	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: MPRP/27176 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60168437001

METHOD BLANK: 1375036 | Matrix: Water
Associated Lab Samples: 60168437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/12/14 11:30	
Antimony	ug/L	ND	10.0	05/12/14 11:30	
Arsenic	ug/L	ND	10.0	05/12/14 11:30	
Beryllium	ug/L	ND	1.0	05/12/14 11:30	
Cadmium	ug/L	ND	5.0	05/12/14 11:30	
Chromium	ug/L	ND	5.0	05/12/14 11:30	
Cobalt	ug/L	ND	5.0	05/12/14 11:30	
Copper	ug/L	ND	10.0	05/12/14 11:30	
Iron	ug/L	ND	50.0	05/12/14 11:30	
Lead	ug/L	ND	5.0	05/12/14 11:30	
Nickel	ug/L	ND	5.0	05/12/14 11:30	
Selenium	ug/L	ND	15.0	05/12/14 11:30	
Silver	ug/L	ND	7.0	05/12/14 11:30	
Thallium	ug/L	ND	20.0	05/12/14 11:30	
Zinc	ug/L	ND	50.0	05/12/14 11:30	

LABORATORY CONTROL SAMPLE: 1375037

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9810	98	85-115	
Antimony	ug/L	1000	1010	101	85-115	
Arsenic	ug/L	1000	968	97	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	983	98	85-115	
Chromium	ug/L	1000	1000	100	85-115	
Cobalt	ug/L	1000	997	100	85-115	
Copper	ug/L	1000	982	98	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	992	99	85-115	
Nickel	ug/L	1000	1010	101	85-115	
Selenium	ug/L	1000	1000	100	85-115	
Silver	ug/L	500	490	98	85-115	
Thallium	ug/L	1000	973	97	85-115	
Zinc	ug/L	1000	1000	100	85-115	

MATRIX SPIKE SAMPLE: 1375038

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	33100	50000	105000	144	70-130	M1
Antimony	ug/L	ND	5000	5010	99	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

MATRIX SPIKE SAMPLE: 1375038

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1090	5000	6300	104	70-130	
Beryllium	ug/L	ND	5000	4910	98	70-130	
Cadmium	ug/L	ND	5000	5000	100	70-130	
Chromium	ug/L	299	5000	5080	96	70-130	
Cobalt	ug/L	62.8	5000	4800	95	70-130	
Copper	ug/L	119	5000	5240	102	70-130	
Iron	ug/L	898000	50000	990000	183	70-130	M1
Lead	ug/L	136	5000	4700	91	70-130	
Nickel	ug/L	167	5000	4870	94	70-130	
Selenium	ug/L	78.4	5000	5680	112	70-130	
Silver	ug/L	ND	2500	2570	102	70-130	
Thallium	ug/L	ND	5000	4290	86	70-130	
Zinc	ug/L	5380	5000	10400	100	70-130	

MATRIX SPIKE SAMPLE: 1375039

Parameter	Units	60168440002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	0.16 mg/L	10000	10300	102	70-130	
Antimony	ug/L	ND	1000	1020	102	70-130	
Arsenic	ug/L	ND	1000	989	98	70-130	
Beryllium	ug/L	ND	1000	1010	101	70-130	
Cadmium	ug/L	ND	1000	1000	100	70-130	
Chromium	ug/L	ND	1000	965	96	70-130	
Cobalt	ug/L	0.010 mg/L	1000	973	96	70-130	
Copper	ug/L	ND	1000	1020	101	70-130	
Iron	ug/L	11.3 mg/L	10000	21000	97	70-130	
Lead	ug/L	ND	1000	969	97	70-130	
Nickel	ug/L	0.018 mg/L	1000	983	96	70-130	
Selenium	ug/L	ND	1000	984	98	70-130	
Silver	ug/L	ND	500	503	101	70-130	
Thallium	ug/L	ND	1000	937	94	70-130	
Zinc	ug/L	ND	1000	947	94	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: MPRP/27137
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60168437001

METHOD BLANK: 1373141
Matrix: Water
Associated Lab Samples: 60168437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/07/14 11:02	
Antimony, Dissolved	ug/L	ND	10.0	05/07/14 11:02	
Arsenic, Dissolved	ug/L	ND	10.0	05/07/14 11:02	
Beryllium, Dissolved	ug/L	ND	1.0	05/07/14 11:02	
Cadmium, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Chromium, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Cobalt, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Copper, Dissolved	ug/L	ND	10.0	05/07/14 11:02	
Iron, Dissolved	ug/L	ND	50.0	05/07/14 11:02	
Lead, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Nickel, Dissolved	ug/L	ND	5.0	05/07/14 11:02	
Selenium, Dissolved	ug/L	ND	15.0	05/07/14 11:02	
Silver, Dissolved	ug/L	ND	7.0	05/07/14 11:02	
Thallium, Dissolved	ug/L	ND	20.0	05/07/14 11:02	
Zinc, Dissolved	ug/L	ND	50.0	05/07/14 11:02	

LABORATORY CONTROL SAMPLE: 1373142

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9800	98	85-115	
Antimony, Dissolved	ug/L	1000	895	90	85-115	
Arsenic, Dissolved	ug/L	1000	859	86	85-115	
Beryllium, Dissolved	ug/L	1000	1010	101	85-115	
Cadmium, Dissolved	ug/L	1000	878	88	85-115	
Chromium, Dissolved	ug/L	1000	977	98	85-115	
Cobalt, Dissolved	ug/L	1000	896	90	85-115	
Copper, Dissolved	ug/L	1000	969	97	85-115	
Iron, Dissolved	ug/L	10000	9860	99	85-115	
Lead, Dissolved	ug/L	1000	901	90	85-115	
Nickel, Dissolved	ug/L	1000	923	92	85-115	
Selenium, Dissolved	ug/L	1000	901	90	85-115	
Silver, Dissolved	ug/L	500	482	96	85-115	
Thallium, Dissolved	ug/L	1000	882	88	85-115	
Zinc, Dissolved	ug/L	1000	903	90	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373143 1373144

Parameter	Units	60168488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	10000	10000	9540	9600	95	96	70-130	1	8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1373143 1373144

Parameter	Units	60168488001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	1000	1000	983	988	98	99	70-130	0	7	
Arsenic, Dissolved	ug/L	ND	1000	1000	954	960	95	96	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	954	956	95	96	70-130	0	10	
Chromium, Dissolved	ug/L	ND	1000	1000	938	944	94	94	70-130	1	10	
Cobalt, Dissolved	ug/L	ND	1000	1000	946	945	95	94	70-130	0	6	
Copper, Dissolved	ug/L	ND	1000	1000	962	970	96	97	70-130	1	11	
Iron, Dissolved	ug/L	ND	10000	10000	9570	9630	95	96	70-130	1	10	
Lead, Dissolved	ug/L	ND	1000	1000	935	933	93	93	70-130	0	10	
Nickel, Dissolved	ug/L	ND	1000	1000	962	964	96	96	70-130	0	10	
Selenium, Dissolved	ug/L	ND	1000	1000	971	980	97	98	70-130	1	10	
Silver, Dissolved	ug/L	ND	500	500	477	480	95	96	70-130	1	10	
Thallium, Dissolved	ug/L	ND	1000	1000	892	897	89	90	70-130	1	6	
Zinc, Dissolved	ug/L	ND	1000	1000	948	946	94	94	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: MSV/61426 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60168437001, 60168437002

METHOD BLANK: 1373368 | Matrix: Water
Associated Lab Samples: 60168437001, 60168437002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/07/14 11:16	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,2-Dichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/07/14 11:16	
2-Butanone (MEK)	ug/L	ND	10.0	05/07/14 11:16	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/07/14 11:16	N2
Acetone	ug/L	ND	10.0	05/07/14 11:16	N2
Benzene	ug/L	ND	1.0	05/07/14 11:16	
Bromodichloromethane	ug/L	ND	1.0	05/07/14 11:16	
Bromoform	ug/L	ND	1.0	05/07/14 11:16	
Bromomethane	ug/L	ND	5.0	05/07/14 11:16	
Carbon tetrachloride	ug/L	ND	1.0	05/07/14 11:16	
Chloroethane	ug/L	ND	1.0	05/07/14 11:16	
Chloroform	ug/L	ND	1.0	05/07/14 11:16	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/07/14 11:16	N2
Ethylbenzene	ug/L	ND	1.0	05/07/14 11:16	
Methylene chloride	ug/L	ND	1.0	05/07/14 11:16	
Tetrachloroethene	ug/L	ND	1.0	05/07/14 11:16	
Toluene	ug/L	ND	1.0	05/07/14 11:16	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/07/14 11:16	
Trichloroethene	ug/L	ND	1.0	05/07/14 11:16	
Vinyl chloride	ug/L	ND	1.0	05/07/14 11:16	
Xylene (Total)	ug/L	ND	3.0	05/07/14 11:16	N2
1,2-Dichloroethane-d4 (S)	%	106	80-120	05/07/14 11:16	
4-Bromofluorobenzene (S)	%	103	80-120	05/07/14 11:16	
Toluene-d8 (S)	%	105	80-120	05/07/14 11:16	

LABORATORY CONTROL SAMPLE: 1373369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.8	94	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	67-127	N2
1,1,2-Trichloroethane	ug/L	20	20.8	104	67-124	
1,2-Dichloroethane	ug/L	20	20.6	103	70-126	
1,4-Dichlorobenzene	ug/L	20	18.5	92	74-120	
2-Butanone (MEK)	ug/L	100	109	109	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	124	124	59-131	N2
Acetone	ug/L	100	104	104	38-134	N2
Benzene	ug/L	20	18.7	94	75-120	
Bromodichloromethane	ug/L	20	20.4	102	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

LABORATORY CONTROL SAMPLE: 1373369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	19.0	95	65-127	
Bromomethane	ug/L	20	11.4	57	13-157	
Carbon tetrachloride	ug/L	20	18.6	93	70-131	
Chloroethane	ug/L	20	19.3	96	47-133	
Chloroform	ug/L	20	19.0	95	65-127	
cis-1,2-Dichloroethene	ug/L	20	19.5	97	68-127	N2
Ethylbenzene	ug/L	20	19.7	99	74-122	
Methylene chloride	ug/L	20	19.3	96	64-129	
Tetrachloroethene	ug/L	20	17.5	87	73-125	
Toluene	ug/L	20	18.8	94	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.5	93	66-129	
Trichloroethene	ug/L	20	18.4	92	71-123	
Vinyl chloride	ug/L	20	17.7	88	43-129	
Xylene (Total)	ug/L	60	60.1	100	75-121	N2
1,2-Dichloroethane-d4 (S)	%			106	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1373370

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4460	89	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5470	109	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	5020	100	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4690	94	49-144	
1,4-Dichlorobenzene	ug/L	252	5000	4760	90	33-140	
2-Butanone (MEK)	ug/L	65600	25000	90800	101	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	31800	124	40-160	N2
Acetone	ug/L	157000	25000	182000	98	10-160	N2
Benzene	ug/L	ND	5000	4020	80	37-151	
Bromodichloromethane	ug/L	ND	5000	5070	101	35-142	
Bromoform	ug/L	ND	5000	4780	96	45-142	
Bromomethane	ug/L	ND	5000	1330	27	10-158	
Carbon tetrachloride	ug/L	ND	5000	4550	91	70-140	
Chloroethane	ug/L	ND	5000	3400	68	19-152	
Chloroform	ug/L	ND	5000	4620	92	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4370	87	34-147	N2
Ethylbenzene	ug/L	ND	5000	4420	88	40-142	
Methylene chloride	ug/L	ND	5000	3920	78	31-144	
Tetrachloroethene	ug/L	ND	5000	3930	79	64-148	
Toluene	ug/L	ND	5000	4280	86	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3510	70	54-151	
Trichloroethene	ug/L	ND	5000	4430	89	71-149	
Vinyl chloride	ug/L	ND	5000	2630	53	22-146	
Xylene (Total)	ug/L	ND	15000	13600	91	37-144	N2
1,2-Dichloroethane-d4 (S)	%				105	80-120	
4-Bromofluorobenzene (S)	%				103	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

MATRIX SPIKE SAMPLE: 1373370

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				102	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: OEXT/44034 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60168437001

METHOD BLANK: 1373174 | Matrix: Water
Associated Lab Samples: 60168437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/08/14 09:26	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/08/14 09:26	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/08/14 09:26	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/08/14 09:26	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/08/14 09:26	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/08/14 09:26	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/08/14 09:26	
Hexachloroethane	ug/L	ND	5.0	05/08/14 09:26	
Naphthalene	ug/L	ND	5.0	05/08/14 09:26	
Nitrobenzene	ug/L	ND	5.0	05/08/14 09:26	
Pentachlorophenol	ug/L	ND	5.0	05/08/14 09:26	
Phenol	ug/L	ND	5.0	05/08/14 09:26	
2,4,6-Tribromophenol (S)	%	82	39-120	05/08/14 09:26	
2-Fluorobiphenyl (S)	%	82	39-120	05/08/14 09:26	
2-Fluorophenol (S)	%	48	17-120	05/08/14 09:26	
Nitrobenzene-d5 (S)	%	82	33-120	05/08/14 09:26	
Phenol-d6 (S)	%	30	11-120	05/08/14 09:26	
Terphenyl-d14 (S)	%	77	45-120	05/08/14 09:26	

LABORATORY CONTROL SAMPLE: 1373175

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	38.4	77	46-120	
2,4,6-Trichlorophenol	ug/L	50	43.0	86	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	37.7	75	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	33.8	68	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	44.1	88	40-133	
Hexachloro-1,3-butadiene	ug/L	50	36.8	74	44-116	
Hexachlorocyclopentadiene	ug/L	100	69.6	70	24-120	
Hexachloroethane	ug/L	50	39.5	79	43-113	
Naphthalene	ug/L	50	40.3	81	48-120	
Nitrobenzene	ug/L	50	40.8	82	48-120	
Pentachlorophenol	ug/L	50	48.2	96	47-120	
Phenol	ug/L	50	17.1	34	16-112	
2,4,6-Tribromophenol (S)	%			90	39-120	
2-Fluorobiphenyl (S)	%			85	39-120	
2-Fluorophenol (S)	%			48	17-120	
Nitrobenzene-d5 (S)	%			82	33-120	
Phenol-d6 (S)	%			31	11-120	
Terphenyl-d14 (S)	%			88	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

MATRIX SPIKE SAMPLE: 1373176

Parameter	Units	60168364001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	40.5	81	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	46.4	93	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	42.2	84	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	98.2	50	122	47	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	39J	78	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	39.9	80	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	72.3	72	11-120	
Hexachloroethane	ug/L	ND	50	39.0	78	40-113	
Naphthalene	ug/L	ND	50	55.4	94	45-120	
Nitrobenzene	ug/L	ND	50	46.5	93	38-120	
Pentachlorophenol	ug/L	ND	50	46.9	94	43-135	
Phenol	ug/L	141	50	142	2	13-112	M1
2,4,6-Tribromophenol (S)	%				92	39-120	
2-Fluorobiphenyl (S)	%				82	39-120	
2-Fluorophenol (S)	%				48	17-120	
Nitrobenzene-d5 (S)	%				175	33-120	S0
Phenol-d6 (S)	%				48	11-120	
Terphenyl-d14 (S)	%				78	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: WET/47774 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168437001

METHOD BLANK: 1375638 | Matrix: Water
Associated Lab Samples: 60168437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/10/14 08:30	

LABORATORY CONTROL SAMPLE: 1375639

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: 1375640

Parameter	Units	60168192002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	1.3J	40.8	37.1	88	78-114	

SAMPLE DUPLICATE: 1375642

Parameter	Units	60168039001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	1.9J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: WET/47777 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60168437001

METHOD BLANK: 1375731 | Matrix: Water
Associated Lab Samples: 60168437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/10/14 10:59	

LABORATORY CONTROL SAMPLE: 1375732

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	18.8	94	64-132	

MATRIX SPIKE SAMPLE: 1375733

Parameter	Units	60168277001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20	18.7	89	64-132	

SAMPLE DUPLICATE: 1375734

Parameter	Units	60168208002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	2.2J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: WET/47693
QC Batch Method: SM 2540D
Analysis Method: SM 2540D
Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60168437001

METHOD BLANK: 1372472
Matrix: Water
Associated Lab Samples: 60168437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/06/14 12:27	

SAMPLE DUPLICATE: 1372473

Parameter	Units	60168360001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	33.0	31.0	6	10	

SAMPLE DUPLICATE: 1372474

Parameter	Units	60168395002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: WET/47758
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60168437001

SAMPLE DUPLICATE: 1374784

Parameter	Units	60168216002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	0	5	H1,H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: WET/47679 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60168437001

METHOD BLANK: 1372292 | Matrix: Water
Associated Lab Samples: 60168437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/10/14 12:53	

LABORATORY CONTROL SAMPLE: 1372293

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	196	99	85-115	

SAMPLE DUPLICATE: 1372294

Parameter	Units	60168429001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	1070	1040	3	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: WETA/29320 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60168437001

METHOD BLANK: 1373302 | Matrix: Water
Associated Lab Samples: 60168437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/07/14 14:13	

LABORATORY CONTROL SAMPLE: 1373303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	99	90-110	

MATRIX SPIKE SAMPLE: 1373304

Parameter	Units	60168394001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.11	2	1.4	65	90-110	M1

MATRIX SPIKE SAMPLE: 1373305

Parameter	Units	60168425002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	9.2	10	16.9	77	90-110	M1

SAMPLE DUPLICATE: 1373306

Parameter	Units	60168497001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.78	0.73	7	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

QC Batch: WETA/29368 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60168437001

METHOD BLANK: 1375467 | Matrix: Water
Associated Lab Samples: 60168437001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/12/14 12:28	

LABORATORY CONTROL SAMPLE: 1375468

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	48.9	98	90-110	

MATRIX SPIKE SAMPLE: 1375469

Parameter	Units	60168051003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	2820	2500	5140	93	90-110	

MATRIX SPIKE SAMPLE: 1375471

Parameter	Units	60168437001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	58400	25000	79400	84	90-110	M1

SAMPLE DUPLICATE: 1375470

Parameter	Units	60168158001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	2190	2150	2	25	

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QUALIFIERS

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

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.
H1	Analysis conducted outside the EPA method holding time.
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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF CB 05-03-14
Pace Project No.: 60168437

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168437001	**CB 05-03-14**	EPA 200.7	MPRP/27176	EPA 200.7	ICP/20601
60168437001	**CB 05-03-14**	EPA 200.7	MPRP/27137	EPA 200.7	ICP/20565
60168437001	**CB 05-03-14**	EPA 245.1	MERP/8374	EPA 245.1	MERC/8328
60168437001	**CB 05-03-14**	EPA 245.1	MERP/8386	EPA 245.1	MERC/8342
60168437001	**CB 05-03-14**	EPA 625	OEXT/44034	EPA 625	MSSV/14079
60168437001	**CB 05-03-14**	EPA 624 Low	MSV/61426		
60168437002	**TRIP BLANK**	EPA 624 Low	MSV/61426		
60168437001	**CB 05-03-14**	EPA 1664A	WET/47774		
60168437001	**CB 05-03-14**	EPA 1664A	WET/47777		
60168437001	**CB 05-03-14**	SM 2540D	WET/47693		
60168437001	**CB 05-03-14**	SM 4500-H+B	WET/47758		
60168437001	**CB 05-03-14**	SM 5210B	WET/47679	SM 5210B	WET/47782
60168437001	**CB 05-03-14**	EPA 350.1	WETA/29320		
60168437001	**CB 05-03-14**	EPA 410.4	WETA/29368		

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Sample Condition Upon Receipt

WO#: 60168437

60168437

Optional
Proj Due Date:
Proj Name:

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 ☐

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 2.0

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JWS 5/5/14 1330

Chain of Custody present:	☒Yes	☐No	☐N/A
Chain of Custody filled out:	☒Yes	☐No	☐N/A
Chain of Custody relinquished:	☒Yes	☐No	☐N/A
Sampler name & signature on COC:	☒Yes	☐No	☐N/A
Samples arrived within holding time:	☒Yes	☐No	☐N/A
Short Hold Time analyses (<72hr):	☒Yes	☐No	☐N/A
Rush Turn Around Time requested:	☐Yes	☒No	☐N/A
Sufficient volume:	☒Yes	☐No	☐N/A
Correct containers used:	☐Yes	☒No	☐N/A
Pace containers used:	☒Yes	☐No	☐N/A
Containers intact:	☒Yes	☐No	☐N/A
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☒N/A
Filtered volume received for dissolved tests?	☐Yes	☐No	☒N/A
Sample labels match COC: Includes date/time/ID/analyses Matrix: water	☒Yes	☐No	☐N/A
All containers needing preservation have been checked.	☒Yes	☐No	☐N/A
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☒No	☐N/A
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☐Yes	☒No	
Trip Blank present:	☒Yes	☐No	☐N/A
Pace Trip Blank lot # (if purchased): covered			
Headspace in VOA vials (>6mm):	☐Yes	☒No	☐N/A
Project sampled in USDA Regulated Area:	☐Yes	☐No	☒N/A

1.
2.
3.
4.
5.
6. BOD / pH
7.
8.
9. Na2S2O3 vials used for sample.
10.
11.
12.
13.
14. BPSN + BPTS unable to be preserved

Initial when completed JWS | Lot # of added preservative 12513-23-2

15.
16.
17. List State: MN

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
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	

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N): 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	BOD SM 5210B	Residual Chlorine (Y/N)	
1	CB 05-03-14	OT	G	5/3/14	1710	—	—		13	10	4	1	0					X	X	X	X	X	X	X	X	X	X	X		3(DGPT) 2(DGAN) 001
2	TRIP BLANK	—		—		—			2	2															X					2(DGAN) 002
3																														
4																														
5																														
6																														METALS LIST total & LF Dis:
7																														Al,Sb,As,Be,Cd,Cr,
8																														Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																														and Mercury
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	[signature] FOT	5-5-14	9:00am	Bill Stone 412	5-5-14	9:00am				
SITE ADDRESS: BRIDGETON LF				[signature]	5/5/14	~~1415~~ 1315	2.0	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:	WILLIAM ABERNATHY					
SIGNATURE of SAMPLER:	[signature]	DATE Signed: 5/3/14				

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May 13, 2014

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

RE: Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 05, 2014. 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 to include TCLP % dry solids prep log.

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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

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 UNTREATED COMMINGLED
Pace Project No.: 60168438

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168438001	**TCLP 5-3-14**	Water	05/03/14 11:00	05/05/14 13:15
60168438002	**TRIP BLANK**	Water	05/03/14 08:00	05/05/14 13:15

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SAMPLE ANALYTE COUNT

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168438001	**TCLP 5-3-14**	EPA 8260	JKL	13
		EPA 5030B/8260	JTK, PRG	28
		EPA 1664A	JMC1	1
		SM 2540B	RAH	1
60168438002	**TRIP BLANK**	EPA 5030B/8260	PRG	28

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

Sample: TCLP 5-3-14 **Lab ID: 60168438001** Collected: 05/03/14 11:00 Received: 05/05/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 05/12/14 00:00								
Benzene	**832**	ug/L	250	500	5		05/12/14 13:20	71-43-2	
2-Butanone (MEK)	**91200**	ug/L	50000	200000	50		05/12/14 14:53	78-93-3	
Carbon tetrachloride	ND	ug/L	250	500	5		05/12/14 13:20	56-23-5	
Chlorobenzene	ND	ug/L	250	100000	5		05/12/14 13:20	108-90-7	
Chloroform	ND	ug/L	1000	6000	5		05/12/14 13:20	67-66-3	
1,2-Dichloroethane	ND	ug/L	250	500	5		05/12/14 13:20	107-06-2	
1,1-Dichloroethene	ND	ug/L	250	700	5		05/12/14 13:20	75-35-4	
Tetrachloroethene	ND	ug/L	250	700	5		05/12/14 13:20	127-18-4	
Trichloroethene	ND	ug/L	250	500	5		05/12/14 13:20	79-01-6	
Vinyl chloride	ND	ug/L	100	200	5		05/12/14 13:20	75-01-4	
Surrogates									
1,2-Dichloroethane-d4 (S)	105	%	80-120		5		05/12/14 13:20	17060-07-0	
Toluene-d8 (S)	105	%	80-120		5		05/12/14 13:20	2037-26-5	
4-Bromofluorobenzene (S)	103	%	80-120		5		05/12/14 13:20	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**188000**	ug/L	5000		500		05/07/14 18:42	67-64-1	
Benzene	**2850**	ug/L	200		200		05/06/14 12:53	71-43-2	
Bromodichloromethane	ND	ug/L	200		200		05/06/14 12:53	75-27-4	
Bromoform	ND	ug/L	200		200		05/06/14 12:53	75-25-2	
Bromomethane	ND	ug/L	1000		200		05/06/14 12:53	74-83-9	
2-Butanone (MEK)	**119000**	ug/L	2000		200		05/06/14 12:53	78-93-3	
Carbon tetrachloride	ND	ug/L	200		200		05/06/14 12:53	56-23-5	
Chloroethane	ND	ug/L	200		200		05/06/14 12:53	75-00-3	
Chloroform	ND	ug/L	200		200		05/06/14 12:53	67-66-3	
1,4-Dichlorobenzene	**5240**	ug/L	200		200		05/06/14 12:53	106-46-7	
1,2-Dichloroethane	ND	ug/L	200		200		05/06/14 12:53	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	200		200		05/06/14 12:53	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	200		200		05/06/14 12:53	156-60-5	
Ethylbenzene	**1880**	ug/L	200		200		05/06/14 12:53	100-41-4	
Methylene chloride	ND	ug/L	200		200		05/06/14 12:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	**4110**	ug/L	2000		200		05/06/14 12:53	108-10-1	
1,1,2,2-Tetrachloroethane	**725**	ug/L	200		200		05/06/14 12:53	79-34-5	
Tetrachloroethene	ND	ug/L	200		200		05/06/14 12:53	127-18-4	
Toluene	**1350**	ug/L	200		200		05/06/14 12:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	200		200		05/06/14 12:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	200		200		05/06/14 12:53	79-00-5	
Trichloroethene	ND	ug/L	200		200		05/06/14 12:53	79-01-6	
Vinyl chloride	ND	ug/L	200		200		05/06/14 12:53	75-01-4	
Xylene (Total)	**5970**	ug/L	600		200		05/06/14 12:53	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	97	%	80-120		200		05/06/14 12:53	460-00-4	HS
1,2-Dichloroethane-d4 (S)	108	%	80-120		200		05/06/14 12:53	17060-07-0	
Toluene-d8 (S)	103	%	80-120		200		05/06/14 12:53	2037-26-5	
Preservation pH	**5.0**		0.10		200		05/06/14 12:53		pH

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

Sample: TCLP 5-3-14 **Lab ID: 60168438001** Collected: 05/03/14 11:00 Received: 05/05/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
HEM, Oil and Grease	Analytical Method: EPA 1664A								
Oil and Grease	**5050**	mg/L	5.0		1		05/10/14 08:32		
2540B Total Solids	Analytical Method: SM 2540B								
Total Solids	**56100**	mg/L	5.0		1		05/06/14 15:05		

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

Sample: TRIP BLANK **Lab ID: 60168438002** Collected: 05/03/14 08:00 Received: 05/05/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0		1		05/06/14 09:47	67-64-1	
Benzene	ND	ug/L	1.0		1		05/06/14 09:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0		1		05/06/14 09:47	75-27-4	
Bromoform	ND	ug/L	1.0		1		05/06/14 09:47	75-25-2	
Bromomethane	ND	ug/L	5.0		1		05/06/14 09:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0		1		05/06/14 09:47	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0		1		05/06/14 09:47	56-23-5	
Chloroethane	ND	ug/L	1.0		1		05/06/14 09:47	75-00-3	
Chloroform	ND	ug/L	1.0		1		05/06/14 09:47	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0		1		05/06/14 09:47	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0		1		05/06/14 09:47	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0		1		05/06/14 09:47	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0		1		05/06/14 09:47	156-60-5	
Ethylbenzene	ND	ug/L	1.0		1		05/06/14 09:47	100-41-4	
Methylene chloride	ND	ug/L	1.0		1		05/06/14 09:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0		1		05/06/14 09:47	108-10-1	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1		05/06/14 09:47	79-34-5	
Tetrachloroethene	ND	ug/L	1.0		1		05/06/14 09:47	127-18-4	
Toluene	ND	ug/L	1.0		1		05/06/14 09:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0		1		05/06/14 09:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0		1		05/06/14 09:47	79-00-5	
Trichloroethene	ND	ug/L	1.0		1		05/06/14 09:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0		1		05/06/14 09:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0		1		05/06/14 09:47	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	120	%	80-120		1		05/06/14 09:47	460-00-4	
1,2-Dichloroethane-d4 (S)	95	%	80-120		1		05/06/14 09:47	17060-07-0	
Toluene-d8 (S)	107	%	80-120		1		05/06/14 09:47	2037-26-5	
Preservation pH	**1.0**		0.10		1		05/06/14 09:47		

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

QC Batch: MSV/61525 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 60168438001

METHOD BLANK: 1376374 | Matrix: Water
Associated Lab Samples: 60168438001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	50.0	05/12/14 13:05	
1,2-Dichloroethane	ug/L	ND	50.0	05/12/14 13:05	
2-Butanone (MEK)	ug/L	ND	1000	05/12/14 13:05	
Benzene	ug/L	ND	50.0	05/12/14 13:05	
Carbon tetrachloride	ug/L	ND	50.0	05/12/14 13:05	
Chlorobenzene	ug/L	ND	50.0	05/12/14 13:05	
Chloroform	ug/L	ND	200	05/12/14 13:05	
Tetrachloroethene	ug/L	ND	50.0	05/12/14 13:05	
Trichloroethene	ug/L	ND	50.0	05/12/14 13:05	
Vinyl chloride	ug/L	ND	20.0	05/12/14 13:05	
1,2-Dichloroethane-d4 (S)	%	102	80-120	05/12/14 13:05	
4-Bromofluorobenzene (S)	%	103	80-120	05/12/14 13:05	
Toluene-d8 (S)	%	104	80-120	05/12/14 13:05	

LABORATORY CONTROL SAMPLE: 1376375

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	1000	1060	106	78-126	
1,2-Dichloroethane	ug/L	1000	1120	112	77-123	
2-Butanone (MEK)	ug/L	5000	6370	127	52-145	
Benzene	ug/L	1000	1070	107	80-120	
Carbon tetrachloride	ug/L	1000	1250	125	78-128	
Chlorobenzene	ug/L	1000	1060	106	80-120	
Chloroform	ug/L	1000	1130	113	79-120	
Tetrachloroethene	ug/L	1000	1050	105	80-121	
Trichloroethene	ug/L	1000	1130	113	80-120	
Vinyl chloride	ug/L	1000	958	96	59-120	
1,2-Dichloroethane-d4 (S)	%			106	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Toluene-d8 (S)	%			104	80-120	

MATRIX SPIKE SAMPLE: 1376376

Parameter	Units	60168438001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	ND	5000	4370	87	60-144	
1,2-Dichloroethane	ug/L	ND	5000	4840	97	49-148	
2-Butanone (MEK)	ug/L	91200	25000	112000	82	36-145	
Benzene	ug/L	832	5000	5280	89	37-157	
Carbon tetrachloride	ug/L	ND	5000	5090	102	68-142	
Chlorobenzene	ug/L	ND	5000	4390	88	66-133	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

MATRIX SPIKE SAMPLE: 1376376

Parameter	Units	60168438001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloroform	ug/L	ND	5000	4770	95	66-127	
Tetrachloroethene	ug/L	ND	5000	4300	86	69-133	
Trichloroethene	ug/L	ND	5000	4590	92	61-135	
Vinyl chloride	ug/L	ND	5000	3480	70	44-128	
1,2-Dichloroethane-d4 (S)	%				100	80-120	
4-Bromofluorobenzene (S)	%				104	80-120	
Toluene-d8 (S)	%				103	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

QC Batch: MSV/61395 | Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 | Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60168438001, 60168438002

METHOD BLANK: 1372570 | Matrix: Water
Associated Lab Samples: 60168438001, 60168438002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/06/14 09:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/06/14 09:23	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/06/14 09:23	
1,2-Dichloroethane	ug/L	ND	1.0	05/06/14 09:23	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/06/14 09:23	
2-Butanone (MEK)	ug/L	ND	10.0	05/06/14 09:23	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/06/14 09:23	
Acetone	ug/L	ND	10.0	05/06/14 09:23	
Benzene	ug/L	ND	1.0	05/06/14 09:23	
Bromodichloromethane	ug/L	ND	1.0	05/06/14 09:23	
Bromoform	ug/L	ND	1.0	05/06/14 09:23	
Bromomethane	ug/L	ND	5.0	05/06/14 09:23	
Carbon tetrachloride	ug/L	ND	1.0	05/06/14 09:23	
Chloroethane	ug/L	ND	1.0	05/06/14 09:23	
Chloroform	ug/L	ND	1.0	05/06/14 09:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/06/14 09:23	
Ethylbenzene	ug/L	ND	1.0	05/06/14 09:23	
Methylene chloride	ug/L	ND	1.0	05/06/14 09:23	
Tetrachloroethene	ug/L	ND	1.0	05/06/14 09:23	
Toluene	ug/L	ND	1.0	05/06/14 09:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/06/14 09:23	
Trichloroethene	ug/L	ND	1.0	05/06/14 09:23	
Vinyl chloride	ug/L	ND	1.0	05/06/14 09:23	
Xylene (Total)	ug/L	ND	3.0	05/06/14 09:23	
1,2-Dichloroethane-d4 (S)	%	102	80-120	05/06/14 09:23	
4-Bromofluorobenzene (S)	%	100	80-120	05/06/14 09:23	
Toluene-d8 (S)	%	99	80-120	05/06/14 09:23	

LABORATORY CONTROL SAMPLE: 1372571

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.8	104	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	21.4	107	73-124	
1,1,2-Trichloroethane	ug/L	20	22.3	112	80-120	
1,2-Dichloroethane	ug/L	20	19.4	97	77-123	
1,4-Dichlorobenzene	ug/L	20	21.3	107	80-120	
2-Butanone (MEK)	ug/L	100	112	112	52-145	
4-Methyl-2-pentanone (MIBK)	ug/L	100	113	113	71-131	
Acetone	ug/L	100	116	116	32-155	
Benzene	ug/L	20	20.1	100	80-120	
Bromodichloromethane	ug/L	20	20.0	100	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

LABORATORY CONTROL SAMPLE: 1372571

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	20.7	103	73-124	
Bromomethane	ug/L	20	13.5	68	31-144	
Carbon tetrachloride	ug/L	20	18.6	93	78-128	
Chloroethane	ug/L	20	19.3	97	55-137	
Chloroform	ug/L	20	21.2	106	79-120	
cis-1,2-Dichloroethene	ug/L	20	20.7	104	80-120	
Ethylbenzene	ug/L	20	22.0	110	80-121	
Methylene chloride	ug/L	20	20.9	105	73-126	
Tetrachloroethene	ug/L	20	22.0	110	80-121	
Toluene	ug/L	20	20.6	103	80-122	
trans-1,2-Dichloroethene	ug/L	20	19.5	98	79-121	
Trichloroethene	ug/L	20	19.4	97	80-120	
Vinyl chloride	ug/L	20	17.0	85	59-120	
Xylene (Total)	ug/L	60	66.5	111	80-121	
1,2-Dichloroethane-d4 (S)	%			105	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			99	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

QC Batch: MSV/61447 | Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 | Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60168438001

METHOD BLANK: 1373747 | Matrix: Water
Associated Lab Samples: 60168438001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acetone	ug/L	ND	10.0	05/07/14 16:04	
1,2-Dichloroethane-d4 (S)	%	99	80-120	05/07/14 16:04	
4-Bromofluorobenzene (S)	%	101	80-120	05/07/14 16:04	
Toluene-d8 (S)	%	95	80-120	05/07/14 16:04	

LABORATORY CONTROL SAMPLE: 1373748

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acetone	ug/L	100	103	103	32-155	
1,2-Dichloroethane-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			95	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

QC Batch: WET/47774 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168438001

METHOD BLANK: 1375638 | Matrix: Water
Associated Lab Samples: 60168438001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/10/14 08:30	

LABORATORY CONTROL SAMPLE: 1375639

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: 1375640

Parameter	Units	60168192002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	1.3J	40.8	37.1	88	78-114	

SAMPLE DUPLICATE: 1375642

Parameter	Units	60168039001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	1.9J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

QC Batch: WET/47694 | Analysis Method: SM 2540B
QC Batch Method: SM 2540B | Analysis Description: 2540B Total Solids
Associated Lab Samples: 60168438001

METHOD BLANK: 1372475 | Matrix: Water
Associated Lab Samples: 60168438001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	05/06/14 15:04	

LABORATORY CONTROL SAMPLE: 1372476

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	1000	996	100	80-120	

SAMPLE DUPLICATE: 1372477

Parameter	Units	60168360001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	36000	35900	0	10	

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QUALIFIERS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

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.

SAMPLE QUALIFIERS

Sample: 60168438001

[1] The samples were received with headspace. Analysis was completed upon client approval.

BATCH QUALIFIERS

Batch: MSV/61395

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

Batch: MSV/61447

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

ANALYTE QUALIFIERS

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60168438

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168438001	**TCLP 5-3-14**	EPA 8260	MSV/61525		
60168438001	**TCLP 5-3-14**	EPA 5030B/8260	MSV/61395		
60168438001	**TCLP 5-3-14**	EPA 5030B/8260	MSV/61447		
60168438002	**TRIP BLANK**	EPA 5030B/8260	MSV/61395		
60168438001	**TCLP 5-3-14**	EPA 1664A	WET/47774		
60168438001	**TCLP 5-3-14**	SM 2540B	WET/47694		

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Sample Condition Upon Receipt

WO#: 60168438

60168438

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-239 / T-194 Type of Ice: Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 3.0

Temperature should be above freezing to 6°C

Date and initials of person examining contents: DPS 5/5/14 1705

Optional
Proj Due Date:
Proj Name:

Chain of Custody present:	☒Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☒Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☒Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☒Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☒Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes	☒No	☐N/A	6.
Rush Turn Around Time requested:	☐Yes	☒No	☐N/A	7.
Sufficient volume:	☒Yes	☐No	☐N/A	8.
Correct containers used:	☒Yes	☐No	☐N/A	
Pace containers used:	☒Yes	☐No	☐N/A	9.
Containers intact:	☒Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☒N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: water	☒Yes	☐No	☐N/A	13.
All containers needing preservation have been checked.	☐Yes	☐No	☒N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☒N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☒Yes	☐No		Initial when completed N/A — Lot # of added preservative
Trip Blank present: 040714-3 Pace Trip Blank lot # (if purchased): N/A	☒Yes	☐No	☒N/A	15.
Headspace in VOA vials (>6mm):	☒Yes	☐No	☒N/A	16. all sample vials have headspace.
Project sampled in USDA Regulated Area:	☐Yes	☐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: HS comment Approved based on historical information

Project Manager Review: _____ Date: _____

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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

Section A Required Client Information:

Company:	BARR ENGINEERING
Address:	
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	

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
Project Name:	BRIDGETON UNTREATED COMMINGLED
Project Number:	

Section C Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	
Pace Project Manager:	Angie Brown 913-563-1402
Pace Profile #:	PROFILE 6787-LINE 6

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: MO

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	8260 Volatiles **	TCLP Volatiles *	Total Solids/water matrix	Oil and Grease								Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	TCLP 5-3-14	OT	C	5/3/14	1100	—	—		8	3	2		3						✓	✓	✓	✓	2(HCl)	2(HNO3)	(NaOH)	2(NaOH)						Total VOCs Bridgeton List
2	TRIP BLANK	WT	G	—	—	—	—		2				2						X				2(HCl)									* footnote %dry solids TCLP
3																																
4																																
5																																
6																																
7																																
8																																
9																																
10																																
11																																
12																																

Col 68438

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
	[signature]	5-5-14	9:00am	Rick Stone 4/12	5-5-14	9:00am				
				[signature] Pace	5/5/14	1915	3.0	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:	WILLIAM ABERNATHY				
SIGNATURE of SAMPLER: [signature]	DATE Signed (MM/DD/YY): 5/3/14				

*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.

F-ALL-Q-020rev.08, 12-Oct-2007

TCLP/SPLP Determination of Percent Solids

(Only if sample is liquid or semi-liquid. Skip if sample is obviously 100% solid.)

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Date: 5/12/14 Batch: 6328

Analyst: CEM Balance ID: 6000EXT2 Reviewed by: AH

Sample Number	A Weight of Beaker (g)	B Weight of Sample & Beaker (g)	C Weight of Filtrate Container (g)	D Weight of 142-mm TCLP Filter (g)	E Weight of Waste Beaker After Filtration (g)	F Weight of Filtrate & Container (g)	G Weight of Filter and Solid Phase After Filtration (g)	H Weight of Filtrate (g) (F - C)	I Weight of Waste Filtered (g) (E - B)	J Percent WET Solids $\left(\frac{(I - H)}{I \times 0.01}\right)$	K DRY Weight #1 of Solid Phase plus Filter (g)	L DRY Weight #2 of Solid Phase plus Filter (g) (1)	M Percent DRY Solids $\left(\frac{(L - D)}{I \times 0.01}\right)$	If Multiphase, Are Phases Compatible (2)
G0V684380 01	108.8	265.2	280.0	1.2	110.1	428.8	3.2	148.6	155.1	4.2%	1.5	1.5	0.13%	Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA

CEM 5/12/14

NOTE: If Wet Solids are ≥0.5 and <5% and a small amount of liquid is entrapped in the filter, then determine Percent Dry Solids. If the entrapped liquid is oily (non-aqueous) do not determine Percent Dry Solids. If Solids are <0.5%, tumbling is not required because the filtrate is considered to be the TCLP/SPLP extract.

(1) Dry Weight #1 and Dry Weight #2 must be within 1% of each other. If the weights are within 1% of each other, use Dry Weight #2 in further calculations. If not within 1%, continue drying and weighing until two successive weighings are within 1%.

(2) If compatible, combine the filtered liquid resulting from extraction with the initial liquid phase of sample. If the initial liquid phase is not compatible with the filtered liquid resulting from extraction, do not combine. Analyze liquids separately and combine the results mathematically.

If solids are ≥5.0 and <100%	Weight of waste to charge the ZHE = $\frac{25}{\text{Percent solids}} \times 100$ Weight of waste to filter = $\frac{\text{mL of leachate required}}{20 \times \text{Percent solids}} \times 100$

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May 15, 2014

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

RE: Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 07, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

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CERTIFICATIONS

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

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 CB 05-05-14
Pace Project No.: 60168566

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168566001	**CB 05-05-14**	Water	05/05/14 11:06	05/07/14 01:50
60168566002	**TRIP BLANK**	Water	05/05/14 11:06	05/07/14 01:50

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168566001	**CB 05-05-14**	EPA 200.7	SMW	15
		EPA 200.7	TDS	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	RAH	1
		SM 4500-H+B	RAH	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60168566002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

Sample: CB 05-05-14 **Lab ID: 60168566001** Collected: 05/05/14 11:06 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**11500**	ug/L	750	2	05/08/14 15:35	05/09/14 11:28	7429-90-5	
Antimony	ND	ug/L	100	2	05/08/14 15:35	05/09/14 11:28	7440-36-0	D3
Arsenic	**1070**	ug/L	50.0	1	05/08/14 15:35	05/09/14 11:24	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/08/14 15:35	05/09/14 11:24	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:24	7440-43-9	
Chromium	**240**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:24	7440-47-3	
Cobalt	**42.8**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:24	7440-48-4	
Copper	**65.9**	ug/L	50.0	1	05/08/14 15:35	05/09/14 11:24	7440-50-8	
Iron	**746000**	ug/L	250	1	05/08/14 15:35	05/09/14 11:24	7439-89-6	
Lead	**99.2**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:24	7439-92-1	
Nickel	**142**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:24	7440-02-0	
Selenium	**88.2**	ug/L	75.0	1	05/08/14 15:35	05/09/14 11:24	7782-49-2	
Silver	ND	ug/L	35.0	1	05/08/14 15:35	05/09/14 11:24	7440-22-4	
Thallium	ND	ug/L	100	1	05/08/14 15:35	05/09/14 11:24	7440-28-0	
Zinc	**5050**	ug/L	500	2	05/08/14 15:35	05/09/14 11:28	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1410**	ug/L	750	2	05/13/14 17:00	05/14/14 13:58	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/13/14 17:00	05/14/14 13:55	7440-36-0	
Arsenic, Dissolved	**830**	ug/L	50.0	1	05/13/14 17:00	05/14/14 13:55	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/13/14 17:00	05/14/14 13:55	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 13:55	7440-43-9	
Chromium, Dissolved	**143**	ug/L	25.0	1	05/13/14 17:00	05/14/14 13:55	7440-47-3	
Cobalt, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 13:55	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/13/14 17:00	05/14/14 13:55	7440-50-8	
Iron, Dissolved	**328000**	ug/L	250	1	05/13/14 17:00	05/14/14 13:55	7439-89-6	M1,R1
Lead, Dissolved	**35.3**	ug/L	25.0	1	05/13/14 17:00	05/14/14 13:55	7439-92-1	
Nickel, Dissolved	**72.8**	ug/L	25.0	1	05/13/14 17:00	05/14/14 13:55	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/13/14 17:00	05/14/14 13:55	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/13/14 17:00	05/14/14 13:55	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/13/14 17:00	05/14/14 13:55	7440-28-0	
Zinc, Dissolved	**3930**	ug/L	500	2	05/13/14 17:00	05/14/14 13:58	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/14/14 10:30	05/14/14 14:42	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/14/14 10:30	05/14/14 14:15	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/09/14 00:00	05/14/14 03:59	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 03:59	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 03:59	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 03:59	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/09/14 00:00	05/14/14 03:59	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7490**	ug/L	4000	2	05/09/14 00:00	05/14/14 03:59		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

Sample: CB 05-05-14 **Lab ID: 60168566001** Collected: 05/05/14 11:06 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1650**	ug/L	1000	2	05/09/14 00:00	05/14/14 03:59	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 03:59	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 03:59	87-86-5	
Phenol	**10400**	ug/L	1000	2	05/09/14 00:00	05/14/14 03:59	108-95-2	M1
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 03:59	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 03:59	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	137	%	33-120	2	05/09/14 00:00	05/14/14 03:59	4165-60-0	S0
2-Fluorobiphenyl (S)	73	%	39-120	2	05/09/14 00:00	05/14/14 03:59	321-60-8	
Terphenyl-d14 (S)	70	%	45-120	2	05/09/14 00:00	05/14/14 03:59	1718-51-0	
Phenol-d6 (S)	44	%	11-120	2	05/09/14 00:00	05/14/14 03:59	13127-88-3	
2-Fluorophenol (S)	45	%	17-120	2	05/09/14 00:00	05/14/14 03:59	367-12-4	
2,4,6-Tribromophenol (S)	81	%	39-120	2	05/09/14 00:00	05/14/14 03:59	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**137000**	ug/L	5000	500		05/09/14 13:30	67-64-1	N2
Benzene	ND	ug/L	250	250		05/07/14 16:00	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/07/14 16:00	75-27-4	
Bromoform	ND	ug/L	250	250		05/07/14 16:00	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/07/14 16:00	74-83-9	
2-Butanone (MEK)	**109000**	ug/L	2500	250		05/07/14 16:00	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/07/14 16:00	56-23-5	
Chloroethane	ND	ug/L	250	250		05/07/14 16:00	75-00-3	
Chloroform	ND	ug/L	250	250		05/07/14 16:00	67-66-3	
1,4-Dichlorobenzene	**591**	ug/L	250	250		05/07/14 16:00	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/07/14 16:00	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/07/14 16:00	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/07/14 16:00	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/07/14 16:00	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/07/14 16:00	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/07/14 16:00	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/07/14 16:00	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/07/14 16:00	127-18-4	
Toluene	ND	ug/L	250	250		05/07/14 16:00	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/07/14 16:00	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/07/14 16:00	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/07/14 16:00	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/07/14 16:00	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/07/14 16:00	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	106	%	80-120	250		05/07/14 16:00	460-00-4	
Toluene-d8 (S)	99	%	80-120	250		05/07/14 16:00	2037-26-5	
1,2-Dichloroethane-d4 (S)	106	%	80-120	250		05/07/14 16:00	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/07/14 16:00		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1190**	mg/L	5.0	1		05/13/14 06:15		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

Sample: CB 05-05-14 **Lab ID: 60168566001** Collected: 05/05/14 11:06 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**8.9**	mg/L	5.0	1		05/14/14 07:43		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**5640**	mg/L	5.0	1		05/08/14 09:38		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.3**	Std. Units	0.10	1		05/09/14 12:35		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**32100**	mg/L	2.0	1	05/07/14 10:51	05/12/14 12:12		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**634**	mg/L	20.0	200		05/07/14 14:42	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**55100**	mg/L	5000	500		05/14/14 12:59		

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ANALYTICAL RESULTS

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

Sample: TRIP BLANK **Lab ID: 60168566002** Collected: 05/05/14 11:06 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/07/14 16:31	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/07/14 16:31	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/07/14 16:31	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/07/14 16:31	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/07/14 16:31	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/07/14 16:31	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/07/14 16:31	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/07/14 16:31	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/07/14 16:31	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/07/14 16:31	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/07/14 16:31	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/07/14 16:31	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/07/14 16:31	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/07/14 16:31	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/07/14 16:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/07/14 16:31	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/07/14 16:31	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/07/14 16:31	127-18-4	
Toluene	ND	ug/L	1.0	1		05/07/14 16:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/07/14 16:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/07/14 16:31	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/07/14 16:31	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/07/14 16:31	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/07/14 16:31	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	101	%	80-120	1		05/07/14 16:31	460-00-4	
Toluene-d8 (S)	95	%	80-120	1		05/07/14 16:31	2037-26-5	
1,2-Dichloroethane-d4 (S)	99	%	80-120	1		05/07/14 16:31	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/07/14 16:31		

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: MERP/8392 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60168566001

METHOD BLANK: 1377546 | Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/14/14 14:37	

LABORATORY CONTROL SAMPLE: 1377547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377548 1377549

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	150	150	166	151	107	98	70-130	9	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: MERP/8391
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60168566001

METHOD BLANK: 1377535
Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/14/14 14:11	

LABORATORY CONTROL SAMPLE: 1377536

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: 1377537 1377538

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	142	147	95	98	70-130	3	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: MPRP/27157
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60168566001

METHOD BLANK: 1374213
Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/09/14 11:05	
Antimony	ug/L	ND	10.0	05/09/14 11:05	
Arsenic	ug/L	ND	10.0	05/09/14 11:05	
Beryllium	ug/L	ND	1.0	05/09/14 11:05	
Cadmium	ug/L	ND	5.0	05/09/14 11:05	
Chromium	ug/L	ND	5.0	05/09/14 11:05	
Cobalt	ug/L	ND	5.0	05/09/14 11:05	
Copper	ug/L	ND	10.0	05/09/14 11:05	
Iron	ug/L	ND	50.0	05/09/14 11:05	
Lead	ug/L	ND	5.0	05/09/14 11:05	
Nickel	ug/L	ND	5.0	05/09/14 11:05	
Selenium	ug/L	ND	15.0	05/09/14 11:05	
Silver	ug/L	ND	7.0	05/09/14 11:05	
Thallium	ug/L	ND	20.0	05/09/14 11:05	
Zinc	ug/L	ND	50.0	05/09/14 11:05	

LABORATORY CONTROL SAMPLE: 1374214

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10400	104	85-115	
Antimony	ug/L	1000	1060	106	85-115	
Arsenic	ug/L	1000	994	99	85-115	
Beryllium	ug/L	1000	1020	102	85-115	
Cadmium	ug/L	1000	1030	103	85-115	
Chromium	ug/L	1000	1000	100	85-115	
Cobalt	ug/L	1000	1040	104	85-115	
Copper	ug/L	1000	1020	102	85-115	
Iron	ug/L	10000	10400	104	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	502	100	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1374215 1374216

Parameter	Units	60168277002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	92.6	10000	10000	10600	10400	105	104	70-130	2	8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1374215 1374216

Parameter	Units	60168277002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	1000	1000	1080	1070	108	107	70-130	1	7	
Arsenic	ug/L	ND	1000	1000	1010	1000	101	100	70-130	1	10	
Beryllium	ug/L	ND	1000	1000	1040	1030	104	103	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1050	1040	105	104	70-130	1	10	
Chromium	ug/L	0.015 mg/L	1000	1000	1020	1010	100	99	70-130	1	10	
Cobalt	ug/L	ND	1000	1000	1050	1040	105	104	70-130	1	6	
Copper	ug/L	0.21 mg/L	1000	1000	1240	1230	104	102	70-130	1	11	
Iron	ug/L	347	10000	10000	10800	10600	105	103	70-130	2	10	
Lead	ug/L	ND	1000	1000	1040	1020	104	102	70-130	1	10	
Nickel	ug/L	0.0073 mg/L	1000	1000	1040	1030	104	103	70-130	1	10	
Selenium	ug/L	ND	1000	1000	1040	1030	104	103	70-130	1	10	
Silver	ug/L	ND	500	500	513	505	102	101	70-130	1	10	
Thallium	ug/L	ND	1000	1000	1020	1000	101	100	70-130	1	6	
Zinc	ug/L	0.11 mg/L	1000	1000	1120	1100	101	100	70-130	1	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: MPRP/27227
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60168566001

METHOD BLANK: 1377214
Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/14/14 13:51	
Antimony, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Arsenic, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Beryllium, Dissolved	ug/L	ND	1.0	05/14/14 13:51	
Cadmium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Chromium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Cobalt, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Copper, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Iron, Dissolved	ug/L	ND	50.0	05/14/14 13:51	
Lead, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Nickel, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Selenium, Dissolved	ug/L	ND	15.0	05/14/14 13:51	
Silver, Dissolved	ug/L	ND	7.0	05/14/14 13:51	
Thallium, Dissolved	ug/L	ND	20.0	05/14/14 13:51	
Zinc, Dissolved	ug/L	ND	50.0	05/14/14 13:51	

LABORATORY CONTROL SAMPLE: 1377215

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9500	95	85-115	
Antimony, Dissolved	ug/L	1000	996	100	85-115	
Arsenic, Dissolved	ug/L	1000	946	95	85-115	
Beryllium, Dissolved	ug/L	1000	954	95	85-115	
Cadmium, Dissolved	ug/L	1000	968	97	85-115	
Chromium, Dissolved	ug/L	1000	926	93	85-115	
Cobalt, Dissolved	ug/L	1000	985	99	85-115	
Copper, Dissolved	ug/L	1000	983	98	85-115	
Iron, Dissolved	ug/L	10000	9620	96	85-115	
Lead, Dissolved	ug/L	1000	977	98	85-115	
Nickel, Dissolved	ug/L	1000	985	99	85-115	
Selenium, Dissolved	ug/L	1000	967	97	85-115	
Silver, Dissolved	ug/L	500	471	94	85-115	
Thallium, Dissolved	ug/L	1000	997	100	85-115	
Zinc, Dissolved	ug/L	1000	942	94	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1410	50000	50000	48200	48300	94	94	70-130	0	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	5000	5000	5080	5140	101	103	70-130	1	7	
Arsenic, Dissolved	ug/L	830	5000	5000	5880	5790	101	99	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4450	4550	89	91	70-130	2	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	4900	4980	98	100	70-130	2	10	
Chromium, Dissolved	ug/L	143	5000	5000	4500	4580	87	89	70-130	2	10	
Cobalt, Dissolved	ug/L	ND	5000	5000	4550	4650	91	93	70-130	2	6	
Copper, Dissolved	ug/L	ND	5000	5000	5100	5180	101	103	70-130	1	11	
Iron, Dissolved	ug/L	328000	50000	50000	369000	330000	83	4	70-130	11	10	M1,R1
Lead, Dissolved	ug/L	35.3	5000	5000	4380	4470	87	89	70-130	2	10	
Nickel, Dissolved	ug/L	72.8	5000	5000	4520	4610	89	91	70-130	2	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5470	5480	109	110	70-130	0	10	
Silver, Dissolved	ug/L	ND	2500	2500	2460	2500	98	100	70-130	1	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4180	4300	84	86	70-130	3	6	
Zinc, Dissolved	ug/L	3930	5000	5000	8310	7800	88	77	70-130	6	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: MSV/61426 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60168566001, 60168566002

METHOD BLANK: 1373368 | Matrix: Water
Associated Lab Samples: 60168566001, 60168566002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/07/14 11:16	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,2-Dichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/07/14 11:16	
2-Butanone (MEK)	ug/L	ND	10.0	05/07/14 11:16	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/07/14 11:16	N2
Acetone	ug/L	ND	10.0	05/07/14 11:16	N2
Benzene	ug/L	ND	1.0	05/07/14 11:16	
Bromodichloromethane	ug/L	ND	1.0	05/07/14 11:16	
Bromoform	ug/L	ND	1.0	05/07/14 11:16	
Bromomethane	ug/L	ND	5.0	05/07/14 11:16	
Carbon tetrachloride	ug/L	ND	1.0	05/07/14 11:16	
Chloroethane	ug/L	ND	1.0	05/07/14 11:16	
Chloroform	ug/L	ND	1.0	05/07/14 11:16	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/07/14 11:16	N2
Ethylbenzene	ug/L	ND	1.0	05/07/14 11:16	
Methylene chloride	ug/L	ND	1.0	05/07/14 11:16	
Tetrachloroethene	ug/L	ND	1.0	05/07/14 11:16	
Toluene	ug/L	ND	1.0	05/07/14 11:16	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/07/14 11:16	
Trichloroethene	ug/L	ND	1.0	05/07/14 11:16	
Vinyl chloride	ug/L	ND	1.0	05/07/14 11:16	
Xylene (Total)	ug/L	ND	3.0	05/07/14 11:16	N2
1,2-Dichloroethane-d4 (S)	%	106	80-120	05/07/14 11:16	
4-Bromofluorobenzene (S)	%	103	80-120	05/07/14 11:16	
Toluene-d8 (S)	%	105	80-120	05/07/14 11:16	

LABORATORY CONTROL SAMPLE: 1373369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.8	94	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	67-127	N2
1,1,2-Trichloroethane	ug/L	20	20.8	104	67-124	
1,2-Dichloroethane	ug/L	20	20.6	103	70-126	
1,4-Dichlorobenzene	ug/L	20	18.5	92	74-120	
2-Butanone (MEK)	ug/L	100	109	109	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	124	124	59-131	N2
Acetone	ug/L	100	104	104	38-134	N2
Benzene	ug/L	20	18.7	94	75-120	
Bromodichloromethane	ug/L	20	20.4	102	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

LABORATORY CONTROL SAMPLE: 1373369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	19.0	95	65-127	
Bromomethane	ug/L	20	11.4	57	13-157	
Carbon tetrachloride	ug/L	20	18.6	93	70-131	
Chloroethane	ug/L	20	19.3	96	47-133	
Chloroform	ug/L	20	19.0	95	65-127	
cis-1,2-Dichloroethene	ug/L	20	19.5	97	68-127	N2
Ethylbenzene	ug/L	20	19.7	99	74-122	
Methylene chloride	ug/L	20	19.3	96	64-129	
Tetrachloroethene	ug/L	20	17.5	87	73-125	
Toluene	ug/L	20	18.8	94	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.5	93	66-129	
Trichloroethene	ug/L	20	18.4	92	71-123	
Vinyl chloride	ug/L	20	17.7	88	43-129	
Xylene (Total)	ug/L	60	60.1	100	75-121	N2
1,2-Dichloroethane-d4 (S)	%			106	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1373370

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4460	89	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5470	109	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	5020	100	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4690	94	49-144	
1,4-Dichlorobenzene	ug/L	252	5000	4760	90	33-140	
2-Butanone (MEK)	ug/L	65600	25000	90800	101	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	31800	124	40-160	N2
Acetone	ug/L	157000	25000	182000	98	10-160	N2
Benzene	ug/L	ND	5000	4020	80	37-151	
Bromodichloromethane	ug/L	ND	5000	5070	101	35-142	
Bromoform	ug/L	ND	5000	4780	96	45-142	
Bromomethane	ug/L	ND	5000	1330	27	10-158	
Carbon tetrachloride	ug/L	ND	5000	4550	91	70-140	
Chloroethane	ug/L	ND	5000	3400	68	19-152	
Chloroform	ug/L	ND	5000	4620	92	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4370	87	34-147	N2
Ethylbenzene	ug/L	ND	5000	4420	88	40-142	
Methylene chloride	ug/L	ND	5000	3920	78	31-144	
Tetrachloroethene	ug/L	ND	5000	3930	79	64-148	
Toluene	ug/L	ND	5000	4280	86	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3510	70	54-151	
Trichloroethene	ug/L	ND	5000	4430	89	71-149	
Vinyl chloride	ug/L	ND	5000	2630	53	22-146	
Xylene (Total)	ug/L	ND	15000	13600	91	37-144	N2
1,2-Dichloroethane-d4 (S)	%				105	80-120	
4-Bromofluorobenzene (S)	%				103	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

MATRIX SPIKE SAMPLE: 1373370

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				102	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: MSV/61484
QC Batch Method: EPA 624 Low
Analysis Method: EPA 624 Low
Analysis Description: 624 MSV
Associated Lab Samples: 60168566001

METHOD BLANK: 1374966
Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acetone	ug/L	ND	10.0	05/09/14 12:10	N2
1,2-Dichloroethane-d4 (S)	%	98	80-120	05/09/14 12:10	
4-Bromofluorobenzene (S)	%	101	80-120	05/09/14 12:10	
Toluene-d8 (S)	%	100	80-120	05/09/14 12:10	

LABORATORY CONTROL SAMPLE: 1374967

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acetone	ug/L	100	92.2	92	38-134	N2
1,2-Dichloroethane-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			103	80-120	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE SAMPLE: 1374968

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Acetone	ug/L	139000	25000	143000	13	10-160	N2
1,2-Dichloroethane-d4 (S)	%				98	80-120	
4-Bromofluorobenzene (S)	%				103	80-120	
Toluene-d8 (S)	%				101	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: OEXT/44088 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60168566001

METHOD BLANK: 1374754 | Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/14/14 02:35	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/14/14 02:35	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/14/14 02:35	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/14/14 02:35	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/14/14 02:35	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/14/14 02:35	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/14/14 02:35	
Hexachloroethane	ug/L	ND	5.0	05/14/14 02:35	
Naphthalene	ug/L	ND	5.0	05/14/14 02:35	
Nitrobenzene	ug/L	ND	5.0	05/14/14 02:35	
Pentachlorophenol	ug/L	ND	5.0	05/14/14 02:35	
Phenol	ug/L	ND	5.0	05/14/14 02:35	
2,4,6-Tribromophenol (S)	%	58	39-120	05/14/14 02:35	
2-Fluorobiphenyl (S)	%	54	39-120	05/14/14 02:35	
2-Fluorophenol (S)	%	31	17-120	05/14/14 02:35	
Nitrobenzene-d5 (S)	%	51	33-120	05/14/14 02:35	
Phenol-d6 (S)	%	20	11-120	05/14/14 02:35	
Terphenyl-d14 (S)	%	64	45-120	05/14/14 02:35	

LABORATORY CONTROL SAMPLE: 1374755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	31.7	63	46-120	
2,4,6-Trichlorophenol	ug/L	50	34.3	69	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	27.7	55	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	25.7	51	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	38.2	76	40-133	
Hexachloro-1,3-butadiene	ug/L	50	30.0	60	44-116	
Hexachlorocyclopentadiene	ug/L	100	51.9	52	24-120	
Hexachloroethane	ug/L	50	29.9	60	43-113	
Naphthalene	ug/L	50	32.9	66	48-120	
Nitrobenzene	ug/L	50	31.6	63	48-120	
Pentachlorophenol	ug/L	50	39.8	80	47-120	
Phenol	ug/L	50	13.6	27	16-112	
2,4,6-Tribromophenol (S)	%			72	39-120	
2-Fluorobiphenyl (S)	%			66	39-120	
2-Fluorophenol (S)	%			39	17-120	
Nitrobenzene-d5 (S)	%			63	33-120	
Phenol-d6 (S)	%			25	11-120	
Terphenyl-d14 (S)	%			73	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

MATRIX SPIKE SAMPLE: 1374756

Parameter	Units	60168566001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3340	67	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	3660	73	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3510	70	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7490	5000	9480	40	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	3890J	78	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3090	62	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	6410	64	11-120	
Hexachloroethane	ug/L	ND	5000	3420	68	40-113	
Naphthalene	ug/L	1650	5000	4830	64	45-120	
Nitrobenzene	ug/L	ND	5000	3480	70	38-120	
Pentachlorophenol	ug/L	ND	5000	4590	92	43-135	
Phenol	ug/L	10400	5000	10300	-3	13-112	M1
2,4,6-Tribromophenol (S)	%				76	39-120	
2-Fluorobiphenyl (S)	%				69	39-120	
2-Fluorophenol (S)	%				39	17-120	
Nitrobenzene-d5 (S)	%				126	33-120	S0
Phenol-d6 (S)	%				37	11-120	
Terphenyl-d14 (S)	%				65	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: WET/47805 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168566001

METHOD BLANK: 1376639 | Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/13/14 06:13	

LABORATORY CONTROL SAMPLE: 1376640

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	37.5	94	78-114	

MATRIX SPIKE SAMPLE: 1376644

Parameter	Units	60168874001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.4	23.9	55	78-114	M1

SAMPLE DUPLICATE: 1376643

Parameter	Units	60168320002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	2.5J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: WET/47840 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60168566001

METHOD BLANK: 1377333 | Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/14/14 07:42	

LABORATORY CONTROL SAMPLE: 1377334

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	20.9	104	64-132	

MATRIX SPIKE SAMPLE: 1377335

Parameter	Units	60168538001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	22.5	22.1	94	64-132	

SAMPLE DUPLICATE: 1377336

Parameter	Units	60168538002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	ND		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: WET/47739
QC Batch Method: SM 2540D
Analysis Method: SM 2540D
Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60168566001

METHOD BLANK: 1374047
Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/08/14 09:38	

SAMPLE DUPLICATE: 1374048

Parameter	Units	60168566001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	5640	5660	0	10	

SAMPLE DUPLICATE: 1374049

Parameter	Units	60168551002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: WET/47758
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60168566001

SAMPLE DUPLICATE: 1374784

Parameter	Units	60168216002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	0	5	H1,H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: WET/47723
QC Batch Method: SM 5210B
Analysis Method: SM 5210B
Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60168566001

METHOD BLANK: 1373338
Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/12/14 12:09	

LABORATORY CONTROL SAMPLE: 1373339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	191	96	85-115	

SAMPLE DUPLICATE: 1373340

Parameter	Units	60168552001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	656	660	1	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: WETA/29320
QC Batch Method: EPA 350.1
Analysis Method: EPA 350.1
Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60168566001

METHOD BLANK: 1373302
Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/07/14 14:13	

LABORATORY CONTROL SAMPLE: 1373303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	99	90-110	

MATRIX SPIKE SAMPLE: 1373304

Parameter	Units	60168394001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.11	2	1.4	65	90-110	M1

MATRIX SPIKE SAMPLE: 1373305

Parameter	Units	60168425002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	9.2	10	16.9	77	90-110	M1

SAMPLE DUPLICATE: 1373306

Parameter	Units	60168497001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.78	0.73	7	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

QC Batch: WETA/29410 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60168566001

METHOD BLANK: 1377413 | Matrix: Water
Associated Lab Samples: 60168566001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/14/14 12:59	

LABORATORY CONTROL SAMPLE: 1377414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	49.5	99	90-110	

MATRIX SPIKE SAMPLE: 1377415

Parameter	Units	60168566001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	55100	25000	80900	103	90-110	

SAMPLE DUPLICATE: 1377416

Parameter	Units	60168582001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	56800	55000	3	25	

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QUALIFIERS

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

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.

SAMPLE QUALIFIERS

Sample: 60168566001

[1] The samples were received outside of required temperature range. Analysis was completed upon client approval.

ANALYTE QUALIFIERS

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

H1 Analysis conducted outside the EPA method holding time.

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.

N2 The lab does not hold TNI accreditation for this parameter.

R1 RPD value was outside control limits.

S0 Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF CB 05-05-14
Pace Project No.: 60168566

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168566001	**CB 05-05-14**	EPA 200.7	MPRP/27157	EPA 200.7	ICP/20588
60168566001	**CB 05-05-14**	EPA 200.7	MPRP/27227	EPA 200.7	ICP/20625
60168566001	**CB 05-05-14**	EPA 245.1	MERP/8392	EPA 245.1	MERC/8347
60168566001	**CB 05-05-14**	EPA 245.1	MERP/8391	EPA 245.1	MERC/8346
60168566001	**CB 05-05-14**	EPA 625	OEXT/44088	EPA 625	MSSV/14113
60168566001	**CB 05-05-14**	EPA 624 Low	MSV/61426		
60168566001	**CB 05-05-14**	EPA 624 Low	MSV/61484		
60168566002	**TRIP BLANK**	EPA 624 Low	MSV/61426		
60168566001	**CB 05-05-14**	EPA 1664A	WET/47805		
60168566001	**CB 05-05-14**	EPA 1664A	WET/47840		
60168566001	**CB 05-05-14**	SM 2540D	WET/47739		
60168566001	**CB 05-05-14**	SM 4500-H+B	WET/47758		
60168566001	**CB 05-05-14**	SM 5210B	WET/47723	SM 5210B	WET/47799
60168566001	**CB 05-05-14**	EPA 350.1	WETA/29320		
60168566001	**CB 05-05-14**	EPA 410.4	WETA/29410		

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Sample Condition Upon Receipt

WO#: 60168566
60168566

Client Name: Burr

Optional
Proj Due Date:
Proj Name:

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-239 / T-194 **Type of Ice:** Wet Blue None (circle one) melted!! ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 7.6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/7/14

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. BOD pH
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	Sodium Thio sulfate vials received for 624 VOCs
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☑No ☐N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix:	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	HNO_3 initial pH ~5.0; added 2.5 ml; final pH ~4.0
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A	H_2SO_4 initial pH ~5.0; added 2 ml; final pH ~3.0 14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed: Lot # of added preservative: 12513-23-2, 12522-2-7
Trip Blank present: Pace Trip Blank lot # (if purchased): Apr 24	☑Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐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: _____ Date: 5/9/14

Pace Analytical

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

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:	AMY HARGROVE/BRIAN POWER
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

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	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	BOD SM 5210B	Residual Chlorine (Y/N)	60168566
1	CB 05-05-14	OT	G	5/5/14	1106	—	—		5	10	4	1	0						X	X	X	X	X	X	X	X	X	X	X		3(AG3S) 2(AG4U) AG3U 2(AG2U) AG3U 4.0 AG3S 3.0
2	TRIP BLANK	—	—	—	—	—	—		2	2																X					2(AG4U)
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

METALS LIST total & LF Dis: Al,Sb,As,Be,Cd,Cr, Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn and Mercury

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-6-14	2:15pm	Marguette Hearth	5-6-14	2:15pm				
SITE ADDRESS: BRIDGETON LF				PASI	5/7/14	0150	7.6	melted	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:	WILLIAM ABERNATHY					
SIGNATURE of SAMPLER:		DATE Signed: 5/5/14				

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May 14, 2014

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

RE: Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 07, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

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 316-290
Pace Project No.: 60168568

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168568001	**316-290**	Water	05/05/14 14:20	05/07/14 01:50
60168568002	**TRIP BLANK**	Water	05/05/14 14:20	05/07/14 01:50

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168568001	**316-290**	EPA 200.7	SMW	15
		EPA 200.7	TDS	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	RAH	1
		SM 4500-H+B	RAH	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60168568002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

Sample: 316-290 **Lab ID: 60168568001** Collected: 05/05/14 14:20 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**18500**	ug/L	750	2	05/08/14 15:35	05/09/14 11:35	7429-90-5	
Antimony	ND	ug/L	100	2	05/08/14 15:35	05/09/14 11:35	7440-36-0	D3
Arsenic	**1100**	ug/L	50.0	1	05/08/14 15:35	05/09/14 11:31	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/08/14 15:35	05/09/14 11:31	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:31	7440-43-9	
Chromium	**266**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:31	7440-47-3	
Cobalt	**49.5**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:31	7440-48-4	
Copper	ND	ug/L	50.0	1	05/08/14 15:35	05/09/14 11:31	7440-50-8	
Iron	**860000**	ug/L	250	1	05/08/14 15:35	05/09/14 11:31	7439-89-6	
Lead	**116**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:31	7439-92-1	
Nickel	**135**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:31	7440-02-0	
Selenium	**84.2**	ug/L	75.0	1	05/08/14 15:35	05/09/14 11:31	7782-49-2	
Silver	ND	ug/L	35.0	1	05/08/14 15:35	05/09/14 11:31	7440-22-4	
Thallium	ND	ug/L	100	1	05/08/14 15:35	05/09/14 11:31	7440-28-0	
Zinc	**4320**	ug/L	500	2	05/08/14 15:35	05/09/14 11:35	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1300**	ug/L	750	2	05/13/14 17:00	05/14/14 14:11	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:09	7440-36-0	
Arsenic, Dissolved	**732**	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:09	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/13/14 17:00	05/14/14 14:09	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:09	7440-43-9	
Chromium, Dissolved	**139**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:09	7440-47-3	
Cobalt, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:09	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:09	7440-50-8	
Iron, Dissolved	**308000**	ug/L	250	1	05/13/14 17:00	05/14/14 14:09	7439-89-6	
Lead, Dissolved	**30.4**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:09	7439-92-1	
Nickel, Dissolved	**64.6**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:09	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/13/14 17:00	05/14/14 14:09	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/13/14 17:00	05/14/14 14:09	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/13/14 17:00	05/14/14 14:09	7440-28-0	
Zinc, Dissolved	**3310**	ug/L	500	2	05/13/14 17:00	05/14/14 14:11	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/14/14 10:30	05/14/14 14:48	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/14/14 10:30	05/14/14 14:22	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/09/14 00:00	05/14/14 04:41	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 04:41	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 04:41	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 04:41	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/09/14 00:00	05/14/14 04:41	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**8100**	ug/L	4000	2	05/09/14 00:00	05/14/14 04:41		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

Sample: 316-290 **Lab ID: 60168568001** Collected: 05/05/14 14:20 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1450**	ug/L	1000	2	05/09/14 00:00	05/14/14 04:41	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 04:41	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 04:41	87-86-5	
Phenol	**11300**	ug/L	1000	2	05/09/14 00:00	05/14/14 04:41	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 04:41	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 04:41	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	134	%	33-120	2	05/09/14 00:00	05/14/14 04:41	4165-60-0	S0
2-Fluorobiphenyl (S)	70	%	39-120	2	05/09/14 00:00	05/14/14 04:41	321-60-8	
Terphenyl-d14 (S)	66	%	45-120	2	05/09/14 00:00	05/14/14 04:41	1718-51-0	
Phenol-d6 (S)	40	%	11-120	2	05/09/14 00:00	05/14/14 04:41	13127-88-3	
2-Fluorophenol (S)	42	%	17-120	2	05/09/14 00:00	05/14/14 04:41	367-12-4	
2,4,6-Tribromophenol (S)	76	%	39-120	2	05/09/14 00:00	05/14/14 04:41	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**142000**	ug/L	2500	250		05/07/14 16:15	67-64-1	N2
Benzene	ND	ug/L	250	250		05/07/14 16:15	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/07/14 16:15	75-27-4	
Bromoform	ND	ug/L	250	250		05/07/14 16:15	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/07/14 16:15	74-83-9	
2-Butanone (MEK)	**58400**	ug/L	2500	250		05/07/14 16:15	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/07/14 16:15	56-23-5	
Chloroethane	ND	ug/L	250	250		05/07/14 16:15	75-00-3	
Chloroform	ND	ug/L	250	250		05/07/14 16:15	67-66-3	
1,4-Dichlorobenzene	**368**	ug/L	250	250		05/07/14 16:15	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/07/14 16:15	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/07/14 16:15	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/07/14 16:15	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/07/14 16:15	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/07/14 16:15	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/07/14 16:15	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/07/14 16:15	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/07/14 16:15	127-18-4	
Toluene	ND	ug/L	250	250		05/07/14 16:15	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/07/14 16:15	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/07/14 16:15	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/07/14 16:15	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/07/14 16:15	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/07/14 16:15	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	104	%	80-120	250		05/07/14 16:15	460-00-4	HS
Toluene-d8 (S)	97	%	80-120	250		05/07/14 16:15	2037-26-5	
1,2-Dichloroethane-d4 (S)	98	%	80-120	250		05/07/14 16:15	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/07/14 16:15		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**49.2**	mg/L	5.0	1		05/13/14 06:15		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

Sample: 316-290 **Lab ID: 60168568001** Collected: 05/05/14 14:20 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**8.3**	mg/L	5.0	1		05/14/14 07:44		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4500**	mg/L	5.0	1		05/08/14 09:38		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.3**	Std. Units	0.10	1		05/09/14 12:35		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**37500**	mg/L	2.0	1	05/07/14 12:05	05/12/14 12:28		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**622**	mg/L	20.0	200		05/07/14 14:43	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**61000**	mg/L	5000	500		05/14/14 13:01		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

Sample: TRIP BLANK **Lab ID: 60168568002** Collected: 05/05/14 14:20 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/07/14 16:47	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/07/14 16:47	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/07/14 16:47	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/07/14 16:47	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/07/14 16:47	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/07/14 16:47	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/07/14 16:47	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/07/14 16:47	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/07/14 16:47	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/07/14 16:47	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/07/14 16:47	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/07/14 16:47	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/07/14 16:47	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/07/14 16:47	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/07/14 16:47	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/07/14 16:47	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/07/14 16:47	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/07/14 16:47	127-18-4	
Toluene	ND	ug/L	1.0	1		05/07/14 16:47	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/07/14 16:47	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/07/14 16:47	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/07/14 16:47	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/07/14 16:47	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/07/14 16:47	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	102	%	80-120	1		05/07/14 16:47	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		05/07/14 16:47	2037-26-5	
1,2-Dichloroethane-d4 (S)	104	%	80-120	1		05/07/14 16:47	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/07/14 16:47		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: MERP/8392
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury
Associated Lab Samples: 60168568001

METHOD BLANK: 1377546
Matrix: Water
Associated Lab Samples: 60168568001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/14/14 14:37	

LABORATORY CONTROL SAMPLE: 1377547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377548 1377549

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	150	150	166	151	107	98	70-130	9	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: MERP/8391
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60168568001

METHOD BLANK: 1377535
Matrix: Water
Associated Lab Samples: 60168568001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/14/14 14:11	

LABORATORY CONTROL SAMPLE: 1377536

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: 1377537 1377538

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	142	147	95	98	70-130	3	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: MPRP/27157
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60168568001

METHOD BLANK: 1374213
Matrix: Water
Associated Lab Samples: 60168568001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/09/14 11:05	
Antimony	ug/L	ND	10.0	05/09/14 11:05	
Arsenic	ug/L	ND	10.0	05/09/14 11:05	
Beryllium	ug/L	ND	1.0	05/09/14 11:05	
Cadmium	ug/L	ND	5.0	05/09/14 11:05	
Chromium	ug/L	ND	5.0	05/09/14 11:05	
Cobalt	ug/L	ND	5.0	05/09/14 11:05	
Copper	ug/L	ND	10.0	05/09/14 11:05	
Iron	ug/L	ND	50.0	05/09/14 11:05	
Lead	ug/L	ND	5.0	05/09/14 11:05	
Nickel	ug/L	ND	5.0	05/09/14 11:05	
Selenium	ug/L	ND	15.0	05/09/14 11:05	
Silver	ug/L	ND	7.0	05/09/14 11:05	
Thallium	ug/L	ND	20.0	05/09/14 11:05	
Zinc	ug/L	ND	50.0	05/09/14 11:05	

LABORATORY CONTROL SAMPLE: 1374214

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10400	104	85-115	
Antimony	ug/L	1000	1060	106	85-115	
Arsenic	ug/L	1000	994	99	85-115	
Beryllium	ug/L	1000	1020	102	85-115	
Cadmium	ug/L	1000	1030	103	85-115	
Chromium	ug/L	1000	1000	100	85-115	
Cobalt	ug/L	1000	1040	104	85-115	
Copper	ug/L	1000	1020	102	85-115	
Iron	ug/L	10000	10400	104	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	502	100	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1374215 1374216

Parameter	Units	60168277002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	92.6	10000	10000	10600	10400	105	104	70-130	2	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1374215 1374216

Parameter	Units	60168277002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	1000	1000	1080	1070	108	107	70-130	1	7	
Arsenic	ug/L	ND	1000	1000	1010	1000	101	100	70-130	1	10	
Beryllium	ug/L	ND	1000	1000	1040	1030	104	103	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1050	1040	105	104	70-130	1	10	
Chromium	ug/L	0.015 mg/L	1000	1000	1020	1010	100	99	70-130	1	10	
Cobalt	ug/L	ND	1000	1000	1050	1040	105	104	70-130	1	6	
Copper	ug/L	0.21 mg/L	1000	1000	1240	1230	104	102	70-130	1	11	
Iron	ug/L	347	10000	10000	10800	10600	105	103	70-130	2	10	
Lead	ug/L	ND	1000	1000	1040	1020	104	102	70-130	1	10	
Nickel	ug/L	0.0073 mg/L	1000	1000	1040	1030	104	103	70-130	1	10	
Selenium	ug/L	ND	1000	1000	1040	1030	104	103	70-130	1	10	
Silver	ug/L	ND	500	500	513	505	102	101	70-130	1	10	
Thallium	ug/L	ND	1000	1000	1020	1000	101	100	70-130	1	6	
Zinc	ug/L	0.11 mg/L	1000	1000	1120	1100	101	100	70-130	1	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: MPRP/27227
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60168568001

METHOD BLANK: 1377214
Matrix: Water
Associated Lab Samples: 60168568001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/14/14 13:51	
Antimony, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Arsenic, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Beryllium, Dissolved	ug/L	ND	1.0	05/14/14 13:51	
Cadmium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Chromium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Cobalt, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Copper, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Iron, Dissolved	ug/L	ND	50.0	05/14/14 13:51	
Lead, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Nickel, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Selenium, Dissolved	ug/L	ND	15.0	05/14/14 13:51	
Silver, Dissolved	ug/L	ND	7.0	05/14/14 13:51	
Thallium, Dissolved	ug/L	ND	20.0	05/14/14 13:51	
Zinc, Dissolved	ug/L	ND	50.0	05/14/14 13:51	

LABORATORY CONTROL SAMPLE: 1377215

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9500	95	85-115	
Antimony, Dissolved	ug/L	1000	996	100	85-115	
Arsenic, Dissolved	ug/L	1000	946	95	85-115	
Beryllium, Dissolved	ug/L	1000	954	95	85-115	
Cadmium, Dissolved	ug/L	1000	968	97	85-115	
Chromium, Dissolved	ug/L	1000	926	93	85-115	
Cobalt, Dissolved	ug/L	1000	985	99	85-115	
Copper, Dissolved	ug/L	1000	983	98	85-115	
Iron, Dissolved	ug/L	10000	9620	96	85-115	
Lead, Dissolved	ug/L	1000	977	98	85-115	
Nickel, Dissolved	ug/L	1000	985	99	85-115	
Selenium, Dissolved	ug/L	1000	967	97	85-115	
Silver, Dissolved	ug/L	500	471	94	85-115	
Thallium, Dissolved	ug/L	1000	997	100	85-115	
Zinc, Dissolved	ug/L	1000	942	94	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1410	50000	50000	48200	48300	94	94	70-130	0	8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	5000	5000	5080	5140	101	103	70-130	1	7	
Arsenic, Dissolved	ug/L	830	5000	5000	5880	5790	101	99	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4450	4550	89	91	70-130	2	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	4900	4980	98	100	70-130	2	10	
Chromium, Dissolved	ug/L	143	5000	5000	4500	4580	87	89	70-130	2	10	
Cobalt, Dissolved	ug/L	ND	5000	5000	4550	4650	91	93	70-130	2	6	
Copper, Dissolved	ug/L	ND	5000	5000	5100	5180	101	103	70-130	1	11	
Iron, Dissolved	ug/L	328000	50000	50000	369000	330000	83	4	70-130	11	10	M1,R1
Lead, Dissolved	ug/L	35.3	5000	5000	4380	4470	87	89	70-130	2	10	
Nickel, Dissolved	ug/L	72.8	5000	5000	4520	4610	89	91	70-130	2	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5470	5480	109	110	70-130	0	10	
Silver, Dissolved	ug/L	ND	2500	2500	2460	2500	98	100	70-130	1	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4180	4300	84	86	70-130	3	6	
Zinc, Dissolved	ug/L	3930	5000	5000	8310	7800	88	77	70-130	6	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: MSV/61426 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60168568001, 60168568002

METHOD BLANK: 1373368 | Matrix: Water
Associated Lab Samples: 60168568001, 60168568002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/07/14 11:16	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,2-Dichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/07/14 11:16	
2-Butanone (MEK)	ug/L	ND	10.0	05/07/14 11:16	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/07/14 11:16	N2
Acetone	ug/L	ND	10.0	05/07/14 11:16	N2
Benzene	ug/L	ND	1.0	05/07/14 11:16	
Bromodichloromethane	ug/L	ND	1.0	05/07/14 11:16	
Bromoform	ug/L	ND	1.0	05/07/14 11:16	
Bromomethane	ug/L	ND	5.0	05/07/14 11:16	
Carbon tetrachloride	ug/L	ND	1.0	05/07/14 11:16	
Chloroethane	ug/L	ND	1.0	05/07/14 11:16	
Chloroform	ug/L	ND	1.0	05/07/14 11:16	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/07/14 11:16	N2
Ethylbenzene	ug/L	ND	1.0	05/07/14 11:16	
Methylene chloride	ug/L	ND	1.0	05/07/14 11:16	
Tetrachloroethene	ug/L	ND	1.0	05/07/14 11:16	
Toluene	ug/L	ND	1.0	05/07/14 11:16	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/07/14 11:16	
Trichloroethene	ug/L	ND	1.0	05/07/14 11:16	
Vinyl chloride	ug/L	ND	1.0	05/07/14 11:16	
Xylene (Total)	ug/L	ND	3.0	05/07/14 11:16	N2
1,2-Dichloroethane-d4 (S)	%	106	80-120	05/07/14 11:16	
4-Bromofluorobenzene (S)	%	103	80-120	05/07/14 11:16	
Toluene-d8 (S)	%	105	80-120	05/07/14 11:16	

LABORATORY CONTROL SAMPLE: 1373369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.8	94	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	67-127	N2
1,1,2-Trichloroethane	ug/L	20	20.8	104	67-124	
1,2-Dichloroethane	ug/L	20	20.6	103	70-126	
1,4-Dichlorobenzene	ug/L	20	18.5	92	74-120	
2-Butanone (MEK)	ug/L	100	109	109	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	124	124	59-131	N2
Acetone	ug/L	100	104	104	38-134	N2
Benzene	ug/L	20	18.7	94	75-120	
Bromodichloromethane	ug/L	20	20.4	102	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

LABORATORY CONTROL SAMPLE: 1373369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	19.0	95	65-127	
Bromomethane	ug/L	20	11.4	57	13-157	
Carbon tetrachloride	ug/L	20	18.6	93	70-131	
Chloroethane	ug/L	20	19.3	96	47-133	
Chloroform	ug/L	20	19.0	95	65-127	
cis-1,2-Dichloroethene	ug/L	20	19.5	97	68-127	N2
Ethylbenzene	ug/L	20	19.7	99	74-122	
Methylene chloride	ug/L	20	19.3	96	64-129	
Tetrachloroethene	ug/L	20	17.5	87	73-125	
Toluene	ug/L	20	18.8	94	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.5	93	66-129	
Trichloroethene	ug/L	20	18.4	92	71-123	
Vinyl chloride	ug/L	20	17.7	88	43-129	
Xylene (Total)	ug/L	60	60.1	100	75-121	N2
1,2-Dichloroethane-d4 (S)	%			106	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1373370

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4460	89	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5470	109	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	5020	100	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4690	94	49-144	
1,4-Dichlorobenzene	ug/L	252	5000	4760	90	33-140	
2-Butanone (MEK)	ug/L	65600	25000	90800	101	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	31800	124	40-160	N2
Acetone	ug/L	157000	25000	182000	98	10-160	N2
Benzene	ug/L	ND	5000	4020	80	37-151	
Bromodichloromethane	ug/L	ND	5000	5070	101	35-142	
Bromoform	ug/L	ND	5000	4780	96	45-142	
Bromomethane	ug/L	ND	5000	1330	27	10-158	
Carbon tetrachloride	ug/L	ND	5000	4550	91	70-140	
Chloroethane	ug/L	ND	5000	3400	68	19-152	
Chloroform	ug/L	ND	5000	4620	92	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4370	87	34-147	N2
Ethylbenzene	ug/L	ND	5000	4420	88	40-142	
Methylene chloride	ug/L	ND	5000	3920	78	31-144	
Tetrachloroethene	ug/L	ND	5000	3930	79	64-148	
Toluene	ug/L	ND	5000	4280	86	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3510	70	54-151	
Trichloroethene	ug/L	ND	5000	4430	89	71-149	
Vinyl chloride	ug/L	ND	5000	2630	53	22-146	
Xylene (Total)	ug/L	ND	15000	13600	91	37-144	N2
1,2-Dichloroethane-d4 (S)	%				105	80-120	
4-Bromofluorobenzene (S)	%				103	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

MATRIX SPIKE SAMPLE: 1373370

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				102	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: OEXT/44088 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60168568001

METHOD BLANK: 1374754 | Matrix: Water
Associated Lab Samples: 60168568001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/14/14 02:35	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/14/14 02:35	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/14/14 02:35	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/14/14 02:35	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/14/14 02:35	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/14/14 02:35	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/14/14 02:35	
Hexachloroethane	ug/L	ND	5.0	05/14/14 02:35	
Naphthalene	ug/L	ND	5.0	05/14/14 02:35	
Nitrobenzene	ug/L	ND	5.0	05/14/14 02:35	
Pentachlorophenol	ug/L	ND	5.0	05/14/14 02:35	
Phenol	ug/L	ND	5.0	05/14/14 02:35	
2,4,6-Tribromophenol (S)	%	58	39-120	05/14/14 02:35	
2-Fluorobiphenyl (S)	%	54	39-120	05/14/14 02:35	
2-Fluorophenol (S)	%	31	17-120	05/14/14 02:35	
Nitrobenzene-d5 (S)	%	51	33-120	05/14/14 02:35	
Phenol-d6 (S)	%	20	11-120	05/14/14 02:35	
Terphenyl-d14 (S)	%	64	45-120	05/14/14 02:35	

LABORATORY CONTROL SAMPLE: 1374755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	31.7	63	46-120	
2,4,6-Trichlorophenol	ug/L	50	34.3	69	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	27.7	55	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	25.7	51	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	38.2	76	40-133	
Hexachloro-1,3-butadiene	ug/L	50	30.0	60	44-116	
Hexachlorocyclopentadiene	ug/L	100	51.9	52	24-120	
Hexachloroethane	ug/L	50	29.9	60	43-113	
Naphthalene	ug/L	50	32.9	66	48-120	
Nitrobenzene	ug/L	50	31.6	63	48-120	
Pentachlorophenol	ug/L	50	39.8	80	47-120	
Phenol	ug/L	50	13.6	27	16-112	
2,4,6-Tribromophenol (S)	%			72	39-120	
2-Fluorobiphenyl (S)	%			66	39-120	
2-Fluorophenol (S)	%			39	17-120	
Nitrobenzene-d5 (S)	%			63	33-120	
Phenol-d6 (S)	%			25	11-120	
Terphenyl-d14 (S)	%			73	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

MATRIX SPIKE SAMPLE: 1374756

Parameter	Units	60168566001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3340	67	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	3660	73	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3510	70	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7490	5000	9480	40	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	3890J	78	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3090	62	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	6410	64	11-120	
Hexachloroethane	ug/L	ND	5000	3420	68	40-113	
Naphthalene	ug/L	1650	5000	4830	64	45-120	
Nitrobenzene	ug/L	ND	5000	3480	70	38-120	
Pentachlorophenol	ug/L	ND	5000	4590	92	43-135	
Phenol	ug/L	10400	5000	10300	-3	13-112	M1
2,4,6-Tribromophenol (S)	%				76	39-120	
2-Fluorobiphenyl (S)	%				69	39-120	
2-Fluorophenol (S)	%				39	17-120	
Nitrobenzene-d5 (S)	%				126	33-120	S0
Phenol-d6 (S)	%				37	11-120	
Terphenyl-d14 (S)	%				65	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: WET/47805 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168568001

METHOD BLANK: 1376639 | Matrix: Water
Associated Lab Samples: 60168568001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/13/14 06:13	

LABORATORY CONTROL SAMPLE: 1376640

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	37.5	94	78-114	

MATRIX SPIKE SAMPLE: 1376644

Parameter	Units	60168874001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.4	23.9	55	78-114	M1

SAMPLE DUPLICATE: 1376643

Parameter	Units	60168320002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	2.5J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: WET/47840 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60168568001

METHOD BLANK: 1377333 | Matrix: Water
Associated Lab Samples: 60168568001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/14/14 07:42	

LABORATORY CONTROL SAMPLE: 1377334

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	20.9	104	64-132	

MATRIX SPIKE SAMPLE: 1377335

Parameter	Units	60168538001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	22.5	22.1	94	64-132	

SAMPLE DUPLICATE: 1377336

Parameter	Units	60168538002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	ND		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: WET/47739
QC Batch Method: SM 2540D
Analysis Method: SM 2540D
Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60168568001

METHOD BLANK: 1374047
Matrix: Water
Associated Lab Samples: 60168568001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/08/14 09:38	

SAMPLE DUPLICATE: 1374048

Parameter	Units	60168566001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	5640	5660	0	10	

SAMPLE DUPLICATE: 1374049

Parameter	Units	60168551002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: WET/47758
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60168568001

SAMPLE DUPLICATE: 1374784

Parameter	Units	60168216002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	0	5	H1,H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: WET/47723 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60168568001

METHOD BLANK: 1373338 | Matrix: Water
Associated Lab Samples: 60168568001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/12/14 12:09	

LABORATORY CONTROL SAMPLE: 1373339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	191	96	85-115	

SAMPLE DUPLICATE: 1373340

Parameter	Units	60168552001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	656	660	1	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: WETA/29320 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60168568001

METHOD BLANK: 1373302 | Matrix: Water
Associated Lab Samples: 60168568001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/07/14 14:13	

LABORATORY CONTROL SAMPLE: 1373303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	99	90-110	

MATRIX SPIKE SAMPLE: 1373304

Parameter	Units	60168394001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.11	2	1.4	65	90-110	M1

MATRIX SPIKE SAMPLE: 1373305

Parameter	Units	60168425002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	9.2	10	16.9	77	90-110	M1

SAMPLE DUPLICATE: 1373306

Parameter	Units	60168497001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.78	0.73	7	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

QC Batch: WETA/29410 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60168568001

METHOD BLANK: 1377413 | Matrix: Water
Associated Lab Samples: 60168568001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/14/14 12:59	

LABORATORY CONTROL SAMPLE: 1377414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	49.5	99	90-110	

MATRIX SPIKE SAMPLE: 1377415

Parameter	Units	60168566001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	55100	25000	80900	103	90-110	

SAMPLE DUPLICATE: 1377416

Parameter	Units	60168582001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	56800	55000	3	25	

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QUALIFIERS

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

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.

SAMPLE QUALIFIERS

Sample: 60168568001

[1] The samples were received outside of required temperature range. Analysis was completed upon client approval.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H1	Analysis conducted outside the EPA method holding time.
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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-290
Pace Project No.: 60168568

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168568001	**316-290**	EPA 200.7	MPRP/27157	EPA 200.7	ICP/20588
60168568001	**316-290**	EPA 200.7	MPRP/27227	EPA 200.7	ICP/20625
60168568001	**316-290**	EPA 245.1	MERP/8392	EPA 245.1	MERC/8347
60168568001	**316-290**	EPA 245.1	MERP/8391	EPA 245.1	MERC/8346
60168568001	**316-290**	EPA 625	OEXT/44088	EPA 625	MSSV/14113
60168568001	**316-290**	EPA 624 Low	MSV/61426		
60168568002	**TRIP BLANK**	EPA 624 Low	MSV/61426		
60168568001	**316-290**	EPA 1664A	WET/47805		
60168568001	**316-290**	EPA 1664A	WET/47840		
60168568001	**316-290**	SM 2540D	WET/47739		
60168568001	**316-290**	SM 4500-H+B	WET/47758		
60168568001	**316-290**	SM 5210B	WET/47723	SM 5210B	WET/47799
60168568001	**316-290**	EPA 350.1	WETA/29320		
60168568001	**316-290**	EPA 410.4	WETA/29410		

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WO#: 60168568

60168568

Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt

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-239 / T-194 Type of Ice: Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 6.8 Melted!!

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: 5/21/14

Chain of Custody present:	☑Yes ☐No ☐N/A	1.	
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.	
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.	
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6.	BOD pH
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.	
Sufficient volume:	☑Yes ☐No ☐N/A	8.	
Correct containers used:	☑Yes ☐No ☐N/A	9.	Sodium Thiosulfate vials received for 624 VOCs
Pace containers used:	☑Yes ☐No ☐N/A		
Containers intact:	☑Yes ☐No ☐N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.	
Filtered volume received for dissolved tests?	☐Yes ☑No ☐N/A	12.	
Sample labels match COC: Includes date/time/ID/analyses Matrix: WI	☑Yes ☐No ☐N/A	13.	
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	14.	HNO_3 initial pH ~5.0; added 2.5 ml; final pH ~4.0
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A		H_2SO_4 initial pH ~5.0; added 2 ml; final pH ~3.0
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No		Initial when completed: [illegible] Lot # of added preservative: 12513-23-2, 12522-2-7
Trip Blank present: Pace Trip Blank lot # (if purchased): covered	☑Yes ☐No ☐N/A	15.	
Headspace in VOA vials (>6mm):	☑Yes ☐No ☐N/A	16.	headspace in 5 of 5 sample vials - proceed per historical list.
Project sampled in USDA Regulated Area:	☐Yes ☐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: [illegible] Date: 5/21/14

Pace Analytical

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

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:	AMY HARGROVE/BRIAN POWER
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

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B	Residual Chlorine (Y/N)	60168568
1	316-290	OT	G	5/5/14	1420	—	—		12	10	4	1	0						X	X	X	X	X	X	X	X	X	X	X		3(A6GU) 2(A6ZS) 2(BP2U) 2(BP2N) 6(BP3N) 4.0 2.0 BP3S 5(DG9U) 6W1
2	TRIP BLANK			—	—	—	—		2	2																X					2(DG9U) W2
3																															
4																															
5																															
6																															METALS LIST total & LF Dis:
7																															Al,Sb,As,Be,Cd,Cr,
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																															and Mercury
10																															
11																															
12																															

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	[signature] FED	5-6-14	2:15pm	Jeanette Heath	5-6-14	2:15pm				
SITE ADDRESS: BRIDGETON LF				[signature] / PAS	5/7/14	0150	6°C	wet ice	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:	WILLIAM ABERNATHY				
SIGNATURE of SAMPLER: [signature]	DATE Signed: 5/5/14				

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May 14, 2014

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

RE: Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 07, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

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 316-291
Pace Project No.: 60168582

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168582001	**316-291**	Water	05/06/14 07:54	05/07/14 01:50
60168582002	**TRIP BLANK**	Water	05/06/14 07:54	05/07/14 01:50

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168582001	**316-291**	EPA 200.7	SMW	15
		EPA 200.7	TDS	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	RAH	1
		SM 4500-H+B	RAH	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60168582002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

Sample: 316-291 **Lab ID: 60168582001** Collected: 05/06/14 07:54 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**18000**	ug/L	750	2	05/08/14 15:35	05/09/14 11:42	7429-90-5	
Antimony	ND	ug/L	100	2	05/08/14 15:35	05/09/14 11:42	7440-36-0	D3
Arsenic	**1140**	ug/L	50.0	1	05/08/14 15:35	05/09/14 11:38	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/08/14 15:35	05/09/14 11:38	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:38	7440-43-9	
Chromium	**263**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:38	7440-47-3	
Cobalt	**49.7**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:38	7440-48-4	
Copper	ND	ug/L	50.0	1	05/08/14 15:35	05/09/14 11:38	7440-50-8	
Iron	**859000**	ug/L	250	1	05/08/14 15:35	05/09/14 11:38	7439-89-6	
Lead	**120**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:38	7439-92-1	
Nickel	**139**	ug/L	25.0	1	05/08/14 15:35	05/09/14 11:38	7440-02-0	
Selenium	**80.0**	ug/L	75.0	1	05/08/14 15:35	05/09/14 11:38	7782-49-2	
Silver	ND	ug/L	35.0	1	05/08/14 15:35	05/09/14 11:38	7440-22-4	
Thallium	ND	ug/L	100	1	05/08/14 15:35	05/09/14 11:38	7440-28-0	
Zinc	**4580**	ug/L	500	2	05/08/14 15:35	05/09/14 11:42	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1390**	ug/L	750	2	05/13/14 17:00	05/14/14 14:20	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:17	7440-36-0	
Arsenic, Dissolved	**772**	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:17	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/13/14 17:00	05/14/14 14:17	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:17	7440-43-9	
Chromium, Dissolved	**136**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:17	7440-47-3	
Cobalt, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:17	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:17	7440-50-8	
Iron, Dissolved	**323000**	ug/L	250	1	05/13/14 17:00	05/14/14 14:17	7439-89-6	
Lead, Dissolved	**36.0**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:17	7439-92-1	
Nickel, Dissolved	**64.7**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:17	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/13/14 17:00	05/14/14 14:17	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/13/14 17:00	05/14/14 14:17	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/13/14 17:00	05/14/14 14:17	7440-28-0	
Zinc, Dissolved	**3380**	ug/L	500	2	05/13/14 17:00	05/14/14 14:20	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**15.9**	ug/L	6.0	1	05/14/14 10:30	05/14/14 14:51	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/14/14 10:30	05/14/14 14:24	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/09/14 00:00	05/14/14 05:23	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 05:23	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 05:23	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 05:23	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/09/14 00:00	05/14/14 05:23	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**8160**	ug/L	4000	2	05/09/14 00:00	05/14/14 05:23		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

Sample: 316-291 **Lab ID: 60168582001** Collected: 05/06/14 07:54 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**2040**	ug/L	1000	2	05/09/14 00:00	05/14/14 05:23	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 05:23	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 05:23	87-86-5	
Phenol	**11500**	ug/L	1000	2	05/09/14 00:00	05/14/14 05:23	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 05:23	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 05:23	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	138	%	33-120	2	05/09/14 00:00	05/14/14 05:23	4165-60-0	S0
2-Fluorobiphenyl (S)	76	%	39-120	2	05/09/14 00:00	05/14/14 05:23	321-60-8	
Terphenyl-d14 (S)	61	%	45-120	2	05/09/14 00:00	05/14/14 05:23	1718-51-0	
Phenol-d6 (S)	44	%	11-120	2	05/09/14 00:00	05/14/14 05:23	13127-88-3	
2-Fluorophenol (S)	46	%	17-120	2	05/09/14 00:00	05/14/14 05:23	367-12-4	
2,4,6-Tribromophenol (S)	78	%	39-120	2	05/09/14 00:00	05/14/14 05:23	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**152000**	ug/L	2500	250		05/07/14 15:44	67-64-1	N2
Benzene	ND	ug/L	250	250		05/07/14 15:44	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/07/14 15:44	75-27-4	
Bromoform	ND	ug/L	250	250		05/07/14 15:44	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/07/14 15:44	74-83-9	
2-Butanone (MEK)	**62500**	ug/L	2500	250		05/07/14 15:44	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/07/14 15:44	56-23-5	
Chloroethane	ND	ug/L	250	250		05/07/14 15:44	75-00-3	
Chloroform	ND	ug/L	250	250		05/07/14 15:44	67-66-3	
1,4-Dichlorobenzene	**354**	ug/L	250	250		05/07/14 15:44	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/07/14 15:44	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/07/14 15:44	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/07/14 15:44	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/07/14 15:44	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/07/14 15:44	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/07/14 15:44	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/07/14 15:44	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/07/14 15:44	127-18-4	
Toluene	ND	ug/L	250	250		05/07/14 15:44	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/07/14 15:44	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/07/14 15:44	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/07/14 15:44	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/07/14 15:44	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/07/14 15:44	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	103	%	80-120	250		05/07/14 15:44	460-00-4	
Toluene-d8 (S)	97	%	80-120	250		05/07/14 15:44	2037-26-5	
1,2-Dichloroethane-d4 (S)	101	%	80-120	250		05/07/14 15:44	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/07/14 15:44		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**889**	mg/L	5.0	1		05/13/14 06:16		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

Sample: 316-291 **Lab ID: 60168582001** Collected: 05/06/14 07:54 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**7.2**	mg/L	5.0	1		05/14/14 07:44		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4620**	mg/L	5.0	1		05/08/14 09:39		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.3**	Std. Units	0.10	1		05/09/14 12:35		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**36500**	mg/L	2.0	1	05/07/14 12:17	05/12/14 12:38		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**638**	mg/L	20.0	200		05/07/14 14:44	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**56800**	mg/L	5000	500		05/14/14 13:02		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

Sample: TRIP BLANK **Lab ID: 60168582002** Collected: 05/06/14 07:54 Received: 05/07/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/07/14 14:41	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/07/14 14:41	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/07/14 14:41	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/07/14 14:41	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/07/14 14:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/07/14 14:41	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/07/14 14:41	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/07/14 14:41	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/07/14 14:41	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/07/14 14:41	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/07/14 14:41	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/07/14 14:41	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/07/14 14:41	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/07/14 14:41	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/07/14 14:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/07/14 14:41	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/07/14 14:41	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/07/14 14:41	127-18-4	
Toluene	ND	ug/L	1.0	1		05/07/14 14:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/07/14 14:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/07/14 14:41	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/07/14 14:41	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/07/14 14:41	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/07/14 14:41	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	105	%	80-120	1		05/07/14 14:41	460-00-4	
Toluene-d8 (S)	102	%	80-120	1		05/07/14 14:41	2037-26-5	
1,2-Dichloroethane-d4 (S)	106	%	80-120	1		05/07/14 14:41	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/07/14 14:41		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: MERP/8392 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60168582001

METHOD BLANK: 1377546 | Matrix: Water
Associated Lab Samples: 60168582001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/14/14 14:37	

LABORATORY CONTROL SAMPLE: 1377547

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377548 1377549

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	150	150	166	151	107	98	70-130	9	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: MERP/8391 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60168582001

METHOD BLANK: 1377535 | Matrix: Water
Associated Lab Samples: 60168582001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/14/14 14:11	

LABORATORY CONTROL SAMPLE: 1377536

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: 1377537 1377538

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	142	147	95	98	70-130	3	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: MPRP/27157
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60168582001

METHOD BLANK: 1374213
Matrix: Water
Associated Lab Samples: 60168582001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/09/14 11:05	
Antimony	ug/L	ND	10.0	05/09/14 11:05	
Arsenic	ug/L	ND	10.0	05/09/14 11:05	
Beryllium	ug/L	ND	1.0	05/09/14 11:05	
Cadmium	ug/L	ND	5.0	05/09/14 11:05	
Chromium	ug/L	ND	5.0	05/09/14 11:05	
Cobalt	ug/L	ND	5.0	05/09/14 11:05	
Copper	ug/L	ND	10.0	05/09/14 11:05	
Iron	ug/L	ND	50.0	05/09/14 11:05	
Lead	ug/L	ND	5.0	05/09/14 11:05	
Nickel	ug/L	ND	5.0	05/09/14 11:05	
Selenium	ug/L	ND	15.0	05/09/14 11:05	
Silver	ug/L	ND	7.0	05/09/14 11:05	
Thallium	ug/L	ND	20.0	05/09/14 11:05	
Zinc	ug/L	ND	50.0	05/09/14 11:05	

LABORATORY CONTROL SAMPLE: 1374214

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10400	104	85-115	
Antimony	ug/L	1000	1060	106	85-115	
Arsenic	ug/L	1000	994	99	85-115	
Beryllium	ug/L	1000	1020	102	85-115	
Cadmium	ug/L	1000	1030	103	85-115	
Chromium	ug/L	1000	1000	100	85-115	
Cobalt	ug/L	1000	1040	104	85-115	
Copper	ug/L	1000	1020	102	85-115	
Iron	ug/L	10000	10400	104	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	502	100	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1374215 1374216

Parameter	Units	60168277002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	92.6	10000	10000	10600	10400	105	104	70-130	2	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1374215 1374216

Parameter	Units	60168277002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	ND	1000	1000	1080	1070	108	107	70-130	1	7	
Arsenic	ug/L	ND	1000	1000	1010	1000	101	100	70-130	1	10	
Beryllium	ug/L	ND	1000	1000	1040	1030	104	103	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1050	1040	105	104	70-130	1	10	
Chromium	ug/L	0.015 mg/L	1000	1000	1020	1010	100	99	70-130	1	10	
Cobalt	ug/L	ND	1000	1000	1050	1040	105	104	70-130	1	6	
Copper	ug/L	0.21 mg/L	1000	1000	1240	1230	104	102	70-130	1	11	
Iron	ug/L	347	10000	10000	10800	10600	105	103	70-130	2	10	
Lead	ug/L	ND	1000	1000	1040	1020	104	102	70-130	1	10	
Nickel	ug/L	0.0073 mg/L	1000	1000	1040	1030	104	103	70-130	1	10	
Selenium	ug/L	ND	1000	1000	1040	1030	104	103	70-130	1	10	
Silver	ug/L	ND	500	500	513	505	102	101	70-130	1	10	
Thallium	ug/L	ND	1000	1000	1020	1000	101	100	70-130	1	6	
Zinc	ug/L	0.11 mg/L	1000	1000	1120	1100	101	100	70-130	1	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: MPRP/27227
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60168582001

METHOD BLANK: 1377214
Matrix: Water
Associated Lab Samples: 60168582001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/14/14 13:51	
Antimony, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Arsenic, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Beryllium, Dissolved	ug/L	ND	1.0	05/14/14 13:51	
Cadmium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Chromium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Cobalt, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Copper, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Iron, Dissolved	ug/L	ND	50.0	05/14/14 13:51	
Lead, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Nickel, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Selenium, Dissolved	ug/L	ND	15.0	05/14/14 13:51	
Silver, Dissolved	ug/L	ND	7.0	05/14/14 13:51	
Thallium, Dissolved	ug/L	ND	20.0	05/14/14 13:51	
Zinc, Dissolved	ug/L	ND	50.0	05/14/14 13:51	

LABORATORY CONTROL SAMPLE: 1377215

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9500	95	85-115	
Antimony, Dissolved	ug/L	1000	996	100	85-115	
Arsenic, Dissolved	ug/L	1000	946	95	85-115	
Beryllium, Dissolved	ug/L	1000	954	95	85-115	
Cadmium, Dissolved	ug/L	1000	968	97	85-115	
Chromium, Dissolved	ug/L	1000	926	93	85-115	
Cobalt, Dissolved	ug/L	1000	985	99	85-115	
Copper, Dissolved	ug/L	1000	983	98	85-115	
Iron, Dissolved	ug/L	10000	9620	96	85-115	
Lead, Dissolved	ug/L	1000	977	98	85-115	
Nickel, Dissolved	ug/L	1000	985	99	85-115	
Selenium, Dissolved	ug/L	1000	967	97	85-115	
Silver, Dissolved	ug/L	500	471	94	85-115	
Thallium, Dissolved	ug/L	1000	997	100	85-115	
Zinc, Dissolved	ug/L	1000	942	94	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1410	50000	50000	48200	48300	94	94	70-130	0	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	5000	5000	5080	5140	101	103	70-130	1	7	
Arsenic, Dissolved	ug/L	830	5000	5000	5880	5790	101	99	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4450	4550	89	91	70-130	2	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	4900	4980	98	100	70-130	2	10	
Chromium, Dissolved	ug/L	143	5000	5000	4500	4580	87	89	70-130	2	10	
Cobalt, Dissolved	ug/L	ND	5000	5000	4550	4650	91	93	70-130	2	6	
Copper, Dissolved	ug/L	ND	5000	5000	5100	5180	101	103	70-130	1	11	
Iron, Dissolved	ug/L	328000	50000	50000	369000	330000	83	4	70-130	11	10	M1,R1
Lead, Dissolved	ug/L	35.3	5000	5000	4380	4470	87	89	70-130	2	10	
Nickel, Dissolved	ug/L	72.8	5000	5000	4520	4610	89	91	70-130	2	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5470	5480	109	110	70-130	0	10	
Silver, Dissolved	ug/L	ND	2500	2500	2460	2500	98	100	70-130	1	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4180	4300	84	86	70-130	3	6	
Zinc, Dissolved	ug/L	3930	5000	5000	8310	7800	88	77	70-130	6	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: MSV/61426 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60168582001, 60168582002

METHOD BLANK: 1373368 | Matrix: Water
Associated Lab Samples: 60168582001, 60168582002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/07/14 11:16	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,2-Dichloroethane	ug/L	ND	1.0	05/07/14 11:16	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/07/14 11:16	
2-Butanone (MEK)	ug/L	ND	10.0	05/07/14 11:16	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/07/14 11:16	N2
Acetone	ug/L	ND	10.0	05/07/14 11:16	N2
Benzene	ug/L	ND	1.0	05/07/14 11:16	
Bromodichloromethane	ug/L	ND	1.0	05/07/14 11:16	
Bromoform	ug/L	ND	1.0	05/07/14 11:16	
Bromomethane	ug/L	ND	5.0	05/07/14 11:16	
Carbon tetrachloride	ug/L	ND	1.0	05/07/14 11:16	
Chloroethane	ug/L	ND	1.0	05/07/14 11:16	
Chloroform	ug/L	ND	1.0	05/07/14 11:16	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/07/14 11:16	N2
Ethylbenzene	ug/L	ND	1.0	05/07/14 11:16	
Methylene chloride	ug/L	ND	1.0	05/07/14 11:16	
Tetrachloroethene	ug/L	ND	1.0	05/07/14 11:16	
Toluene	ug/L	ND	1.0	05/07/14 11:16	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/07/14 11:16	
Trichloroethene	ug/L	ND	1.0	05/07/14 11:16	
Vinyl chloride	ug/L	ND	1.0	05/07/14 11:16	
Xylene (Total)	ug/L	ND	3.0	05/07/14 11:16	N2
1,2-Dichloroethane-d4 (S)	%	106	80-120	05/07/14 11:16	
4-Bromofluorobenzene (S)	%	103	80-120	05/07/14 11:16	
Toluene-d8 (S)	%	105	80-120	05/07/14 11:16	

LABORATORY CONTROL SAMPLE: 1373369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.8	94	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.8	99	67-127	N2
1,1,2-Trichloroethane	ug/L	20	20.8	104	67-124	
1,2-Dichloroethane	ug/L	20	20.6	103	70-126	
1,4-Dichlorobenzene	ug/L	20	18.5	92	74-120	
2-Butanone (MEK)	ug/L	100	109	109	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	124	124	59-131	N2
Acetone	ug/L	100	104	104	38-134	N2
Benzene	ug/L	20	18.7	94	75-120	
Bromodichloromethane	ug/L	20	20.4	102	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

LABORATORY CONTROL SAMPLE: 1373369

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	19.0	95	65-127	
Bromomethane	ug/L	20	11.4	57	13-157	
Carbon tetrachloride	ug/L	20	18.6	93	70-131	
Chloroethane	ug/L	20	19.3	96	47-133	
Chloroform	ug/L	20	19.0	95	65-127	
cis-1,2-Dichloroethene	ug/L	20	19.5	97	68-127	N2
Ethylbenzene	ug/L	20	19.7	99	74-122	
Methylene chloride	ug/L	20	19.3	96	64-129	
Tetrachloroethene	ug/L	20	17.5	87	73-125	
Toluene	ug/L	20	18.8	94	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.5	93	66-129	
Trichloroethene	ug/L	20	18.4	92	71-123	
Vinyl chloride	ug/L	20	17.7	88	43-129	
Xylene (Total)	ug/L	60	60.1	100	75-121	N2
1,2-Dichloroethane-d4 (S)	%			106	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1373370

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4460	89	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5470	109	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	5020	100	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4690	94	49-144	
1,4-Dichlorobenzene	ug/L	252	5000	4760	90	33-140	
2-Butanone (MEK)	ug/L	65600	25000	90800	101	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	31800	124	40-160	N2
Acetone	ug/L	157000	25000	182000	98	10-160	N2
Benzene	ug/L	ND	5000	4020	80	37-151	
Bromodichloromethane	ug/L	ND	5000	5070	101	35-142	
Bromoform	ug/L	ND	5000	4780	96	45-142	
Bromomethane	ug/L	ND	5000	1330	27	10-158	
Carbon tetrachloride	ug/L	ND	5000	4550	91	70-140	
Chloroethane	ug/L	ND	5000	3400	68	19-152	
Chloroform	ug/L	ND	5000	4620	92	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4370	87	34-147	N2
Ethylbenzene	ug/L	ND	5000	4420	88	40-142	
Methylene chloride	ug/L	ND	5000	3920	78	31-144	
Tetrachloroethene	ug/L	ND	5000	3930	79	64-148	
Toluene	ug/L	ND	5000	4280	86	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3510	70	54-151	
Trichloroethene	ug/L	ND	5000	4430	89	71-149	
Vinyl chloride	ug/L	ND	5000	2630	53	22-146	
Xylene (Total)	ug/L	ND	15000	13600	91	37-144	N2
1,2-Dichloroethane-d4 (S)	%				105	80-120	
4-Bromofluorobenzene (S)	%				103	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

MATRIX SPIKE SAMPLE: 1373370

Parameter	Units	60168436001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				102	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: OEXT/44088 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60168582001

METHOD BLANK: 1374754 | Matrix: Water
Associated Lab Samples: 60168582001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/14/14 02:35	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/14/14 02:35	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/14/14 02:35	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/14/14 02:35	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/14/14 02:35	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/14/14 02:35	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/14/14 02:35	
Hexachloroethane	ug/L	ND	5.0	05/14/14 02:35	
Naphthalene	ug/L	ND	5.0	05/14/14 02:35	
Nitrobenzene	ug/L	ND	5.0	05/14/14 02:35	
Pentachlorophenol	ug/L	ND	5.0	05/14/14 02:35	
Phenol	ug/L	ND	5.0	05/14/14 02:35	
2,4,6-Tribromophenol (S)	%	58	39-120	05/14/14 02:35	
2-Fluorobiphenyl (S)	%	54	39-120	05/14/14 02:35	
2-Fluorophenol (S)	%	31	17-120	05/14/14 02:35	
Nitrobenzene-d5 (S)	%	51	33-120	05/14/14 02:35	
Phenol-d6 (S)	%	20	11-120	05/14/14 02:35	
Terphenyl-d14 (S)	%	64	45-120	05/14/14 02:35	

LABORATORY CONTROL SAMPLE: 1374755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	31.7	63	46-120	
2,4,6-Trichlorophenol	ug/L	50	34.3	69	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	27.7	55	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	25.7	51	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	38.2	76	40-133	
Hexachloro-1,3-butadiene	ug/L	50	30.0	60	44-116	
Hexachlorocyclopentadiene	ug/L	100	51.9	52	24-120	
Hexachloroethane	ug/L	50	29.9	60	43-113	
Naphthalene	ug/L	50	32.9	66	48-120	
Nitrobenzene	ug/L	50	31.6	63	48-120	
Pentachlorophenol	ug/L	50	39.8	80	47-120	
Phenol	ug/L	50	13.6	27	16-112	
2,4,6-Tribromophenol (S)	%			72	39-120	
2-Fluorobiphenyl (S)	%			66	39-120	
2-Fluorophenol (S)	%			39	17-120	
Nitrobenzene-d5 (S)	%			63	33-120	
Phenol-d6 (S)	%			25	11-120	
Terphenyl-d14 (S)	%			73	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

MATRIX SPIKE SAMPLE: 1374756

Parameter	Units	60168566001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3340	67	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	3660	73	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3510	70	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7490	5000	9480	40	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	3890J	78	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3090	62	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	6410	64	11-120	
Hexachloroethane	ug/L	ND	5000	3420	68	40-113	
Naphthalene	ug/L	1650	5000	4830	64	45-120	
Nitrobenzene	ug/L	ND	5000	3480	70	38-120	
Pentachlorophenol	ug/L	ND	5000	4590	92	43-135	
Phenol	ug/L	10400	5000	10300	-3	13-112	M1
2,4,6-Tribromophenol (S)	%				76	39-120	
2-Fluorobiphenyl (S)	%				69	39-120	
2-Fluorophenol (S)	%				39	17-120	
Nitrobenzene-d5 (S)	%				126	33-120	S0
Phenol-d6 (S)	%				37	11-120	
Terphenyl-d14 (S)	%				65	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: WET/47805 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168582001

METHOD BLANK: 1376639 | Matrix: Water
Associated Lab Samples: 60168582001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/13/14 06:13	

LABORATORY CONTROL SAMPLE: 1376640

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	37.5	94	78-114	

MATRIX SPIKE SAMPLE: 1376644

Parameter	Units	60168874001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.4	23.9	55	78-114	M1

SAMPLE DUPLICATE: 1376643

Parameter	Units	60168320002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	2.5J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: WET/47840 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60168582001

METHOD BLANK: 1377333 | Matrix: Water
Associated Lab Samples: 60168582001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/14/14 07:42	

LABORATORY CONTROL SAMPLE: 1377334

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	20.9	104	64-132	

MATRIX SPIKE SAMPLE: 1377335

Parameter	Units	60168538001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	22.5	22.1	94	64-132	

SAMPLE DUPLICATE: 1377336

Parameter	Units	60168538002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	ND		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: WET/47739
QC Batch Method: SM 2540D
Analysis Method: SM 2540D
Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60168582001

METHOD BLANK: 1374047
Matrix: Water
Associated Lab Samples: 60168582001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/08/14 09:38	

SAMPLE DUPLICATE: 1374048

Parameter	Units	60168566001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	5640	5660	0	10	

SAMPLE DUPLICATE: 1374049

Parameter	Units	60168551002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: WET/47758
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60168582001

SAMPLE DUPLICATE: 1374784

Parameter	Units	60168216002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	0	5	H1,H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: WET/47723 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60168582001

METHOD BLANK: 1373338 | Matrix: Water
Associated Lab Samples: 60168582001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/12/14 12:09	

LABORATORY CONTROL SAMPLE: 1373339

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	191	96	85-115	

SAMPLE DUPLICATE: 1373340

Parameter	Units	60168552001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	656	660	1	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: WETA/29320 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60168582001

METHOD BLANK: 1373302 | Matrix: Water
Associated Lab Samples: 60168582001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/07/14 14:13	

LABORATORY CONTROL SAMPLE: 1373303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	99	90-110	

MATRIX SPIKE SAMPLE: 1373304

Parameter	Units	60168394001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.11	2	1.4	65	90-110	M1

MATRIX SPIKE SAMPLE: 1373305

Parameter	Units	60168425002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	9.2	10	16.9	77	90-110	M1

SAMPLE DUPLICATE: 1373306

Parameter	Units	60168497001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.78	0.73	7	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

QC Batch: WETA/29410 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60168582001

METHOD BLANK: 1377413 | Matrix: Water
Associated Lab Samples: 60168582001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/14/14 12:59	

LABORATORY CONTROL SAMPLE: 1377414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	49.5	99	90-110	

MATRIX SPIKE SAMPLE: 1377415

Parameter	Units	60168566001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	55100	25000	80900	103	90-110	

SAMPLE DUPLICATE: 1377416

Parameter	Units	60168582001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	56800	55000	3	25	

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QUALIFIERS

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

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.
H1	Analysis conducted outside the EPA method holding time.
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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-291
Pace Project No.: 60168582

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168582001	**316-291**	EPA 200.7	MPRP/27157	EPA 200.7	ICP/20588
60168582001	**316-291**	EPA 200.7	MPRP/27227	EPA 200.7	ICP/20625
60168582001	**316-291**	EPA 245.1	MERP/8392	EPA 245.1	MERC/8347
60168582001	**316-291**	EPA 245.1	MERP/8391	EPA 245.1	MERC/8346
60168582001	**316-291**	EPA 625	OEXT/44088	EPA 625	MSSV/14113
60168582001	**316-291**	EPA 624 Low	MSV/61426		
60168582002	**TRIP BLANK**	EPA 624 Low	MSV/61426		
60168582001	**316-291**	EPA 1664A	WET/47805		
60168582001	**316-291**	EPA 1664A	WET/47840		
60168582001	**316-291**	SM 2540D	WET/47739		
60168582001	**316-291**	SM 4500-H+B	WET/47758		
60168582001	**316-291**	SM 5210B	WET/47723	SM 5210B	WET/47799
60168582001	**316-291**	EPA 350.1	WETA/29320		
60168582001	**316-291**	EPA 410.4	WETA/29410		

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Sample Condition Upon Receipt

WO#: 60168582
60168582

Client Name: Barr

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☒ x 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 ☑ ZPLC

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 2.6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: PV 5/7/14

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. BOD pH
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	Added 2.5 mL of HNO3 to BP3N. pH 6.0/4.0
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☑No ☐N/A	Added 2.0 mL of H2SO4 to BP3S. pH 6.0/1.5 14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed PV / Lot # of added preservative 12513, 12522
Trip Blank present: Pace Trip Blank lot # (if purchased): cover	☑Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State: MO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/7/14

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

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:	AMY HARGROVE/BRIAN POWER
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

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

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	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	BOD SM 5210B		Residual Chlorine (Y/N)	60168582
1	2AG4U 316-291 1BP3U 3AG3S50494	OT	G	5/6/14	0754	—	—		15	10	4	1	0	1BP3S	1.5				X	X	X	X	X	X	X	X	X	X	1BP3N		4.0 ~~2D6P~~ 2BP2U 04
2	TRIP BLANK	—	—	—	—	—	—		2	2																X						2D6AU 02
3																																
4																																
5																																
6																																METALS LIST total & LF Dis:
7																																Al,Sb,As,Be,Cd,Cr,
8																																Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																																and Mercury
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FGT	5/6/14	2:15	Marquette Hewitt	5/6/14	2:15				
SITE ADDRESS: BRIDGETON LF				PASS	5/7/14	0150	2.6	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:	WILLIAM ABERNATHY				
SIGNATURE of SAMPLER:	DATE Signed: 5/6/14				

Pace Analytical Services, Inc.
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Lenexa, KS 66219
(913)599-5665

May 20, 2014

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

RE: Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 08, 2014. 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 052014 to remove Calcium from metals list reported.

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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

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 316-292
Pace Project No.: 60168703

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168703001	**316-292**	Water	05/07/14 07:18	05/08/14 01:00
60168703002	**TRIP BLANK**	Water	05/07/14 07:18	05/08/14 01:00

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168703001	**316-292**	EPA 200.7	SMW	15
		EPA 200.7	TDS	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	RAH	1
		SM 4500-H+B	RAH	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60168703002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

Sample: 316-292 **Lab ID: 60168703001** Collected: 05/07/14 07:18 Received: 05/08/14 01:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**18200**	ug/L	750	2	05/13/14 09:55	05/14/14 17:17	7429-90-5	
Antimony	ND	ug/L	100	2	05/13/14 09:55	05/14/14 17:17	7440-36-0	D3
Arsenic	**1140**	ug/L	50.0	1	05/13/14 09:55	05/14/14 17:13	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/13/14 09:55	05/14/14 17:13	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:13	7440-43-9	
Chromium	**269**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:13	7440-47-3	
Cobalt	**47.5**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:13	7440-48-4	
Copper	ND	ug/L	50.0	1	05/13/14 09:55	05/14/14 17:13	7440-50-8	
Iron	**872000**	ug/L	250	1	05/13/14 09:55	05/14/14 17:13	7439-89-6	M1
Lead	**123**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:13	7439-92-1	
Nickel	**132**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:13	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/13/14 09:55	05/14/14 17:13	7782-49-2	
Silver	ND	ug/L	35.0	1	05/13/14 09:55	05/14/14 17:13	7440-22-4	
Thallium	ND	ug/L	100	1	05/13/14 09:55	05/14/14 17:13	7440-28-0	
Zinc	**4860**	ug/L	500	2	05/13/14 09:55	05/14/14 17:17	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1490**	ug/L	750	2	05/13/14 17:00	05/14/14 14:27	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:24	7440-36-0	
Arsenic, Dissolved	**914**	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:24	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/13/14 17:00	05/14/14 14:24	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:24	7440-43-9	
Chromium, Dissolved	**157**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:24	7440-47-3	
Cobalt, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:24	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:24	7440-50-8	
Iron, Dissolved	**380000**	ug/L	250	1	05/13/14 17:00	05/14/14 14:24	7439-89-6	
Lead, Dissolved	**31.9**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:24	7439-92-1	
Nickel, Dissolved	**73.0**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:24	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/13/14 17:00	05/14/14 14:24	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/13/14 17:00	05/14/14 14:24	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/13/14 17:00	05/14/14 14:24	7440-28-0	
Zinc, Dissolved	**3650**	ug/L	500	2	05/13/14 17:00	05/14/14 14:27	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**23.1**	ug/L	6.0	1	05/14/14 16:15	05/15/14 11:27	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/14/14 10:30	05/14/14 14:26	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/09/14 00:00	05/14/14 06:05	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 06:05	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 06:05	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 06:05	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/09/14 00:00	05/14/14 06:05	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**9180**	ug/L	4000	2	05/09/14 00:00	05/14/14 06:05		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

Sample: 316-292 **Lab ID: 60168703001** Collected: 05/07/14 07:18 Received: 05/08/14 01:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1600**	ug/L	1000	2	05/09/14 00:00	05/14/14 06:05	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 06:05	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 06:05	87-86-5	
Phenol	**13500**	ug/L	1000	2	05/09/14 00:00	05/14/14 06:05	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 06:05	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/09/14 00:00	05/14/14 06:05	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	153	%	33-120	2	05/09/14 00:00	05/14/14 06:05	4165-60-0	S0
2-Fluorobiphenyl (S)	73	%	39-120	2	05/09/14 00:00	05/14/14 06:05	321-60-8	
Terphenyl-d14 (S)	64	%	45-120	2	05/09/14 00:00	05/14/14 06:05	1718-51-0	
Phenol-d6 (S)	45	%	11-120	2	05/09/14 00:00	05/14/14 06:05	13127-88-3	
2-Fluorophenol (S)	44	%	17-120	2	05/09/14 00:00	05/14/14 06:05	367-12-4	
2,4,6-Tribromophenol (S)	82	%	39-120	2	05/09/14 00:00	05/14/14 06:05	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**139000**	ug/L	2500	250		05/09/14 13:45	67-64-1	N2
Benzene	ND	ug/L	250	250		05/09/14 13:45	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/09/14 13:45	75-27-4	
Bromoform	ND	ug/L	250	250		05/09/14 13:45	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/09/14 13:45	74-83-9	
2-Butanone (MEK)	**61000**	ug/L	2500	250		05/09/14 13:45	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/09/14 13:45	56-23-5	
Chloroethane	ND	ug/L	250	250		05/09/14 13:45	75-00-3	
Chloroform	ND	ug/L	250	250		05/09/14 13:45	67-66-3	
1,4-Dichlorobenzene	**349**	ug/L	250	250		05/09/14 13:45	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/09/14 13:45	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/09/14 13:45	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/09/14 13:45	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/09/14 13:45	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/09/14 13:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/09/14 13:45	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/09/14 13:45	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/09/14 13:45	127-18-4	
Toluene	ND	ug/L	250	250		05/09/14 13:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/09/14 13:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/09/14 13:45	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/09/14 13:45	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/09/14 13:45	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/09/14 13:45	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	102	%	80-120	250		05/09/14 13:45	460-00-4	
Toluene-d8 (S)	104	%	80-120	250		05/09/14 13:45	2037-26-5	
1,2-Dichloroethane-d4 (S)	104	%	80-120	250		05/09/14 13:45	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/09/14 13:45		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1160**	mg/L	5.0	1		05/13/14 06:17		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

Sample: 316-292 **Lab ID: 60168703001** Collected: 05/07/14 07:18 Received: 05/08/14 01:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**7.1**	mg/L	5.0	1		05/14/14 07:46		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**5120**	mg/L	5.0	1		05/09/14 10:49		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.2**	Std. Units	0.10	1		05/09/14 12:35		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**35600**	mg/L	2.0	1	05/08/14 17:34	05/13/14 14:28		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**640**	mg/L	20.0	200		05/13/14 10:38	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**55500**	mg/L	5000	500		05/14/14 13:03		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

Sample: TRIP BLANK **Lab ID: 60168703002** Collected: 05/07/14 07:18 Received: 05/08/14 01:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/09/14 12:41	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/09/14 12:41	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/09/14 12:41	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/09/14 12:41	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/09/14 12:41	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/09/14 12:41	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/09/14 12:41	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/09/14 12:41	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/09/14 12:41	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/09/14 12:41	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/09/14 12:41	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/09/14 12:41	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/09/14 12:41	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/09/14 12:41	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/09/14 12:41	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/09/14 12:41	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/09/14 12:41	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/09/14 12:41	127-18-4	
Toluene	ND	ug/L	1.0	1		05/09/14 12:41	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/09/14 12:41	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/09/14 12:41	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/09/14 12:41	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/09/14 12:41	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/09/14 12:41	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	103	%	80-120	1		05/09/14 12:41	460-00-4	
Toluene-d8 (S)	101	%	80-120	1		05/09/14 12:41	2037-26-5	
1,2-Dichloroethane-d4 (S)	97	%	80-120	1		05/09/14 12:41	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/09/14 12:41		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: MERP/8394 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60168703001

METHOD BLANK: 1378076 | Matrix: Water
Associated Lab Samples: 60168703001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/15/14 10:37	

LABORATORY CONTROL SAMPLE: 1378077

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.4	87	85-115	

MATRIX SPIKE SAMPLE: 1378078

Parameter	Units	60168440001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	5.7	112	70-130	

MATRIX SPIKE SAMPLE: 1378079

Parameter	Units	60168532001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	3.5	70	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: MERP/8391
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60168703001

METHOD BLANK: 1377535
Matrix: Water
Associated Lab Samples: 60168703001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/14/14 14:11	

LABORATORY CONTROL SAMPLE: 1377536

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: 1377537 1377538

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	142	147	95	98	70-130	3	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: MPRP/27213 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60168703001

METHOD BLANK: 1376844 | Matrix: Water
Associated Lab Samples: 60168703001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/14/14 17:04	
Antimony	ug/L	ND	10.0	05/14/14 17:04	
Arsenic	ug/L	ND	10.0	05/14/14 17:04	
Beryllium	ug/L	ND	1.0	05/14/14 17:04	
Cadmium	ug/L	ND	5.0	05/14/14 17:04	
Chromium	ug/L	ND	5.0	05/14/14 17:04	
Cobalt	ug/L	ND	5.0	05/14/14 17:04	
Copper	ug/L	ND	10.0	05/14/14 17:04	
Iron	ug/L	ND	50.0	05/14/14 17:04	
Lead	ug/L	ND	5.0	05/14/14 17:04	
Nickel	ug/L	ND	5.0	05/14/14 17:04	
Selenium	ug/L	ND	15.0	05/14/14 17:04	
Silver	ug/L	ND	7.0	05/14/14 17:04	
Thallium	ug/L	ND	20.0	05/14/14 17:04	
Zinc	ug/L	ND	50.0	05/14/14 17:04	

LABORATORY CONTROL SAMPLE: 1376845

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	986	99	85-115	
Beryllium	ug/L	1000	1020	102	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	992	99	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	1000	100	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	492	98	85-115	
Thallium	ug/L	1000	985	98	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	18200	50000	81700	127	70-130	
Antimony	ug/L	ND	5000	5150	101	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1140	5000	6570	109	70-130	
Beryllium	ug/L	ND	5000	4970	99	70-130	
Cadmium	ug/L	ND	5000	5200	104	70-130	
Chromium	ug/L	269	5000	5130	97	70-130	
Cobalt	ug/L	47.5	5000	4950	98	70-130	
Copper	ug/L	ND	5000	5300	106	70-130	
Iron	ug/L	872000	50000	939000	134	70-130	M1
Lead	ug/L	123	5000	4770	93	70-130	
Nickel	ug/L	132	5000	4970	97	70-130	
Selenium	ug/L	ND	5000	5880	117	70-130	
Silver	ug/L	ND	2500	2640	105	70-130	
Thallium	ug/L	ND	5000	4390	88	70-130	
Zinc	ug/L	4860	5000	9580	94	70-130	

MATRIX SPIKE SAMPLE: 1376847

Parameter	Units	60168779001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	ND	10000	9860	99	70-130	
Antimony	ug/L	ND	1000	1010	100	70-130	
Arsenic	ug/L	ND	1000	990	99	70-130	
Beryllium	ug/L	ND	1000	1000	100	70-130	
Cadmium	ug/L	ND	1000	992	99	70-130	
Chromium	ug/L	ND	1000	985	98	70-130	
Cobalt	ug/L	ND	1000	1020	102	70-130	
Copper	ug/L	24.9	1000	1040	101	70-130	
Iron	ug/L	163	10000	10200	100	70-130	
Lead	ug/L	ND	1000	999	100	70-130	
Nickel	ug/L	7.1	1000	1010	100	70-130	
Selenium	ug/L	ND	1000	1010	101	70-130	
Silver	ug/L	ND	500	497	99	70-130	
Thallium	ug/L	ND	1000	951	95	70-130	
Zinc	ug/L	ND	1000	1040	100	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: MPRP/27227
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60168703001

METHOD BLANK: 1377214
Matrix: Water
Associated Lab Samples: 60168703001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/14/14 13:51	
Antimony, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Arsenic, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Beryllium, Dissolved	ug/L	ND	1.0	05/14/14 13:51	
Cadmium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Chromium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Cobalt, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Copper, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Iron, Dissolved	ug/L	ND	50.0	05/14/14 13:51	
Lead, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Nickel, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Selenium, Dissolved	ug/L	ND	15.0	05/14/14 13:51	
Silver, Dissolved	ug/L	ND	7.0	05/14/14 13:51	
Thallium, Dissolved	ug/L	ND	20.0	05/14/14 13:51	
Zinc, Dissolved	ug/L	ND	50.0	05/14/14 13:51	

LABORATORY CONTROL SAMPLE: 1377215

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9500	95	85-115	
Antimony, Dissolved	ug/L	1000	996	100	85-115	
Arsenic, Dissolved	ug/L	1000	946	95	85-115	
Beryllium, Dissolved	ug/L	1000	954	95	85-115	
Cadmium, Dissolved	ug/L	1000	968	97	85-115	
Chromium, Dissolved	ug/L	1000	926	93	85-115	
Cobalt, Dissolved	ug/L	1000	985	99	85-115	
Copper, Dissolved	ug/L	1000	983	98	85-115	
Iron, Dissolved	ug/L	10000	9620	96	85-115	
Lead, Dissolved	ug/L	1000	977	98	85-115	
Nickel, Dissolved	ug/L	1000	985	99	85-115	
Selenium, Dissolved	ug/L	1000	967	97	85-115	
Silver, Dissolved	ug/L	500	471	94	85-115	
Thallium, Dissolved	ug/L	1000	997	100	85-115	
Zinc, Dissolved	ug/L	1000	942	94	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1410	50000	50000	48200	48300	94	94	70-130	0	8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	5000	5000	5080	5140	101	103	70-130	1	7	
Arsenic, Dissolved	ug/L	830	5000	5000	5880	5790	101	99	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4450	4550	89	91	70-130	2	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	4900	4980	98	100	70-130	2	10	
Chromium, Dissolved	ug/L	143	5000	5000	4500	4580	87	89	70-130	2	10	
Cobalt, Dissolved	ug/L	ND	5000	5000	4550	4650	91	93	70-130	2	6	
Copper, Dissolved	ug/L	ND	5000	5000	5100	5180	101	103	70-130	1	11	
Iron, Dissolved	ug/L	328000	50000	50000	369000	330000	83	4	70-130	11	10	M1,R1
Lead, Dissolved	ug/L	35.3	5000	5000	4380	4470	87	89	70-130	2	10	
Nickel, Dissolved	ug/L	72.8	5000	5000	4520	4610	89	91	70-130	2	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5470	5480	109	110	70-130	0	10	
Silver, Dissolved	ug/L	ND	2500	2500	2460	2500	98	100	70-130	1	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4180	4300	84	86	70-130	3	6	
Zinc, Dissolved	ug/L	3930	5000	5000	8310	7800	88	77	70-130	6	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: MSV/61484 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60168703001, 60168703002

METHOD BLANK: 1374966 | Matrix: Water
Associated Lab Samples: 60168703001, 60168703002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/09/14 12:10	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/09/14 12:10	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/09/14 12:10	
1,2-Dichloroethane	ug/L	ND	1.0	05/09/14 12:10	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/09/14 12:10	
2-Butanone (MEK)	ug/L	ND	10.0	05/09/14 12:10	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/09/14 12:10	N2
Acetone	ug/L	ND	10.0	05/09/14 12:10	N2
Benzene	ug/L	ND	1.0	05/09/14 12:10	
Bromodichloromethane	ug/L	ND	1.0	05/09/14 12:10	
Bromoform	ug/L	ND	1.0	05/09/14 12:10	
Bromomethane	ug/L	ND	5.0	05/09/14 12:10	
Carbon tetrachloride	ug/L	ND	1.0	05/09/14 12:10	
Chloroethane	ug/L	ND	1.0	05/09/14 12:10	
Chloroform	ug/L	ND	1.0	05/09/14 12:10	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/09/14 12:10	N2
Ethylbenzene	ug/L	ND	1.0	05/09/14 12:10	
Methylene chloride	ug/L	ND	1.0	05/09/14 12:10	
Tetrachloroethene	ug/L	ND	1.0	05/09/14 12:10	
Toluene	ug/L	ND	1.0	05/09/14 12:10	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/09/14 12:10	
Trichloroethene	ug/L	ND	1.0	05/09/14 12:10	
Vinyl chloride	ug/L	ND	1.0	05/09/14 12:10	
Xylene (Total)	ug/L	ND	3.0	05/09/14 12:10	N2
1,2-Dichloroethane-d4 (S)	%	98	80-120	05/09/14 12:10	
4-Bromofluorobenzene (S)	%	101	80-120	05/09/14 12:10	
Toluene-d8 (S)	%	100	80-120	05/09/14 12:10	

LABORATORY CONTROL SAMPLE: 1374967

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.1	95	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.9	100	67-127	N2
1,1,2-Trichloroethane	ug/L	20	19.5	98	67-124	
1,2-Dichloroethane	ug/L	20	19.4	97	70-126	
1,4-Dichlorobenzene	ug/L	20	18.9	95	74-120	
2-Butanone (MEK)	ug/L	100	98.9	99	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	113	113	59-131	N2
Acetone	ug/L	100	92.2	92	38-134	N2
Benzene	ug/L	20	19.0	95	75-120	
Bromodichloromethane	ug/L	20	19.5	98	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

LABORATORY CONTROL SAMPLE: 1374967

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	18.6	93	65-127	
Bromomethane	ug/L	20	11.0	55	13-157	
Carbon tetrachloride	ug/L	20	18.5	93	70-131	
Chloroethane	ug/L	20	18.6	93	47-133	
Chloroform	ug/L	20	18.8	94	65-127	
cis-1,2-Dichloroethene	ug/L	20	20.0	100	68-127	N2
Ethylbenzene	ug/L	20	19.8	99	74-122	
Methylene chloride	ug/L	20	19.9	100	64-129	
Tetrachloroethene	ug/L	20	18.2	91	73-125	
Toluene	ug/L	20	18.7	94	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.7	94	66-129	
Trichloroethene	ug/L	20	18.7	93	71-123	
Vinyl chloride	ug/L	20	16.7	84	43-129	
Xylene (Total)	ug/L	60	60.3	101	75-121	N2
1,2-Dichloroethane-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			103	80-120	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE SAMPLE: 1374968

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	3880	78	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4470	89	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4270	85	52-143	
1,2-Dichloroethane	ug/L	ND	5000	3940	79	49-144	
1,4-Dichlorobenzene	ug/L	349	5000	4230	78	33-140	
2-Butanone (MEK)	ug/L	61000	25000	77400	66	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	25400	98	40-160	N2
Acetone	ug/L	139000	25000	143000	13	10-160	N2
Benzene	ug/L	ND	5000	3440	69	37-151	
Bromodichloromethane	ug/L	ND	5000	4370	87	35-142	
Bromoform	ug/L	ND	5000	4110	82	45-142	
Bromomethane	ug/L	ND	5000	1300	26	10-158	
Carbon tetrachloride	ug/L	ND	5000	3740	75	70-140	
Chloroethane	ug/L	ND	5000	2680	54	19-152	
Chloroform	ug/L	ND	5000	3920	78	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	3800	76	34-147	N2
Ethylbenzene	ug/L	ND	5000	3960	79	40-142	
Methylene chloride	ug/L	ND	5000	3590	70	31-144	
Tetrachloroethene	ug/L	ND	5000	3550	71	64-148	
Toluene	ug/L	ND	5000	3700	74	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3100	62	54-151	
Trichloroethene	ug/L	ND	5000	3620	72	71-149	
Vinyl chloride	ug/L	ND	5000	2200	44	22-146	
Xylene (Total)	ug/L	ND	15000	12000	80	37-144	N2
1,2-Dichloroethane-d4 (S)	%				98	80-120	
4-Bromofluorobenzene (S)	%				103	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

MATRIX SPIKE SAMPLE: 1374968

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				101	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: OEXT/44088 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60168703001

METHOD BLANK: 1374754 | Matrix: Water
Associated Lab Samples: 60168703001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/14/14 02:35	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/14/14 02:35	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/14/14 02:35	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/14/14 02:35	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/14/14 02:35	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/14/14 02:35	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/14/14 02:35	
Hexachloroethane	ug/L	ND	5.0	05/14/14 02:35	
Naphthalene	ug/L	ND	5.0	05/14/14 02:35	
Nitrobenzene	ug/L	ND	5.0	05/14/14 02:35	
Pentachlorophenol	ug/L	ND	5.0	05/14/14 02:35	
Phenol	ug/L	ND	5.0	05/14/14 02:35	
2,4,6-Tribromophenol (S)	%	58	39-120	05/14/14 02:35	
2-Fluorobiphenyl (S)	%	54	39-120	05/14/14 02:35	
2-Fluorophenol (S)	%	31	17-120	05/14/14 02:35	
Nitrobenzene-d5 (S)	%	51	33-120	05/14/14 02:35	
Phenol-d6 (S)	%	20	11-120	05/14/14 02:35	
Terphenyl-d14 (S)	%	64	45-120	05/14/14 02:35	

LABORATORY CONTROL SAMPLE: 1374755

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	31.7	63	46-120	
2,4,6-Trichlorophenol	ug/L	50	34.3	69	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	27.7	55	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	25.7	51	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	38.2	76	40-133	
Hexachloro-1,3-butadiene	ug/L	50	30.0	60	44-116	
Hexachlorocyclopentadiene	ug/L	100	51.9	52	24-120	
Hexachloroethane	ug/L	50	29.9	60	43-113	
Naphthalene	ug/L	50	32.9	66	48-120	
Nitrobenzene	ug/L	50	31.6	63	48-120	
Pentachlorophenol	ug/L	50	39.8	80	47-120	
Phenol	ug/L	50	13.6	27	16-112	
2,4,6-Tribromophenol (S)	%			72	39-120	
2-Fluorobiphenyl (S)	%			66	39-120	
2-Fluorophenol (S)	%			39	17-120	
Nitrobenzene-d5 (S)	%			63	33-120	
Phenol-d6 (S)	%			25	11-120	
Terphenyl-d14 (S)	%			73	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

MATRIX SPIKE SAMPLE: 1374756

Parameter	Units	60168566001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3340	67	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	3660	73	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3510	70	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7490	5000	9480	40	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	3890J	78	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3090	62	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	6410	64	11-120	
Hexachloroethane	ug/L	ND	5000	3420	68	40-113	
Naphthalene	ug/L	1650	5000	4830	64	45-120	
Nitrobenzene	ug/L	ND	5000	3480	70	38-120	
Pentachlorophenol	ug/L	ND	5000	4590	92	43-135	
Phenol	ug/L	10400	5000	10300	-3	13-112	M1
2,4,6-Tribromophenol (S)	%				76	39-120	
2-Fluorobiphenyl (S)	%				69	39-120	
2-Fluorophenol (S)	%				39	17-120	
Nitrobenzene-d5 (S)	%				126	33-120	S0
Phenol-d6 (S)	%				37	11-120	
Terphenyl-d14 (S)	%				65	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: WET/47805 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168703001

METHOD BLANK: 1376639 | Matrix: Water
Associated Lab Samples: 60168703001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/13/14 06:13	

LABORATORY CONTROL SAMPLE: 1376640

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	37.5	94	78-114	

MATRIX SPIKE SAMPLE: 1376644

Parameter	Units	60168874001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40.4	23.9	55	78-114	M1

SAMPLE DUPLICATE: 1376643

Parameter	Units	60168320002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	2.5J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: WET/47840 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60168703001

METHOD BLANK: 1377333 | Matrix: Water
Associated Lab Samples: 60168703001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/14/14 07:42	

LABORATORY CONTROL SAMPLE: 1377334

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	20.9	104	64-132	

MATRIX SPIKE SAMPLE: 1377335

Parameter	Units	60168538001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	22.5	22.1	94	64-132	

SAMPLE DUPLICATE: 1377336

Parameter	Units	60168538002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	ND		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: WET/47762
QC Batch Method: SM 2540D
Analysis Method: SM 2540D
Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60168703001

METHOD BLANK: 1374839
Matrix: Water
Associated Lab Samples: 60168703001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/09/14 10:45	

SAMPLE DUPLICATE: 1374840

Parameter	Units	60168699001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	23.0	25.0	8	10	

SAMPLE DUPLICATE: 1374841

Parameter	Units	60168598003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	151	152	1	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: WET/47758
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60168703001

SAMPLE DUPLICATE: 1374784

Parameter	Units	60168216002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.6	7.6	0	5	H1,H6

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: WET/47745 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60168703001

METHOD BLANK: 1374282 | Matrix: Water
Associated Lab Samples: 60168703001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/13/14 14:07	

LABORATORY CONTROL SAMPLE: 1374283

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	200	101	85-115	

SAMPLE DUPLICATE: 1374284

Parameter	Units	60168602002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	3.2	3.1	3	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: WETA/29394 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60168703001

METHOD BLANK: 1376794 | Matrix: Water
Associated Lab Samples: 60168703001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/13/14 10:30	

LABORATORY CONTROL SAMPLE: 1376795

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	100	90-110	

MATRIX SPIKE SAMPLE: 1376796

Parameter	Units	60168617001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.0	101	90-110	

MATRIX SPIKE SAMPLE: 1376797

Parameter	Units	60168719001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	4.8	2	6.2	68	90-110	M1

SAMPLE DUPLICATE: 1376798

Parameter	Units	60168883004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.10	0.11	4	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

QC Batch: WETA/29410 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60168703001

METHOD BLANK: 1377413 | Matrix: Water
Associated Lab Samples: 60168703001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/14/14 12:59	

LABORATORY CONTROL SAMPLE: 1377414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	49.5	99	90-110	

MATRIX SPIKE SAMPLE: 1377415

Parameter	Units	60168566001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	55100	25000	80900	103	90-110	

SAMPLE DUPLICATE: 1377416

Parameter	Units	60168582001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	56800	55000	3	25	

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QUALIFIERS

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

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.
H1	Analysis conducted outside the EPA method holding time.
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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-292
Pace Project No.: 60168703

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168703001	**316-292**	EPA 200.7	MPRP/27213	EPA 200.7	ICP/20616
60168703001	**316-292**	EPA 200.7	MPRP/27227	EPA 200.7	ICP/20625
60168703001	**316-292**	EPA 245.1	MERP/8394	EPA 245.1	MERC/8348
60168703001	**316-292**	EPA 245.1	MERP/8391	EPA 245.1	MERC/8346
60168703001	**316-292**	EPA 625	OEXT/44088	EPA 625	MSSV/14113
60168703001	**316-292**	EPA 624 Low	MSV/61484		
60168703002	**TRIP BLANK**	EPA 624 Low	MSV/61484		
60168703001	**316-292**	EPA 1664A	WET/47805		
60168703001	**316-292**	EPA 1664A	WET/47840		
60168703001	**316-292**	SM 2540D	WET/47762		
60168703001	**316-292**	SM 4500-H+B	WET/47758		
60168703001	**316-292**	SM 5210B	WET/47745	SM 5210B	WET/47833
60168703001	**316-292**	EPA 350.1	WETA/29394		
60168703001	**316-292**	EPA 410.4	WETA/29410		

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Sample Condition Upon Receipt

WO#: 60168703
60168703

Client Name: Barr Engineering

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☑ 2-Reels

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 pk

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 5.0

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/8/14

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. BOD, ph
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	initial ph BP3N 4.5, added 2.5mL HNO3 final 4.0
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A	initial ph BP3S 4.5, added 2.5mL H2SO4, final 3.0 14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed ✓ Lot # of added preservative HNO3 - 12513-23-2 H2SO4 - 12523-2-7
Trip Blank present: Pace Trip Blank lot # (if purchased): Covered	☑Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State: NO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/8/14

Pace Analytical

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency	
State / Location	
	Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B	Residual Chlorine (Y/N)	60168703
1	2BP2u 3/6-2P2 BP3u, 3AG3S, 2AG4u	OT	G	5/7/14	0718	—	—		15	10	4	1	0	BP3N	40				X	X	X	X	X	X	X	X	X	X	X		BP3S2-5, 5DG4u W/
2	TRIP BLANK	—	—	—	—	—	—		2	2																X					2 DG4u (TB)
3																															
4																															
5																															
6																															METALS LIST total & LF Dis:
7																															Al,Sb,As,Be,Cd,Cr,
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																															and Mercury
10																															
11																															
12																															

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-7-14	3:00pm	Nemptto Gorth	5-7-14	3:00pm				
SITE ADDRESS: BRIDGETON LF				E Brockett / Pace	5/8/14	0100	5.0	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:	WILLIAM ABERNATHY					
SIGNATURE of SAMPLER:		DATE Signed: 5/7/14				

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May 20, 2014

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

RE: Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 09, 2014. 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 05/20/14 to correct for EPA 625 compound list.

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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

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 316-293
Pace Project No.: 60168816

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168816001	**316-293**	Water	05/08/14 07:06	05/09/14 01:35
60168816002	**TRIP BLANK**	Water	05/08/14 07:06	05/09/14 01:35

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168816001	**316-293**	EPA 200.7	SMW	15
		EPA 200.7	TDS	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	PRG	28
		EPA 1664A	JMC1	1
		EPA 1664A	JMC1	1
		SM 2540D	RAH	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60168816002	**TRIP BLANK**	EPA 624 Low	PRG	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

Sample: 316-293 **Lab ID: 60168816001** Collected: 05/08/14 07:06 Received: 05/09/14 01:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**13900**	ug/L	750	2	05/13/14 09:55	05/14/14 17:33	7429-90-5	
Antimony	ND	ug/L	100	2	05/13/14 09:55	05/14/14 17:33	7440-36-0	D3
Arsenic	**1200**	ug/L	50.0	1	05/13/14 09:55	05/14/14 17:30	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/13/14 09:55	05/14/14 17:30	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:30	7440-43-9	
Chromium	**270**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:30	7440-47-3	
Cobalt	**46.7**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:30	7440-48-4	
Copper	ND	ug/L	50.0	1	05/13/14 09:55	05/14/14 17:30	7440-50-8	
Iron	**876000**	ug/L	250	1	05/13/14 09:55	05/14/14 17:30	7439-89-6	
Lead	**102**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:30	7439-92-1	
Nickel	**130**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:30	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/13/14 09:55	05/14/14 17:30	7782-49-2	
Silver	ND	ug/L	35.0	1	05/13/14 09:55	05/14/14 17:30	7440-22-4	
Thallium	ND	ug/L	100	1	05/13/14 09:55	05/14/14 17:30	7440-28-0	
Zinc	**4980**	ug/L	500	2	05/13/14 09:55	05/14/14 17:33	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1700**	ug/L	750	2	05/13/14 17:00	05/14/14 14:31	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:29	7440-36-0	
Arsenic, Dissolved	**856**	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:29	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/13/14 17:00	05/14/14 14:29	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:29	7440-43-9	
Chromium, Dissolved	**149**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:29	7440-47-3	
Cobalt, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:29	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:29	7440-50-8	
Iron, Dissolved	**353000**	ug/L	250	1	05/13/14 17:00	05/14/14 14:29	7439-89-6	
Lead, Dissolved	**45.4**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:29	7439-92-1	
Nickel, Dissolved	**69.4**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:29	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/13/14 17:00	05/14/14 14:29	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/13/14 17:00	05/14/14 14:29	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/13/14 17:00	05/14/14 14:29	7440-28-0	
Zinc, Dissolved	**3650**	ug/L	500	2	05/13/14 17:00	05/14/14 14:31	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**0.46**	ug/L	0.20	1	05/15/14 16:00	05/16/14 09:51	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/14/14 10:30	05/14/14 14:28	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	25.0	1	05/14/14 00:00	05/15/14 21:37	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	5.0	1	05/14/14 00:00	05/15/14 21:37	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	5.0	1	05/14/14 00:00	05/15/14 21:37	77-47-4	
Hexachloroethane	ND	ug/L	5.0	1	05/14/14 00:00	05/15/14 21:37	67-72-1	
2-Methylphenol(o-Cresol)	**34.8**	ug/L	10.0	1	05/14/14 00:00	05/15/14 21:37	95-48-7	M1,N2
3&4-Methylphenol(m&p Cresol)	**85.9**	ug/L	20.0	1	05/14/14 00:00	05/15/14 21:37		M1,N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

Sample: 316-293 **Lab ID: 60168816001** Collected: 05/08/14 07:06 Received: 05/09/14 01:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**15.5**	ug/L	5.0	1	05/14/14 00:00	05/15/14 21:37	91-20-3	
Nitrobenzene	ND	ug/L	5.0	1	05/14/14 00:00	05/15/14 21:37	98-95-3	
Pentachlorophenol	ND	ug/L	5.0	1	05/14/14 00:00	05/15/14 21:37	87-86-5	
Phenol	**99.5**	ug/L	10.0	2	05/14/14 00:00	05/16/14 14:00	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	5.0	1	05/14/14 00:00	05/15/14 21:37	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	5.0	1	05/14/14 00:00	05/15/14 21:37	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	163	%	33-120	1	05/14/14 00:00	05/15/14 21:37	4165-60-0	S0
2-Fluorobiphenyl (S)	82	%	39-120	1	05/14/14 00:00	05/15/14 21:37	321-60-8	
Terphenyl-d14 (S)	80	%	45-120	1	05/14/14 00:00	05/15/14 21:37	1718-51-0	
Phenol-d6 (S)	16	%	11-120	1	05/14/14 00:00	05/15/14 21:37	13127-88-3	
2-Fluorophenol (S)	52	%	17-120	1	05/14/14 00:00	05/15/14 21:37	367-12-4	
2,4,6-Tribromophenol (S)	85	%	39-120	1	05/14/14 00:00	05/15/14 21:37	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**149000**	ug/L	2500	250		05/15/14 11:54	67-64-1	N2
Benzene	ND	ug/L	250	250		05/15/14 11:54	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/15/14 11:54	75-27-4	
Bromoform	ND	ug/L	250	250		05/15/14 11:54	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/15/14 11:54	74-83-9	
2-Butanone (MEK)	**55300**	ug/L	2500	250		05/15/14 11:54	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/15/14 11:54	56-23-5	
Chloroethane	ND	ug/L	250	250		05/15/14 11:54	75-00-3	
Chloroform	ND	ug/L	250	250		05/15/14 11:54	67-66-3	
1,4-Dichlorobenzene	**308**	ug/L	250	250		05/15/14 11:54	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/15/14 11:54	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 11:54	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 11:54	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/15/14 11:54	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/15/14 11:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/15/14 11:54	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/15/14 11:54	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/15/14 11:54	127-18-4	M1
Toluene	ND	ug/L	250	250		05/15/14 11:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/15/14 11:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/15/14 11:54	79-00-5	
Trichloroethene	**413**	ug/L	250	250		05/15/14 11:54	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/15/14 11:54	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/15/14 11:54	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	250		05/15/14 11:54	460-00-4	
Toluene-d8 (S)	104	%	80-120	250		05/15/14 11:54	2037-26-5	
1,2-Dichloroethane-d4 (S)	93	%	80-120	250		05/15/14 11:54	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/15/14 11:54		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1160**	mg/L	5.0	1		05/16/14 07:16		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

Sample: 316-293 **Lab ID: 60168816001** Collected: 05/08/14 07:06 Received: 05/09/14 01:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**14.8**	mg/L	5.0	1		05/16/14 07:19		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**2200**	mg/L	5.0	1		05/13/14 11:07		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.3**	Std. Units	0.10	1		05/10/14 13:20		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**27600**	mg/L	2.0	1	05/09/14 14:02	05/14/14 15:00		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**620**	mg/L	20.0	200		05/13/14 10:45	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**58000**	mg/L	5000	500		05/14/14 13:04		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

Sample: TRIP BLANK **Lab ID: 60168816002** Collected: 05/08/14 07:06 Received: 05/09/14 01:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/15/14 09:45	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/15/14 09:45	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/15/14 09:45	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/15/14 09:45	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/15/14 09:45	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/15/14 09:45	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/15/14 09:45	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/15/14 09:45	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/15/14 09:45	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/15/14 09:45	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/15/14 09:45	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 09:45	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 09:45	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/15/14 09:45	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/15/14 09:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/15/14 09:45	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/15/14 09:45	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/15/14 09:45	127-18-4	
Toluene	ND	ug/L	1.0	1		05/15/14 09:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/15/14 09:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/15/14 09:45	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/15/14 09:45	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/15/14 09:45	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/15/14 09:45	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	1		05/15/14 09:45	460-00-4	
Toluene-d8 (S)	104	%	80-120	1		05/15/14 09:45	2037-26-5	
1,2-Dichloroethane-d4 (S)	98	%	80-120	1		05/15/14 09:45	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/15/14 09:45		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: MERP/8402 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60168816001

METHOD BLANK: 1378761 | Matrix: Water
Associated Lab Samples: 60168816001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/16/14 09:36	

LABORATORY CONTROL SAMPLE: 1378762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1378763 1378764

Parameter	Units	60168655001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	5.4	6.9	106	135	70-130	24	20	M1,R1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: MERP/8391
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60168816001

METHOD BLANK: 1377535
Matrix: Water
Associated Lab Samples: 60168816001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/14/14 14:11	

LABORATORY CONTROL SAMPLE: 1377536

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: 1377537 1377538

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	142	147	95	98	70-130	3	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: MPRP/27213 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60168816001

METHOD BLANK: 1376844 | Matrix: Water
Associated Lab Samples: 60168816001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/14/14 17:04	
Antimony	ug/L	ND	10.0	05/14/14 17:04	
Arsenic	ug/L	ND	10.0	05/14/14 17:04	
Beryllium	ug/L	ND	1.0	05/14/14 17:04	
Cadmium	ug/L	ND	5.0	05/14/14 17:04	
Chromium	ug/L	ND	5.0	05/14/14 17:04	
Cobalt	ug/L	ND	5.0	05/14/14 17:04	
Copper	ug/L	ND	10.0	05/14/14 17:04	
Iron	ug/L	ND	50.0	05/14/14 17:04	
Lead	ug/L	ND	5.0	05/14/14 17:04	
Nickel	ug/L	ND	5.0	05/14/14 17:04	
Selenium	ug/L	ND	15.0	05/14/14 17:04	
Silver	ug/L	ND	7.0	05/14/14 17:04	
Thallium	ug/L	ND	20.0	05/14/14 17:04	
Zinc	ug/L	ND	50.0	05/14/14 17:04	

LABORATORY CONTROL SAMPLE: 1376845

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	986	99	85-115	
Beryllium	ug/L	1000	1020	102	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	992	99	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	1000	100	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	492	98	85-115	
Thallium	ug/L	1000	985	98	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	18200	50000	81700	127	70-130	
Antimony	ug/L	ND	5000	5150	101	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1140	5000	6570	109	70-130	
Beryllium	ug/L	ND	5000	4970	99	70-130	
Cadmium	ug/L	ND	5000	5200	104	70-130	
Chromium	ug/L	269	5000	5130	97	70-130	
Cobalt	ug/L	47.5	5000	4950	98	70-130	
Copper	ug/L	ND	5000	5300	106	70-130	
Iron	ug/L	872000	50000	939000	134	70-130	M1
Lead	ug/L	123	5000	4770	93	70-130	
Nickel	ug/L	132	5000	4970	97	70-130	
Selenium	ug/L	ND	5000	5880	117	70-130	
Silver	ug/L	ND	2500	2640	105	70-130	
Thallium	ug/L	ND	5000	4390	88	70-130	
Zinc	ug/L	4860	5000	9580	94	70-130	

MATRIX SPIKE SAMPLE: 1376847

Parameter	Units	60168779001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	ND	10000	9860	99	70-130	
Antimony	ug/L	ND	1000	1010	100	70-130	
Arsenic	ug/L	ND	1000	990	99	70-130	
Beryllium	ug/L	ND	1000	1000	100	70-130	
Cadmium	ug/L	ND	1000	992	99	70-130	
Chromium	ug/L	ND	1000	985	98	70-130	
Cobalt	ug/L	ND	1000	1020	102	70-130	
Copper	ug/L	24.9	1000	1040	101	70-130	
Iron	ug/L	163	10000	10200	100	70-130	
Lead	ug/L	ND	1000	999	100	70-130	
Nickel	ug/L	7.1	1000	1010	100	70-130	
Selenium	ug/L	ND	1000	1010	101	70-130	
Silver	ug/L	ND	500	497	99	70-130	
Thallium	ug/L	ND	1000	951	95	70-130	
Zinc	ug/L	ND	1000	1040	100	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: MPRP/27227
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60168816001

METHOD BLANK: 1377214
Matrix: Water
Associated Lab Samples: 60168816001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/14/14 13:51	
Antimony, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Arsenic, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Beryllium, Dissolved	ug/L	ND	1.0	05/14/14 13:51	
Cadmium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Chromium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Cobalt, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Copper, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Iron, Dissolved	ug/L	ND	50.0	05/14/14 13:51	
Lead, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Nickel, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Selenium, Dissolved	ug/L	ND	15.0	05/14/14 13:51	
Silver, Dissolved	ug/L	ND	7.0	05/14/14 13:51	
Thallium, Dissolved	ug/L	ND	20.0	05/14/14 13:51	
Zinc, Dissolved	ug/L	ND	50.0	05/14/14 13:51	

LABORATORY CONTROL SAMPLE: 1377215

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9500	95	85-115	
Antimony, Dissolved	ug/L	1000	996	100	85-115	
Arsenic, Dissolved	ug/L	1000	946	95	85-115	
Beryllium, Dissolved	ug/L	1000	954	95	85-115	
Cadmium, Dissolved	ug/L	1000	968	97	85-115	
Chromium, Dissolved	ug/L	1000	926	93	85-115	
Cobalt, Dissolved	ug/L	1000	985	99	85-115	
Copper, Dissolved	ug/L	1000	983	98	85-115	
Iron, Dissolved	ug/L	10000	9620	96	85-115	
Lead, Dissolved	ug/L	1000	977	98	85-115	
Nickel, Dissolved	ug/L	1000	985	99	85-115	
Selenium, Dissolved	ug/L	1000	967	97	85-115	
Silver, Dissolved	ug/L	500	471	94	85-115	
Thallium, Dissolved	ug/L	1000	997	100	85-115	
Zinc, Dissolved	ug/L	1000	942	94	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1410	50000	50000	48200	48300	94	94	70-130	0	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	5000	5000	5080	5140	101	103	70-130	1	7	
Arsenic, Dissolved	ug/L	830	5000	5000	5880	5790	101	99	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4450	4550	89	91	70-130	2	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	4900	4980	98	100	70-130	2	10	
Chromium, Dissolved	ug/L	143	5000	5000	4500	4580	87	89	70-130	2	10	
Cobalt, Dissolved	ug/L	ND	5000	5000	4550	4650	91	93	70-130	2	6	
Copper, Dissolved	ug/L	ND	5000	5000	5100	5180	101	103	70-130	1	11	
Iron, Dissolved	ug/L	328000	50000	50000	369000	330000	83	4	70-130	11	10	M1,R1
Lead, Dissolved	ug/L	35.3	5000	5000	4380	4470	87	89	70-130	2	10	
Nickel, Dissolved	ug/L	72.8	5000	5000	4520	4610	89	91	70-130	2	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5470	5480	109	110	70-130	0	10	
Silver, Dissolved	ug/L	ND	2500	2500	2460	2500	98	100	70-130	1	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4180	4300	84	86	70-130	3	6	
Zinc, Dissolved	ug/L	3930	5000	5000	8310	7800	88	77	70-130	6	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: MSV/61584 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60168816001, 60168816002

METHOD BLANK: 1377791 | Matrix: Water
Associated Lab Samples: 60168816001, 60168816002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/15/14 09:26	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,2-Dichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/15/14 09:26	
2-Butanone (MEK)	ug/L	ND	10.0	05/15/14 09:26	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/15/14 09:26	N2
Acetone	ug/L	ND	10.0	05/15/14 09:26	N2
Benzene	ug/L	ND	1.0	05/15/14 09:26	
Bromodichloromethane	ug/L	ND	1.0	05/15/14 09:26	
Bromoform	ug/L	ND	1.0	05/15/14 09:26	
Bromomethane	ug/L	ND	5.0	05/15/14 09:26	
Carbon tetrachloride	ug/L	ND	1.0	05/15/14 09:26	
Chloroethane	ug/L	ND	1.0	05/15/14 09:26	
Chloroform	ug/L	ND	1.0	05/15/14 09:26	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	N2
Ethylbenzene	ug/L	ND	1.0	05/15/14 09:26	
Methylene chloride	ug/L	ND	1.0	05/15/14 09:26	
Tetrachloroethene	ug/L	ND	1.0	05/15/14 09:26	
Toluene	ug/L	ND	1.0	05/15/14 09:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Trichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Vinyl chloride	ug/L	ND	1.0	05/15/14 09:26	
Xylene (Total)	ug/L	ND	3.0	05/15/14 09:26	N2
1,2-Dichloroethane-d4 (S)	%	91	80-120	05/15/14 09:26	
4-Bromofluorobenzene (S)	%	97	80-120	05/15/14 09:26	
Toluene-d8 (S)	%	103	80-120	05/15/14 09:26	

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.6	103	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.2	106	67-127	N2
1,1,2-Trichloroethane	ug/L	20	21.6	108	67-124	
1,2-Dichloroethane	ug/L	20	20.0	100	70-126	
1,4-Dichlorobenzene	ug/L	20	22.6	113	74-120	
2-Butanone (MEK)	ug/L	100	93.7	94	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	93.3	93	59-131	N2
Acetone	ug/L	100	94.3	94	38-134	N2
Benzene	ug/L	20	19.9	99	75-120	
Bromodichloromethane	ug/L	20	21.2	106	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	23.2	116	65-127	
Bromomethane	ug/L	20	18.8	94	13-157	
Carbon tetrachloride	ug/L	20	20.1	100	70-131	
Chloroethane	ug/L	20	18.0	90	47-133	
Chloroform	ug/L	20	20.2	101	65-127	
cis-1,2-Dichloroethene	ug/L	20	20.3	102	68-127	N2
Ethylbenzene	ug/L	20	22.8	114	74-122	
Methylene chloride	ug/L	20	20.4	102	64-129	
Tetrachloroethene	ug/L	20	24.5	123	73-125	
Toluene	ug/L	20	21.7	108	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.8	94	66-129	
Trichloroethene	ug/L	20	19.6	98	71-123	
Vinyl chloride	ug/L	20	16.7	83	43-129	
Xylene (Total)	ug/L	60	68.3	114	75-121	N2
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	6000	120	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5810	116	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	6110	122	52-143	
1,2-Dichloroethane	ug/L	ND	5000	5470	109	49-144	
1,4-Dichlorobenzene	ug/L	308	5000	6650	127	33-140	
2-Butanone (MEK)	ug/L	55300	25000	82800	110	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	25500	95	40-160	N2
Acetone	ug/L	149000	25000	185000	144	10-160	N2
Benzene	ug/L	ND	5000	5840	117	37-151	
Bromodichloromethane	ug/L	ND	5000	5810	116	35-142	
Bromoform	ug/L	ND	5000	6700	134	45-142	
Bromomethane	ug/L	ND	5000	4660	93	10-158	
Carbon tetrachloride	ug/L	ND	5000	5950	119	70-140	
Chloroethane	ug/L	ND	5000	5880	118	19-152	
Chloroform	ug/L	ND	5000	5670	113	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	5950	116	34-147	N2
Ethylbenzene	ug/L	ND	5000	6630	132	40-142	
Methylene chloride	ug/L	ND	5000	5790	114	31-144	
Tetrachloroethene	ug/L	ND	5000	7450	149	64-148	M1
Toluene	ug/L	ND	5000	6380	127	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	5650	113	54-151	
Trichloroethene	ug/L	413	5000	5550	103	71-149	
Vinyl chloride	ug/L	ND	5000	5580	111	22-146	
Xylene (Total)	ug/L	ND	15000	19700	131	37-144	N2
1,2-Dichloroethane-d4 (S)	%				92	80-120	
4-Bromofluorobenzene (S)	%				96	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				104	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: OEXT/44159 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60168816001

METHOD BLANK: 1377349 | Matrix: Water
Associated Lab Samples: 60168816001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/15/14 20:34	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/15/14 20:34	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/15/14 20:34	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/15/14 20:34	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/15/14 20:34	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/15/14 20:34	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/15/14 20:34	
Hexachloroethane	ug/L	ND	5.0	05/15/14 20:34	
Naphthalene	ug/L	ND	5.0	05/15/14 20:34	
Nitrobenzene	ug/L	ND	5.0	05/15/14 20:34	
Pentachlorophenol	ug/L	ND	5.0	05/15/14 20:34	
Phenol	ug/L	ND	5.0	05/15/14 20:34	
2,4,6-Tribromophenol (S)	%	85	39-120	05/15/14 20:34	
2-Fluorobiphenyl (S)	%	84	39-120	05/15/14 20:34	
2-Fluorophenol (S)	%	50	17-120	05/15/14 20:34	
Nitrobenzene-d5 (S)	%	80	33-120	05/15/14 20:34	
Phenol-d6 (S)	%	33	11-120	05/15/14 20:34	
Terphenyl-d14 (S)	%	91	45-120	05/15/14 20:34	

LABORATORY CONTROL SAMPLE: 1377350

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	40.4	81	46-120	
2,4,6-Trichlorophenol	ug/L	50	45.0	90	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	36.2	72	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	32.2	64	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	48.2	96	40-133	
Hexachloro-1,3-butadiene	ug/L	50	38.1	76	44-116	
Hexachlorocyclopentadiene	ug/L	100	51.6	52	24-120	
Hexachloroethane	ug/L	50	35.2	70	43-113	
Naphthalene	ug/L	50	42.6	85	48-120	
Nitrobenzene	ug/L	50	43.0	86	48-120	
Pentachlorophenol	ug/L	50	47.4	95	47-120	
Phenol	ug/L	50	18.1	36	16-112	
2,4,6-Tribromophenol (S)	%			95	39-120	
2-Fluorobiphenyl (S)	%			90	39-120	
2-Fluorophenol (S)	%			50	17-120	
Nitrobenzene-d5 (S)	%			86	33-120	
Phenol-d6 (S)	%			33	11-120	
Terphenyl-d14 (S)	%			93	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

MATRIX SPIKE SAMPLE: 1377351

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	37.9	76	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	45.7	91	50-120	
2-Methylphenol(o-Cresol)	ug/L	34.8	50	40.7	12	30-120	M1,N2
3&4-Methylphenol(m&p Cresol)	ug/L	85.9	50	98.4	25	27-120	M1,N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	48.4	97	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	36.2	72	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	63.2	63	11-120	
Hexachloroethane	ug/L	ND	50	38.2	76	40-113	
Naphthalene	ug/L	15.5	50	47.3	64	45-120	
Nitrobenzene	ug/L	ND	50	44.3	89	38-120	
Pentachlorophenol	ug/L	ND	50	47.6	95	43-135	
Phenol	ug/L	99.5	50	118	37	13-112	
2,4,6-Tribromophenol (S)	%				88	39-120	
2-Fluorobiphenyl (S)	%				84	39-120	
2-Fluorophenol (S)	%				50	17-120	
Nitrobenzene-d5 (S)	%				162	33-120	S0
Phenol-d6 (S)	%				33	11-120	
Terphenyl-d14 (S)	%				84	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: WET/47893 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168816001

METHOD BLANK: 1379011 | Matrix: Water
Associated Lab Samples: 60168816001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/16/14 07:16	

LABORATORY CONTROL SAMPLE: 1379012

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	38.5	96	78-114	

MATRIX SPIKE SAMPLE: 1379014

Parameter	Units	60168916002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	10.9	43	54.5	101	78-114	

SAMPLE DUPLICATE: 1379013

Parameter	Units	60168771002 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	15.2	17.7	15	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: WET/47892 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60168816001

METHOD BLANK: 1379006 | Matrix: Water
Associated Lab Samples: 60168816001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/16/14 07:18	

LABORATORY CONTROL SAMPLE: 1379007

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: 1379010

Parameter	Units	60168916002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	21.5	23.1	96	64-132	

SAMPLE DUPLICATE: 1379009

Parameter	Units	60168771002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	3J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: WET/47815 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60168816001

METHOD BLANK: 1376739 | Matrix: Water
Associated Lab Samples: 60168816001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/13/14 11:05	

SAMPLE DUPLICATE: 1376740

Parameter	Units	60168787001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		10	

SAMPLE DUPLICATE: 1376741

Parameter	Units	60168876003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: WET/47781
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60168816001

SAMPLE DUPLICATE: 1375817

Parameter	Units	60168480001 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 316-293
Pace Project No.: 60168816

QC Batch: WET/47771 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60168816001

METHOD BLANK: 1375056 | Matrix: Water
Associated Lab Samples: 60168816001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/14/14 14:17	

LABORATORY CONTROL SAMPLE: 1375057

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	185	94	85-115	

SAMPLE DUPLICATE: 1375058

Parameter	Units	60168690002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	2.4	2.5	3	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: WETA/29394 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60168816001

METHOD BLANK: 1376794 | Matrix: Water
Associated Lab Samples: 60168816001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/13/14 10:30	

LABORATORY CONTROL SAMPLE: 1376795

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	100	90-110	

MATRIX SPIKE SAMPLE: 1376796

Parameter	Units	60168617001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.0	101	90-110	

MATRIX SPIKE SAMPLE: 1376797

Parameter	Units	60168719001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	4.8	2	6.2	68	90-110	M1

SAMPLE DUPLICATE: 1376798

Parameter	Units	60168883004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.10	0.11	4	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

QC Batch: WETA/29410 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60168816001

METHOD BLANK: 1377413 | Matrix: Water
Associated Lab Samples: 60168816001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/14/14 12:59	

LABORATORY CONTROL SAMPLE: 1377414

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	49.5	99	90-110	

MATRIX SPIKE SAMPLE: 1377415

Parameter	Units	60168566001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	55100	25000	80900	103	90-110	

SAMPLE DUPLICATE: 1377416

Parameter	Units	60168582001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	56800	55000	3	25	

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QUALIFIERS

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-293
Pace Project No.: 60168816

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168816001	**316-293**	EPA 200.7	MPRP/27213	EPA 200.7	ICP/20616
60168816001	**316-293**	EPA 200.7	MPRP/27227	EPA 200.7	ICP/20625
60168816001	**316-293**	EPA 245.1	MERP/8402	EPA 245.1	MERC/8357
60168816001	**316-293**	EPA 245.1	MERP/8391	EPA 245.1	MERC/8346
60168816001	**316-293**	EPA 625	OEXT/44159	EPA 625	MSSV/14121
60168816001	**316-293**	EPA 624 Low	MSV/61584		
60168816002	**TRIP BLANK**	EPA 624 Low	MSV/61584		
60168816001	**316-293**	EPA 1664A	WET/47893		
60168816001	**316-293**	EPA 1664A	WET/47892		
60168816001	**316-293**	SM 2540D	WET/47815		
60168816001	**316-293**	SM 4500-H+B	WET/47781		
60168816001	**316-293**	SM 5210B	WET/47771	SM 5210B	WET/47855
60168816001	**316-293**	EPA 350.1	WETA/29394		
60168816001	**316-293**	EPA 410.4	WETA/29410		

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Sample Condition Upon Receipt

WO#: 60168816

60168816

Client Name: Barr Engineering

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☑ x-reals

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-239 / T-194 Type of Ice: Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 4.6

Temperature should be above freezing to 6°C

Optional	
Proj Due Date:	
Proj Name:	

Date and initials of person examining contents: 5/9/14

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. BOD, ph
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes	☐No	☐N/A	13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	initial ph BP3N 4.5, added 2.5mL HNO3 final 3.5 initial ph BP3S 4.5, added 2.5mL H2SO4 final 2.5
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☑No	☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed [illegible] Lot # of added preservative HNO3. 12513-23-2 H2SO4. 12522-2-7
Trip Blank present: Pace Trip Blank lot # (if purchased): Covered	☑Yes	☐No	☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes	☑No	☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☑N/A	17. List State: MO

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: 5/9/14

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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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency	
State / Location	
	Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N): 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	BOD SM 5210B		Residual Chlorine (Y/N)	60168816
1	BP3S2.5 316-243 2BP24, BP3U, 2AG4U	OT	G	5/8/14	0706				15	10	4	1	0	3	KG3S			X	X	X	X	X	X	X	X	X	X	5	DG9U, BP3N7.5		GW
2	TRIP BLANK								2	2															X		2	DG9U			WZ
3																															
4																															
5																															
6																														METALS LIST total & LF Dis:	
7																														Al,Sb,As,Be,Cd,Cr,	
8																														Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn	
9																														and Mercury	
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FSI	5-8-14	2:30pm		5-8-14	2:30pm				
SITE ADDRESS: BRIDGETON LF				E Brockett / Pace	5/9	0135	4.6	Y	Y	Y
13570 ST. CHARLES ROCK RD										
BRIDGETON MO 63044										

SAMPLER NAME AND SIGNATURE			
PRINT Name of SAMPLER:	WILLIAM ABERNATHY		
SIGNATURE of SAMPLER:		DATE Signed:	5/8/14

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

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May 19, 2014

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

RE: Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 10, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

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 316-294R
Pace Project No.: 60168924

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60168924001	**316-294R**	Water	05/09/14 09:36	05/10/14 08:47
60168924002	**TRIP BLANK**	Water	05/09/14 00:00	05/10/14 01:00

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60168924001	**316-294R**	EPA 200.7	SMW	15
		EPA 200.7	TDS	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	PRG	28
		EPA 1664A	DJR	1
		EPA 1664A	CRT	1
		SM 2540D	RAH	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60168924002	**TRIP BLANK**	EPA 624 Low	PRG	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

Sample: 316-294R **Lab ID: 60168924001** Collected: 05/09/14 09:36 Received: 05/10/14 08:47 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**26500**	ug/L	750	2	05/13/14 09:55	05/14/14 17:47	7429-90-5	
Antimony	ND	ug/L	100	2	05/13/14 09:55	05/14/14 17:47	7440-36-0	D3
Arsenic	**1170**	ug/L	50.0	1	05/13/14 09:55	05/14/14 17:43	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/13/14 09:55	05/14/14 17:43	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:43	7440-43-9	
Chromium	**286**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:43	7440-47-3	
Cobalt	**57.6**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:43	7440-48-4	
Copper	**176**	ug/L	50.0	1	05/13/14 09:55	05/14/14 17:43	7440-50-8	
Iron	**899000**	ug/L	250	1	05/13/14 09:55	05/14/14 17:43	7439-89-6	
Lead	**170**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:43	7439-92-1	
Nickel	**166**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:43	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/13/14 09:55	05/14/14 17:43	7782-49-2	
Silver	ND	ug/L	35.0	1	05/13/14 09:55	05/14/14 17:43	7440-22-4	
Thallium	ND	ug/L	100	1	05/13/14 09:55	05/14/14 17:43	7440-28-0	
Zinc	**5090**	ug/L	500	2	05/13/14 09:55	05/14/14 17:47	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1700**	ug/L	750	2	05/13/14 17:00	05/14/14 14:36	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:34	7440-36-0	
Arsenic, Dissolved	**882**	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:34	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/13/14 17:00	05/14/14 14:34	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:34	7440-43-9	
Chromium, Dissolved	**143**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:34	7440-47-3	
Cobalt, Dissolved	ND	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:34	7440-48-4	
Copper, Dissolved	**67.9**	ug/L	50.0	1	05/13/14 17:00	05/14/14 14:34	7440-50-8	
Iron, Dissolved	**348000**	ug/L	250	1	05/13/14 17:00	05/14/14 14:34	7439-89-6	
Lead, Dissolved	**42.2**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:34	7439-92-1	
Nickel, Dissolved	**84.6**	ug/L	25.0	1	05/13/14 17:00	05/14/14 14:34	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/13/14 17:00	05/14/14 14:34	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/13/14 17:00	05/14/14 14:34	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/13/14 17:00	05/14/14 14:34	7440-28-0	
Zinc, Dissolved	**3690**	ug/L	500	2	05/13/14 17:00	05/14/14 14:36	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**1.7**	ug/L	0.20	1	05/15/14 16:00	05/16/14 09:54	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/14/14 10:30	05/14/14 14:31	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/16/14 00:00	05/19/14 06:12	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:12	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:12	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:12	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/16/14 00:00	05/19/14 06:12	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7780**	ug/L	4000	2	05/16/14 00:00	05/19/14 06:12		N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

Sample: 316-294R **Lab ID: 60168924001** Collected: 05/09/14 09:36 Received: 05/10/14 08:47 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**2050**	ug/L	1000	2	05/16/14 00:00	05/19/14 06:12	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:12	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:12	87-86-5	
Phenol	**11100**	ug/L	1000	2	05/16/14 00:00	05/19/14 06:12	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:12	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:12	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	160	%	33-120	2	05/16/14 00:00	05/19/14 06:12	4165-60-0	S0
2-Fluorobiphenyl (S)	76	%	39-120	2	05/16/14 00:00	05/19/14 06:12	321-60-8	
Terphenyl-d14 (S)	73	%	45-120	2	05/16/14 00:00	05/19/14 06:12	1718-51-0	
Phenol-d6 (S)	41	%	11-120	2	05/16/14 00:00	05/19/14 06:12	13127-88-3	
2-Fluorophenol (S)	36	%	17-120	2	05/16/14 00:00	05/19/14 06:12	367-12-4	
2,4,6-Tribromophenol (S)	89	%	39-120	2	05/16/14 00:00	05/19/14 06:12	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**142000**	ug/L	2500	250		05/15/14 12:23	67-64-1	N2
Benzene	ND	ug/L	250	250		05/15/14 12:23	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/15/14 12:23	75-27-4	
Bromoform	ND	ug/L	250	250		05/15/14 12:23	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/15/14 12:23	74-83-9	
2-Butanone (MEK)	**61700**	ug/L	2500	250		05/15/14 12:23	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/15/14 12:23	56-23-5	
Chloroethane	ND	ug/L	250	250		05/15/14 12:23	75-00-3	
Chloroform	ND	ug/L	250	250		05/15/14 12:23	67-66-3	
1,4-Dichlorobenzene	**929**	ug/L	250	250		05/15/14 12:23	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/15/14 12:23	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 12:23	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 12:23	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/15/14 12:23	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/15/14 12:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/15/14 12:23	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/15/14 12:23	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/15/14 12:23	127-18-4	
Toluene	ND	ug/L	250	250		05/15/14 12:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/15/14 12:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/15/14 12:23	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/15/14 12:23	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/15/14 12:23	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/15/14 12:23	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	93	%	80-120	250		05/15/14 12:23	460-00-4	
Toluene-d8 (S)	105	%	80-120	250		05/15/14 12:23	2037-26-5	
1,2-Dichloroethane-d4 (S)	97	%	80-120	250		05/15/14 12:23	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/15/14 12:23		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1590**	mg/L	5.0	1		05/16/14 16:04		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

Sample: 316-294R **Lab ID: 60168924001** Collected: 05/09/14 09:36 Received: 05/10/14 08:47 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**8.8**	mg/L	5.0	1		05/19/14 08:32		M1
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**5780**	mg/L	5.0	1		05/15/14 10:06		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/10/14 13:20		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**32600**	mg/L	2.0	1	05/10/14 11:58	05/15/14 16:47		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**612**	mg/L	20.0	200		05/16/14 08:05	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**61700**	mg/L	5000	500		05/19/14 13:34		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

Sample: TRIP BLANK **Lab ID: 60168924002** Collected: 05/09/14 00:00 Received: 05/10/14 01:00 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/15/14 09:59	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/15/14 09:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/15/14 09:59	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/15/14 09:59	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/15/14 09:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/15/14 09:59	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/15/14 09:59	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/15/14 09:59	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/15/14 09:59	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/15/14 09:59	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/15/14 09:59	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 09:59	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 09:59	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/15/14 09:59	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/15/14 09:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/15/14 09:59	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/15/14 09:59	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/15/14 09:59	127-18-4	
Toluene	ND	ug/L	1.0	1		05/15/14 09:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/15/14 09:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/15/14 09:59	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/15/14 09:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/15/14 09:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/15/14 09:59	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	93	%	80-120	1		05/15/14 09:59	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		05/15/14 09:59	2037-26-5	
1,2-Dichloroethane-d4 (S)	97	%	80-120	1		05/15/14 09:59	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/15/14 09:59		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: MERP/8402
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury
Associated Lab Samples: 60168924001

METHOD BLANK: 1378761
Matrix: Water
Associated Lab Samples: 60168924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/16/14 09:36	

LABORATORY CONTROL SAMPLE: 1378762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1378763 1378764

Parameter	Units	60168655001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	5.4	6.9	106	135	70-130	24	20	M1,R1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: MERP/8391
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60168924001

METHOD BLANK: 1377535
Matrix: Water
Associated Lab Samples: 60168924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/14/14 14:11	

LABORATORY CONTROL SAMPLE: 1377536

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: 1377537 1377538

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	142	147	95	98	70-130	3	20	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: MPRP/27213 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60168924001

METHOD BLANK: 1376844 | Matrix: Water
Associated Lab Samples: 60168924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/14/14 17:04	
Antimony	ug/L	ND	10.0	05/14/14 17:04	
Arsenic	ug/L	ND	10.0	05/14/14 17:04	
Beryllium	ug/L	ND	1.0	05/14/14 17:04	
Cadmium	ug/L	ND	5.0	05/14/14 17:04	
Chromium	ug/L	ND	5.0	05/14/14 17:04	
Cobalt	ug/L	ND	5.0	05/14/14 17:04	
Copper	ug/L	ND	10.0	05/14/14 17:04	
Iron	ug/L	ND	50.0	05/14/14 17:04	
Lead	ug/L	ND	5.0	05/14/14 17:04	
Nickel	ug/L	ND	5.0	05/14/14 17:04	
Selenium	ug/L	ND	15.0	05/14/14 17:04	
Silver	ug/L	ND	7.0	05/14/14 17:04	
Thallium	ug/L	ND	20.0	05/14/14 17:04	
Zinc	ug/L	ND	50.0	05/14/14 17:04	

LABORATORY CONTROL SAMPLE: 1376845

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	986	99	85-115	
Beryllium	ug/L	1000	1020	102	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	992	99	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	1000	100	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	492	98	85-115	
Thallium	ug/L	1000	985	98	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	18200	50000	81700	127	70-130	
Antimony	ug/L	ND	5000	5150	101	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1140	5000	6570	109	70-130	
Beryllium	ug/L	ND	5000	4970	99	70-130	
Cadmium	ug/L	ND	5000	5200	104	70-130	
Chromium	ug/L	269	5000	5130	97	70-130	
Cobalt	ug/L	47.5	5000	4950	98	70-130	
Copper	ug/L	ND	5000	5300	106	70-130	
Iron	ug/L	872000	50000	939000	134	70-130	M1
Lead	ug/L	123	5000	4770	93	70-130	
Nickel	ug/L	132	5000	4970	97	70-130	
Selenium	ug/L	ND	5000	5880	117	70-130	
Silver	ug/L	ND	2500	2640	105	70-130	
Thallium	ug/L	ND	5000	4390	88	70-130	
Zinc	ug/L	4860	5000	9580	94	70-130	

MATRIX SPIKE SAMPLE: 1376847

Parameter	Units	60168779001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	ND	10000	9860	99	70-130	
Antimony	ug/L	ND	1000	1010	100	70-130	
Arsenic	ug/L	ND	1000	990	99	70-130	
Beryllium	ug/L	ND	1000	1000	100	70-130	
Cadmium	ug/L	ND	1000	992	99	70-130	
Chromium	ug/L	ND	1000	985	98	70-130	
Cobalt	ug/L	ND	1000	1020	102	70-130	
Copper	ug/L	24.9	1000	1040	101	70-130	
Iron	ug/L	163	10000	10200	100	70-130	
Lead	ug/L	ND	1000	999	100	70-130	
Nickel	ug/L	7.1	1000	1010	100	70-130	
Selenium	ug/L	ND	1000	1010	101	70-130	
Silver	ug/L	ND	500	497	99	70-130	
Thallium	ug/L	ND	1000	951	95	70-130	
Zinc	ug/L	ND	1000	1040	100	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: MPRP/27227
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60168924001

METHOD BLANK: 1377214
Matrix: Water
Associated Lab Samples: 60168924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/14/14 13:51	
Antimony, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Arsenic, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Beryllium, Dissolved	ug/L	ND	1.0	05/14/14 13:51	
Cadmium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Chromium, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Cobalt, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Copper, Dissolved	ug/L	ND	10.0	05/14/14 13:51	
Iron, Dissolved	ug/L	ND	50.0	05/14/14 13:51	
Lead, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Nickel, Dissolved	ug/L	ND	5.0	05/14/14 13:51	
Selenium, Dissolved	ug/L	ND	15.0	05/14/14 13:51	
Silver, Dissolved	ug/L	ND	7.0	05/14/14 13:51	
Thallium, Dissolved	ug/L	ND	20.0	05/14/14 13:51	
Zinc, Dissolved	ug/L	ND	50.0	05/14/14 13:51	

LABORATORY CONTROL SAMPLE: 1377215

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9500	95	85-115	
Antimony, Dissolved	ug/L	1000	996	100	85-115	
Arsenic, Dissolved	ug/L	1000	946	95	85-115	
Beryllium, Dissolved	ug/L	1000	954	95	85-115	
Cadmium, Dissolved	ug/L	1000	968	97	85-115	
Chromium, Dissolved	ug/L	1000	926	93	85-115	
Cobalt, Dissolved	ug/L	1000	985	99	85-115	
Copper, Dissolved	ug/L	1000	983	98	85-115	
Iron, Dissolved	ug/L	10000	9620	96	85-115	
Lead, Dissolved	ug/L	1000	977	98	85-115	
Nickel, Dissolved	ug/L	1000	985	99	85-115	
Selenium, Dissolved	ug/L	1000	967	97	85-115	
Silver, Dissolved	ug/L	500	471	94	85-115	
Thallium, Dissolved	ug/L	1000	997	100	85-115	
Zinc, Dissolved	ug/L	1000	942	94	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1410	50000	50000	48200	48300	94	94	70-130	0	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1377216 1377217

Parameter	Units	60168566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	5000	5000	5080	5140	101	103	70-130	1	7	
Arsenic, Dissolved	ug/L	830	5000	5000	5880	5790	101	99	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4450	4550	89	91	70-130	2	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	4900	4980	98	100	70-130	2	10	
Chromium, Dissolved	ug/L	143	5000	5000	4500	4580	87	89	70-130	2	10	
Cobalt, Dissolved	ug/L	ND	5000	5000	4550	4650	91	93	70-130	2	6	
Copper, Dissolved	ug/L	ND	5000	5000	5100	5180	101	103	70-130	1	11	
Iron, Dissolved	ug/L	328000	50000	50000	369000	330000	83	4	70-130	11	10	M1,R1
Lead, Dissolved	ug/L	35.3	5000	5000	4380	4470	87	89	70-130	2	10	
Nickel, Dissolved	ug/L	72.8	5000	5000	4520	4610	89	91	70-130	2	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5470	5480	109	110	70-130	0	10	
Silver, Dissolved	ug/L	ND	2500	2500	2460	2500	98	100	70-130	1	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4180	4300	84	86	70-130	3	6	
Zinc, Dissolved	ug/L	3930	5000	5000	8310	7800	88	77	70-130	6	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: MSV/61584 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60168924001, 60168924002

METHOD BLANK: 1377791 | Matrix: Water
Associated Lab Samples: 60168924001, 60168924002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/15/14 09:26	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,2-Dichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/15/14 09:26	
2-Butanone (MEK)	ug/L	ND	10.0	05/15/14 09:26	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/15/14 09:26	N2
Acetone	ug/L	ND	10.0	05/15/14 09:26	N2
Benzene	ug/L	ND	1.0	05/15/14 09:26	
Bromodichloromethane	ug/L	ND	1.0	05/15/14 09:26	
Bromoform	ug/L	ND	1.0	05/15/14 09:26	
Bromomethane	ug/L	ND	5.0	05/15/14 09:26	
Carbon tetrachloride	ug/L	ND	1.0	05/15/14 09:26	
Chloroethane	ug/L	ND	1.0	05/15/14 09:26	
Chloroform	ug/L	ND	1.0	05/15/14 09:26	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	N2
Ethylbenzene	ug/L	ND	1.0	05/15/14 09:26	
Methylene chloride	ug/L	ND	1.0	05/15/14 09:26	
Tetrachloroethene	ug/L	ND	1.0	05/15/14 09:26	
Toluene	ug/L	ND	1.0	05/15/14 09:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Trichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Vinyl chloride	ug/L	ND	1.0	05/15/14 09:26	
Xylene (Total)	ug/L	ND	3.0	05/15/14 09:26	N2
1,2-Dichloroethane-d4 (S)	%	91	80-120	05/15/14 09:26	
4-Bromofluorobenzene (S)	%	97	80-120	05/15/14 09:26	
Toluene-d8 (S)	%	103	80-120	05/15/14 09:26	

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.6	103	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.2	106	67-127	N2
1,1,2-Trichloroethane	ug/L	20	21.6	108	67-124	
1,2-Dichloroethane	ug/L	20	20.0	100	70-126	
1,4-Dichlorobenzene	ug/L	20	22.6	113	74-120	
2-Butanone (MEK)	ug/L	100	93.7	94	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	93.3	93	59-131	N2
Acetone	ug/L	100	94.3	94	38-134	N2
Benzene	ug/L	20	19.9	99	75-120	
Bromodichloromethane	ug/L	20	21.2	106	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	23.2	116	65-127	
Bromomethane	ug/L	20	18.8	94	13-157	
Carbon tetrachloride	ug/L	20	20.1	100	70-131	
Chloroethane	ug/L	20	18.0	90	47-133	
Chloroform	ug/L	20	20.2	101	65-127	
cis-1,2-Dichloroethene	ug/L	20	20.3	102	68-127	N2
Ethylbenzene	ug/L	20	22.8	114	74-122	
Methylene chloride	ug/L	20	20.4	102	64-129	
Tetrachloroethene	ug/L	20	24.5	123	73-125	
Toluene	ug/L	20	21.7	108	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.8	94	66-129	
Trichloroethene	ug/L	20	19.6	98	71-123	
Vinyl chloride	ug/L	20	16.7	83	43-129	
Xylene (Total)	ug/L	60	68.3	114	75-121	N2
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	6000	120	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5810	116	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	6110	122	52-143	
1,2-Dichloroethane	ug/L	ND	5000	5470	109	49-144	
1,4-Dichlorobenzene	ug/L	308	5000	6650	127	33-140	
2-Butanone (MEK)	ug/L	55300	25000	82800	110	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	25500	95	40-160	N2
Acetone	ug/L	149000	25000	185000	144	10-160	N2
Benzene	ug/L	ND	5000	5840	117	37-151	
Bromodichloromethane	ug/L	ND	5000	5810	116	35-142	
Bromoform	ug/L	ND	5000	6700	134	45-142	
Bromomethane	ug/L	ND	5000	4660	93	10-158	
Carbon tetrachloride	ug/L	ND	5000	5950	119	70-140	
Chloroethane	ug/L	ND	5000	5880	118	19-152	
Chloroform	ug/L	ND	5000	5670	113	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	5950	116	34-147	N2
Ethylbenzene	ug/L	ND	5000	6630	132	40-142	
Methylene chloride	ug/L	ND	5000	5790	114	31-144	
Tetrachloroethene	ug/L	ND	5000	7450	149	64-148	M1
Toluene	ug/L	ND	5000	6380	127	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	5650	113	54-151	
Trichloroethene	ug/L	413	5000	5550	103	71-149	
Vinyl chloride	ug/L	ND	5000	5580	111	22-146	
Xylene (Total)	ug/L	ND	15000	19700	131	37-144	N2
1,2-Dichloroethane-d4 (S)	%				92	80-120	
4-Bromofluorobenzene (S)	%				96	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				104	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: OEXT/44202 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60168924001

METHOD BLANK: 1379015 | Matrix: Water
Associated Lab Samples: 60168924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/19/14 05:08	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/19/14 05:08	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/19/14 05:08	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/19/14 05:08	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/19/14 05:08	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/19/14 05:08	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/19/14 05:08	
Hexachloroethane	ug/L	ND	5.0	05/19/14 05:08	
Naphthalene	ug/L	ND	5.0	05/19/14 05:08	
Nitrobenzene	ug/L	ND	5.0	05/19/14 05:08	
Pentachlorophenol	ug/L	ND	5.0	05/19/14 05:08	
Phenol	ug/L	ND	5.0	05/19/14 05:08	
2,4,6-Tribromophenol (S)	%	68	39-120	05/19/14 05:08	
2-Fluorobiphenyl (S)	%	69	39-120	05/19/14 05:08	
2-Fluorophenol (S)	%	44	17-120	05/19/14 05:08	
Nitrobenzene-d5 (S)	%	67	33-120	05/19/14 05:08	
Phenol-d6 (S)	%	29	11-120	05/19/14 05:08	
Terphenyl-d14 (S)	%	73	45-120	05/19/14 05:08	

LABORATORY CONTROL SAMPLE: 1379016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.1	78	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.8	86	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.4	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	28.4	57	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	47.0	94	40-133	
Hexachloro-1,3-butadiene	ug/L	50	36.1	72	44-116	
Hexachlorocyclopentadiene	ug/L	100	75.3	75	24-120	
Hexachloroethane	ug/L	50	35.6	71	43-113	
Naphthalene	ug/L	50	41.1	82	48-120	
Nitrobenzene	ug/L	50	40.3	81	48-120	
Pentachlorophenol	ug/L	50	42.0	84	47-120	
Phenol	ug/L	50	16.7	33	16-112	
2,4,6-Tribromophenol (S)	%			91	39-120	
2-Fluorobiphenyl (S)	%			84	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			82	33-120	
Phenol-d6 (S)	%			29	11-120	
Terphenyl-d14 (S)	%			86	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

MATRIX SPIKE SAMPLE: 1379017

Parameter	Units	60168930001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	41.4	83	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	48.4	97	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	37.0	74	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	33.6	67	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	51.3	103	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	40.6	81	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	90.7	91	11-120	
Hexachloroethane	ug/L	ND	50	40.9	82	40-113	
Naphthalene	ug/L	ND	50	44.2	88	45-120	
Nitrobenzene	ug/L	ND	50	43.1	86	38-120	
Pentachlorophenol	ug/L	ND	50	47.6	95	43-135	
Phenol	ug/L	ND	50	17.7	35	13-112	
2,4,6-Tribromophenol (S)	%				100	39-120	
2-Fluorobiphenyl (S)	%				90	39-120	
2-Fluorophenol (S)	%				46	17-120	
Nitrobenzene-d5 (S)	%				85	33-120	
Phenol-d6 (S)	%				33	11-120	
Terphenyl-d14 (S)	%				93	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: WET/47915 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60168924001

METHOD BLANK: 1379599 | Matrix: Water
Associated Lab Samples: 60168924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/16/14 16:01	

LABORATORY CONTROL SAMPLE: 1379600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	40.0	100	78-114	

MATRIX SPIKE SAMPLE: 1379601

Parameter	Units	60168397002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	17.6	44.4	59.6	95	78-114	

SAMPLE DUPLICATE: 1379602

Parameter	Units	60168405001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	12.3	12.0	3	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: WET/47925 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60168924001

METHOD BLANK: 1380379 | Matrix: Water
Associated Lab Samples: 60168924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/19/14 08:31	

LABORATORY CONTROL SAMPLE: 1380380

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.3	106	64-132	

MATRIX SPIKE SAMPLE: 1380381

Parameter	Units	60168924001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	8.8	76.9	221	276	64-132	M1

SAMPLE DUPLICATE: 1380382

Parameter	Units	60169029001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	6.4	18.3	96	34	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: WET/47871 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60168924001

METHOD BLANK: 1378311 | Matrix: Water
Associated Lab Samples: 60168924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/15/14 10:05	

SAMPLE DUPLICATE: 1378312

Parameter	Units	60168924001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	5780	5720	1	10	

SAMPLE DUPLICATE: 1378313

Parameter	Units	60169119003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	40.0	41.0	2	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: WET/47781
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60168924001

SAMPLE DUPLICATE: 1375817

Parameter	Units	60168480001 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 316-294R
Pace Project No.: 60168924

QC Batch: WET/47776 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60168924001

METHOD BLANK: 1375726 | Matrix: Water
Associated Lab Samples: 60168924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/15/14 14:47	

LABORATORY CONTROL SAMPLE: 1375727

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	188	95	85-115	

SAMPLE DUPLICATE: 1375728

Parameter	Units	60168734005 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	3.7	3.8	4	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: WETA/29412 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60168924001

METHOD BLANK: 1377423 | Matrix: Water
Associated Lab Samples: 60168924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/16/14 07:37	

LABORATORY CONTROL SAMPLE: 1377424

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

MATRIX SPIKE SAMPLE: 1377425

Parameter	Units	60168805001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	3.6	2	5.0	71	90-110	M1

MATRIX SPIKE SAMPLE: 1377426

Parameter	Units	60168814002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.0	102	90-110	

SAMPLE DUPLICATE: 1377427

Parameter	Units	60168818001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	3.6	3.6	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

QC Batch: WETA/29473 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60168924001

METHOD BLANK: 1379591 | Matrix: Water
Associated Lab Samples: 60168924001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/19/14 13:33	

LABORATORY CONTROL SAMPLE: 1379592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	47.2	94	90-110	

MATRIX SPIKE SAMPLE: 1379593

Parameter	Units	60168924001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	61700	25000	85900	97	90-110	

MATRIX SPIKE SAMPLE: 1379595

Parameter	Units	60168787001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	50.8	92	90-110	

SAMPLE DUPLICATE: 1379594

Parameter	Units	60168924001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	61700	55300	11	25	

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QUALIFIERS

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-294R
Pace Project No.: 60168924

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60168924001	**316-294R**	EPA 200.7	MPRP/27213	EPA 200.7	ICP/20616
60168924001	**316-294R**	EPA 200.7	MPRP/27227	EPA 200.7	ICP/20625
60168924001	**316-294R**	EPA 245.1	MERP/8402	EPA 245.1	MERC/8357
60168924001	**316-294R**	EPA 245.1	MERP/8391	EPA 245.1	MERC/8346
60168924001	**316-294R**	EPA 625	OEXT/44202	EPA 625	MSSV/14134
60168924001	**316-294R**	EPA 624 Low	MSV/61584		
60168924002	**TRIP BLANK**	EPA 624 Low	MSV/61584		
60168924001	**316-294R**	EPA 1664A	WET/47915		
60168924001	**316-294R**	EPA 1664A	WET/47925		
60168924001	**316-294R**	SM 2540D	WET/47871		
60168924001	**316-294R**	SM 4500-H+B	WET/47781		
60168924001	**316-294R**	SM 5210B	WET/47776	SM 5210B	WET/47884
60168924001	**316-294R**	EPA 350.1	WETA/29412		
60168924001	**316-294R**	EPA 410.4	WETA/29473		

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Sample Condition Upon Receipt

WO#: 60168924
60168924

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 ☑ zplc

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 3.6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: PVS/10/14

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6 BOD pH
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	Added 2.5 mL of HNO3 to BP3N. pH 6.0/4.0 Added 2.0 mL of H2SO4 to BP3S. pH 6.0/3.0
All containers needing preservation are found to be in compliance with EPA recommendation.	~~☑Yes~~ (☐No) ☐N/A PVS/10/14	14.
Exceptions: (VOA), coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed PV / Lot # of added preservative 12522 12513
Trip Blank present: Pace Trip Blank lot # (if purchased): COVER	☑Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State: MD

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency	
State / Location	
	Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	START TIME	END DATE	END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCL	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N: 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	BOD SM 5210B	Residual Chlorine (Y/N)	60168924
1	316-294A 2AG6U 113P3U 3AG3S	OT	G	5/9/14	0936	—	—		12	10	4	1	0	1BP3S	3-0		5DG94	X	X	X	X	X	X	X	X	X	X	X		1BP3N 4-0 2AP2U 2D79U
2	TRIP BLANK	—	—	—	—	—	—		2	2															X					
3																														
4																														
5																														
6																														METALS LIST total & LF Dis:
7																														Al,Sb,As,Be,Cd,Cr,
8																														Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																														and Mercury
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	Paul Unselth, FEI	05/09/14	2:20 PM	Bernette Harris	05/09/14	2:20 PM				
SITE ADDRESS: BRIDGETON LF				PASE	5/10/14	0100	3.6	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:	WILLIAM ABERNATHY					
SIGNATURE of SAMPLER:		DATE Signed: 5/9/14				

Pace Analytical Services, Inc.
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Lenexa, KS 66219
(913)599-5665

May 19, 2014

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

RE: Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 12, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

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 316-295
Pace Project No.: 60169029

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169029001	**316-295**	Water	05/10/14 17:15	05/12/14 13:25
60169029002	**TRIP BLANK**	Water	05/10/14 08:00	05/12/14 13:25

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169029001	**316-295**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	TDS	1
		EPA 245.1	TDS	1
		EPA 625	JMT	18
		EPA 624 Low	PRG	28
		EPA 1664A	DJR	1
		EPA 1664A	CRT	1
		SM 2540D	RAH	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60169029002	**TRIP BLANK**	EPA 624 Low	PRG	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

Sample: 316-295 **Lab ID: 60169029001** Collected: 05/10/14 17:15 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**25000**	ug/L	750	2	05/13/14 09:55	05/14/14 17:53	7429-90-5	
Antimony	**101**	ug/L	100	2	05/13/14 09:55	05/14/14 17:53	7440-36-0	
Arsenic	**1280**	ug/L	50.0	1	05/13/14 09:55	05/14/14 17:50	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/13/14 09:55	05/14/14 17:50	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:50	7440-43-9	
Chromium	**306**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:50	7440-47-3	
Cobalt	**60.4**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:50	7440-48-4	
Copper	**103**	ug/L	50.0	1	05/13/14 09:55	05/14/14 17:50	7440-50-8	
Iron	**994000**	ug/L	250	1	05/13/14 09:55	05/14/14 17:50	7439-89-6	
Lead	**183**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:50	7439-92-1	
Nickel	**163**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:50	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/13/14 09:55	05/14/14 17:50	7782-49-2	
Silver	ND	ug/L	35.0	1	05/13/14 09:55	05/14/14 17:50	7440-22-4	
Thallium	ND	ug/L	100	1	05/13/14 09:55	05/14/14 17:50	7440-28-0	
Zinc	**5500**	ug/L	500	2	05/13/14 09:55	05/14/14 17:53	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1960**	ug/L	750	2	05/16/14 17:00	05/18/14 14:56	7429-90-5	
Antimony, Dissolved	**57.1**	ug/L	50.0	1	05/16/14 17:00	05/18/14 14:58	7440-36-0	R1
Arsenic, Dissolved	**1000**	ug/L	50.0	1	05/16/14 17:00	05/18/14 14:58	7440-38-2	R1
Beryllium, Dissolved	ND	ug/L	5.0	1	05/16/14 17:00	05/18/14 14:58	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/16/14 17:00	05/18/14 14:58	7440-43-9	
Chromium, Dissolved	**165**	ug/L	25.0	1	05/16/14 17:00	05/18/14 14:58	7440-47-3	
Cobalt, Dissolved	**26.4**	ug/L	25.0	1	05/16/14 17:00	05/18/14 14:58	7440-48-4	
Copper, Dissolved	**53.8**	ug/L	50.0	1	05/16/14 17:00	05/18/14 14:58	7440-50-8	
Iron, Dissolved	**358000**	ug/L	250	1	05/16/14 17:00	05/18/14 14:58	7439-89-6	
Lead, Dissolved	**30.6**	ug/L	25.0	1	05/16/14 17:00	05/18/14 14:58	7439-92-1	
Nickel, Dissolved	**80.8**	ug/L	25.0	1	05/16/14 17:00	05/18/14 14:58	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/16/14 17:00	05/18/14 14:58	7782-49-2	R1
Silver, Dissolved	ND	ug/L	35.0	1	05/16/14 17:00	05/18/14 14:58	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/16/14 17:00	05/18/14 14:58	7440-28-0	
Zinc, Dissolved	**3820**	ug/L	500	2	05/16/14 17:00	05/18/14 14:56	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**46.5**	ug/L	6.0	1	05/19/14 11:00	05/19/14 15:39	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/19/14 11:00	05/19/14 16:12	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/16/14 00:00	05/19/14 06:33	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:33	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:33	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:33	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/16/14 00:00	05/19/14 06:33	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**8610**	ug/L	4000	2	05/16/14 00:00	05/19/14 06:33		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

Sample: 316-295 **Lab ID: 60169029001** Collected: 05/10/14 17:15 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1770**	ug/L	1000	2	05/16/14 00:00	05/19/14 06:33	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:33	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:33	87-86-5	
Phenol	**11800**	ug/L	1000	2	05/16/14 00:00	05/19/14 06:33	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:33	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:33	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	153	%	33-120	2	05/16/14 00:00	05/19/14 06:33	4165-60-0	S0
2-Fluorobiphenyl (S)	75	%	39-120	2	05/16/14 00:00	05/19/14 06:33	321-60-8	
Terphenyl-d14 (S)	77	%	45-120	2	05/16/14 00:00	05/19/14 06:33	1718-51-0	
Phenol-d6 (S)	42	%	11-120	2	05/16/14 00:00	05/19/14 06:33	13127-88-3	
2-Fluorophenol (S)	38	%	17-120	2	05/16/14 00:00	05/19/14 06:33	367-12-4	
2,4,6-Tribromophenol (S)	90	%	39-120	2	05/16/14 00:00	05/19/14 06:33	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**124000**	ug/L	2500	250		05/15/14 12:37	67-64-1	N2
Benzene	ND	ug/L	250	250		05/15/14 12:37	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/15/14 12:37	75-27-4	
Bromoform	ND	ug/L	250	250		05/15/14 12:37	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/15/14 12:37	74-83-9	
2-Butanone (MEK)	**50100**	ug/L	2500	250		05/15/14 12:37	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/15/14 12:37	56-23-5	
Chloroethane	ND	ug/L	250	250		05/15/14 12:37	75-00-3	
Chloroform	ND	ug/L	250	250		05/15/14 12:37	67-66-3	
1,4-Dichlorobenzene	**393**	ug/L	250	250		05/15/14 12:37	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/15/14 12:37	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 12:37	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 12:37	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/15/14 12:37	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/15/14 12:37	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/15/14 12:37	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/15/14 12:37	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/15/14 12:37	127-18-4	
Toluene	ND	ug/L	250	250		05/15/14 12:37	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/15/14 12:37	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/15/14 12:37	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/15/14 12:37	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/15/14 12:37	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/15/14 12:37	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	92	%	80-120	250		05/15/14 12:37	460-00-4	
Toluene-d8 (S)	104	%	80-120	250		05/15/14 12:37	2037-26-5	
1,2-Dichloroethane-d4 (S)	93	%	80-120	250		05/15/14 12:37	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/15/14 12:37		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1340**	mg/L	5.0	1		05/16/14 16:04		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

Sample: 316-295 **Lab ID: 60169029001** Collected: 05/10/14 17:15 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**6.4**	mg/L	5.0	1		05/19/14 08:33		D6
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**5180**	mg/L	5.0	1		05/15/14 10:07		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/13/14 09:40		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**32900**	mg/L	2.0	1	05/12/14 16:09	05/17/14 07:57		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**639**	mg/L	20.0	200		05/16/14 08:06	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**56900**	mg/L	5000	500		05/19/14 13:35		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

Sample: TRIP BLANK **Lab ID: 60169029002** Collected: 05/10/14 08:00 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/15/14 10:14	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/15/14 10:14	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/15/14 10:14	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/15/14 10:14	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/15/14 10:14	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/15/14 10:14	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/15/14 10:14	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/15/14 10:14	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/15/14 10:14	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/15/14 10:14	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/15/14 10:14	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 10:14	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 10:14	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/15/14 10:14	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/15/14 10:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/15/14 10:14	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/15/14 10:14	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/15/14 10:14	127-18-4	
Toluene	ND	ug/L	1.0	1		05/15/14 10:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/15/14 10:14	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/15/14 10:14	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/15/14 10:14	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/15/14 10:14	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/15/14 10:14	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	1		05/15/14 10:14	460-00-4	
Toluene-d8 (S)	105	%	80-120	1		05/15/14 10:14	2037-26-5	
1,2-Dichloroethane-d4 (S)	96	%	80-120	1		05/15/14 10:14	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/15/14 10:14		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: MERP/8408
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169029001

METHOD BLANK: 1380593
Matrix: Water
Associated Lab Samples: 60169029001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/19/14 15:35	

LABORATORY CONTROL SAMPLE: 1380594

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380595 1380596

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	46.5	150	150	164	174	78	85	70-130	6	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: MERP/8407
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169029001

METHOD BLANK: 1380589
Matrix: Water
Associated Lab Samples: 60169029001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/19/14 16:08	

LABORATORY CONTROL SAMPLE: 1380590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.7	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380591 1380592

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	118	112	79	74	70-130	5	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: MPRP/27213 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169029001

METHOD BLANK: 1376844 | Matrix: Water
Associated Lab Samples: 60169029001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/14/14 17:04	
Antimony	ug/L	ND	10.0	05/14/14 17:04	
Arsenic	ug/L	ND	10.0	05/14/14 17:04	
Beryllium	ug/L	ND	1.0	05/14/14 17:04	
Cadmium	ug/L	ND	5.0	05/14/14 17:04	
Chromium	ug/L	ND	5.0	05/14/14 17:04	
Cobalt	ug/L	ND	5.0	05/14/14 17:04	
Copper	ug/L	ND	10.0	05/14/14 17:04	
Iron	ug/L	ND	50.0	05/14/14 17:04	
Lead	ug/L	ND	5.0	05/14/14 17:04	
Nickel	ug/L	ND	5.0	05/14/14 17:04	
Selenium	ug/L	ND	15.0	05/14/14 17:04	
Silver	ug/L	ND	7.0	05/14/14 17:04	
Thallium	ug/L	ND	20.0	05/14/14 17:04	
Zinc	ug/L	ND	50.0	05/14/14 17:04	

LABORATORY CONTROL SAMPLE: 1376845

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	986	99	85-115	
Beryllium	ug/L	1000	1020	102	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	992	99	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	1000	100	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	492	98	85-115	
Thallium	ug/L	1000	985	98	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	18200	50000	81700	127	70-130	
Antimony	ug/L	ND	5000	5150	101	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1140	5000	6570	109	70-130	
Beryllium	ug/L	ND	5000	4970	99	70-130	
Cadmium	ug/L	ND	5000	5200	104	70-130	
Chromium	ug/L	269	5000	5130	97	70-130	
Cobalt	ug/L	47.5	5000	4950	98	70-130	
Copper	ug/L	ND	5000	5300	106	70-130	
Iron	ug/L	872000	50000	939000	134	70-130	M1
Lead	ug/L	123	5000	4770	93	70-130	
Nickel	ug/L	132	5000	4970	97	70-130	
Selenium	ug/L	ND	5000	5880	117	70-130	
Silver	ug/L	ND	2500	2640	105	70-130	
Thallium	ug/L	ND	5000	4390	88	70-130	
Zinc	ug/L	4860	5000	9580	94	70-130	

MATRIX SPIKE SAMPLE: 1376847

Parameter	Units	60168779001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	ND	10000	9860	99	70-130	
Antimony	ug/L	ND	1000	1010	100	70-130	
Arsenic	ug/L	ND	1000	990	99	70-130	
Beryllium	ug/L	ND	1000	1000	100	70-130	
Cadmium	ug/L	ND	1000	992	99	70-130	
Chromium	ug/L	ND	1000	985	98	70-130	
Cobalt	ug/L	ND	1000	1020	102	70-130	
Copper	ug/L	24.9	1000	1040	101	70-130	
Iron	ug/L	163	10000	10200	100	70-130	
Lead	ug/L	ND	1000	999	100	70-130	
Nickel	ug/L	7.1	1000	1010	100	70-130	
Selenium	ug/L	ND	1000	1010	101	70-130	
Silver	ug/L	ND	500	497	99	70-130	
Thallium	ug/L	ND	1000	951	95	70-130	
Zinc	ug/L	ND	1000	1040	100	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: MPRP/27278
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169029001

METHOD BLANK: 1379437
Matrix: Water
Associated Lab Samples: 60169029001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/18/14 14:51	
Antimony, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Arsenic, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Beryllium, Dissolved	ug/L	ND	1.0	05/18/14 14:51	
Cadmium, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Chromium, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Cobalt, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Copper, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Iron, Dissolved	ug/L	ND	50.0	05/18/14 14:51	
Lead, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Nickel, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Selenium, Dissolved	ug/L	ND	15.0	05/18/14 14:51	
Silver, Dissolved	ug/L	ND	7.0	05/18/14 14:51	
Thallium, Dissolved	ug/L	ND	20.0	05/18/14 14:51	
Zinc, Dissolved	ug/L	ND	50.0	05/18/14 14:51	

LABORATORY CONTROL SAMPLE: 1379438

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	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	972	97	85-115	
Beryllium, Dissolved	ug/L	1000	1000	100	85-115	
Cadmium, Dissolved	ug/L	1000	1010	101	85-115	
Chromium, Dissolved	ug/L	1000	974	97	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9760	98	85-115	
Lead, Dissolved	ug/L	1000	1020	102	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	491	98	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	961	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379439 1379440

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1960	50000	50000	52000	53300	100	103	70-130	3	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379439 1379440

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	57.1	5000	5000	4940	5610	98	111	70-130	13	7	R1
Arsenic, Dissolved	ug/L	1000	5000	5000	5890	6640	98	113	70-130	12	10	R1
Beryllium, Dissolved	ug/L	ND	5000	5000	4700	4830	94	97	70-130	3	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5020	5400	100	108	70-130	7	10	
Chromium, Dissolved	ug/L	165	5000	5000	5270	4910	102	95	70-130	7	10	
Cobalt, Dissolved	ug/L	26.4	5000	5000	4760	4860	95	97	70-130	2	6	
Copper, Dissolved	ug/L	53.8	5000	5000	5000	5560	99	110	70-130	11	11	
Iron, Dissolved	ug/L	358000	50000	50000	393000	409000	70	103	70-130	4	10	
Lead, Dissolved	ug/L	30.6	5000	5000	4650	4690	92	93	70-130	1	10	
Nickel, Dissolved	ug/L	80.8	5000	5000	4720	4910	93	97	70-130	4	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5280	6200	106	124	70-130	16	10	R1
Silver, Dissolved	ug/L	ND	2500	2500	2600	2700	104	108	70-130	4	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4250	4390	85	88	70-130	3	6	
Zinc, Dissolved	ug/L	3820	5000	5000	8210	8670	88	97	70-130	5	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: MSV/61584 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169029001, 60169029002

METHOD BLANK: 1377791 | Matrix: Water
Associated Lab Samples: 60169029001, 60169029002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/15/14 09:26	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,2-Dichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/15/14 09:26	
2-Butanone (MEK)	ug/L	ND	10.0	05/15/14 09:26	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/15/14 09:26	N2
Acetone	ug/L	ND	10.0	05/15/14 09:26	N2
Benzene	ug/L	ND	1.0	05/15/14 09:26	
Bromodichloromethane	ug/L	ND	1.0	05/15/14 09:26	
Bromoform	ug/L	ND	1.0	05/15/14 09:26	
Bromomethane	ug/L	ND	5.0	05/15/14 09:26	
Carbon tetrachloride	ug/L	ND	1.0	05/15/14 09:26	
Chloroethane	ug/L	ND	1.0	05/15/14 09:26	
Chloroform	ug/L	ND	1.0	05/15/14 09:26	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	N2
Ethylbenzene	ug/L	ND	1.0	05/15/14 09:26	
Methylene chloride	ug/L	ND	1.0	05/15/14 09:26	
Tetrachloroethene	ug/L	ND	1.0	05/15/14 09:26	
Toluene	ug/L	ND	1.0	05/15/14 09:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Trichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Vinyl chloride	ug/L	ND	1.0	05/15/14 09:26	
Xylene (Total)	ug/L	ND	3.0	05/15/14 09:26	N2
1,2-Dichloroethane-d4 (S)	%	91	80-120	05/15/14 09:26	
4-Bromofluorobenzene (S)	%	97	80-120	05/15/14 09:26	
Toluene-d8 (S)	%	103	80-120	05/15/14 09:26	

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.6	103	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.2	106	67-127	N2
1,1,2-Trichloroethane	ug/L	20	21.6	108	67-124	
1,2-Dichloroethane	ug/L	20	20.0	100	70-126	
1,4-Dichlorobenzene	ug/L	20	22.6	113	74-120	
2-Butanone (MEK)	ug/L	100	93.7	94	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	93.3	93	59-131	N2
Acetone	ug/L	100	94.3	94	38-134	N2
Benzene	ug/L	20	19.9	99	75-120	
Bromodichloromethane	ug/L	20	21.2	106	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	23.2	116	65-127	
Bromomethane	ug/L	20	18.8	94	13-157	
Carbon tetrachloride	ug/L	20	20.1	100	70-131	
Chloroethane	ug/L	20	18.0	90	47-133	
Chloroform	ug/L	20	20.2	101	65-127	
cis-1,2-Dichloroethene	ug/L	20	20.3	102	68-127	N2
Ethylbenzene	ug/L	20	22.8	114	74-122	
Methylene chloride	ug/L	20	20.4	102	64-129	
Tetrachloroethene	ug/L	20	24.5	123	73-125	
Toluene	ug/L	20	21.7	108	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.8	94	66-129	
Trichloroethene	ug/L	20	19.6	98	71-123	
Vinyl chloride	ug/L	20	16.7	83	43-129	
Xylene (Total)	ug/L	60	68.3	114	75-121	N2
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	6000	120	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5810	116	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	6110	122	52-143	
1,2-Dichloroethane	ug/L	ND	5000	5470	109	49-144	
1,4-Dichlorobenzene	ug/L	308	5000	6650	127	33-140	
2-Butanone (MEK)	ug/L	55300	25000	82800	110	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	25500	95	40-160	N2
Acetone	ug/L	149000	25000	185000	144	10-160	N2
Benzene	ug/L	ND	5000	5840	117	37-151	
Bromodichloromethane	ug/L	ND	5000	5810	116	35-142	
Bromoform	ug/L	ND	5000	6700	134	45-142	
Bromomethane	ug/L	ND	5000	4660	93	10-158	
Carbon tetrachloride	ug/L	ND	5000	5950	119	70-140	
Chloroethane	ug/L	ND	5000	5880	118	19-152	
Chloroform	ug/L	ND	5000	5670	113	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	5950	116	34-147	N2
Ethylbenzene	ug/L	ND	5000	6630	132	40-142	
Methylene chloride	ug/L	ND	5000	5790	114	31-144	
Tetrachloroethene	ug/L	ND	5000	7450	149	64-148	M1
Toluene	ug/L	ND	5000	6380	127	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	5650	113	54-151	
Trichloroethene	ug/L	413	5000	5550	103	71-149	
Vinyl chloride	ug/L	ND	5000	5580	111	22-146	
Xylene (Total)	ug/L	ND	15000	19700	131	37-144	N2
1,2-Dichloroethane-d4 (S)	%				92	80-120	
4-Bromofluorobenzene (S)	%				96	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				104	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: OEXT/44202 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169029001

METHOD BLANK: 1379015 | Matrix: Water
Associated Lab Samples: 60169029001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/19/14 05:08	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/19/14 05:08	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/19/14 05:08	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/19/14 05:08	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/19/14 05:08	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/19/14 05:08	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/19/14 05:08	
Hexachloroethane	ug/L	ND	5.0	05/19/14 05:08	
Naphthalene	ug/L	ND	5.0	05/19/14 05:08	
Nitrobenzene	ug/L	ND	5.0	05/19/14 05:08	
Pentachlorophenol	ug/L	ND	5.0	05/19/14 05:08	
Phenol	ug/L	ND	5.0	05/19/14 05:08	
2,4,6-Tribromophenol (S)	%	68	39-120	05/19/14 05:08	
2-Fluorobiphenyl (S)	%	69	39-120	05/19/14 05:08	
2-Fluorophenol (S)	%	44	17-120	05/19/14 05:08	
Nitrobenzene-d5 (S)	%	67	33-120	05/19/14 05:08	
Phenol-d6 (S)	%	29	11-120	05/19/14 05:08	
Terphenyl-d14 (S)	%	73	45-120	05/19/14 05:08	

LABORATORY CONTROL SAMPLE: 1379016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.1	78	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.8	86	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.4	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	28.4	57	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	47.0	94	40-133	
Hexachloro-1,3-butadiene	ug/L	50	36.1	72	44-116	
Hexachlorocyclopentadiene	ug/L	100	75.3	75	24-120	
Hexachloroethane	ug/L	50	35.6	71	43-113	
Naphthalene	ug/L	50	41.1	82	48-120	
Nitrobenzene	ug/L	50	40.3	81	48-120	
Pentachlorophenol	ug/L	50	42.0	84	47-120	
Phenol	ug/L	50	16.7	33	16-112	
2,4,6-Tribromophenol (S)	%			91	39-120	
2-Fluorobiphenyl (S)	%			84	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			82	33-120	
Phenol-d6 (S)	%			29	11-120	
Terphenyl-d14 (S)	%			86	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

MATRIX SPIKE SAMPLE: 1379017

Parameter	Units	60168930001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	41.4	83	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	48.4	97	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	37.0	74	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	33.6	67	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	51.3	103	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	40.6	81	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	90.7	91	11-120	
Hexachloroethane	ug/L	ND	50	40.9	82	40-113	
Naphthalene	ug/L	ND	50	44.2	88	45-120	
Nitrobenzene	ug/L	ND	50	43.1	86	38-120	
Pentachlorophenol	ug/L	ND	50	47.6	95	43-135	
Phenol	ug/L	ND	50	17.7	35	13-112	
2,4,6-Tribromophenol (S)	%				100	39-120	
2-Fluorobiphenyl (S)	%				90	39-120	
2-Fluorophenol (S)	%				46	17-120	
Nitrobenzene-d5 (S)	%				85	33-120	
Phenol-d6 (S)	%				33	11-120	
Terphenyl-d14 (S)	%				93	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: WET/47915 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169029001

METHOD BLANK: 1379599 | Matrix: Water
Associated Lab Samples: 60169029001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/16/14 16:01	

LABORATORY CONTROL SAMPLE: 1379600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	40.0	100	78-114	

MATRIX SPIKE SAMPLE: 1379601

Parameter	Units	60168397002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	17.6	44.4	59.6	95	78-114	

SAMPLE DUPLICATE: 1379602

Parameter	Units	60168405001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	12.3	12.0	3	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: WET/47925 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169029001

METHOD BLANK: 1380379 | Matrix: Water
Associated Lab Samples: 60169029001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/19/14 08:31	

LABORATORY CONTROL SAMPLE: 1380380

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.3	106	64-132	

MATRIX SPIKE SAMPLE: 1380381

Parameter	Units	60168924001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	8.8	76.9	221	276	64-132	M1

SAMPLE DUPLICATE: 1380382

Parameter	Units	60169029001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	6.4	18.3	96	34	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: WET/47871 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169029001

METHOD BLANK: 1378311 | Matrix: Water
Associated Lab Samples: 60169029001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/15/14 10:05	

SAMPLE DUPLICATE: 1378312

Parameter	Units	60168924001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	5780	5720	1	10	

SAMPLE DUPLICATE: 1378313

Parameter	Units	60169119003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	40.0	41.0	2	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: WET/47823
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169029001

SAMPLE DUPLICATE: 1376884

Parameter	Units	60168497002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.0	8.0	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: WET/47802 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169029001

METHOD BLANK: 1376583 | Matrix: Water
Associated Lab Samples: 60169029001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/17/14 07:54	

LABORATORY CONTROL SAMPLE: 1376584

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	175	89	85-115	

SAMPLE DUPLICATE: 1376585

Parameter	Units	60169029001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	32900	31700	4	17	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: WETA/29412 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169029001

METHOD BLANK: 1377423 | Matrix: Water
Associated Lab Samples: 60169029001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/16/14 07:37	

LABORATORY CONTROL SAMPLE: 1377424

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

MATRIX SPIKE SAMPLE: 1377425

Parameter	Units	60168805001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	3.6	2	5.0	71	90-110	M1

MATRIX SPIKE SAMPLE: 1377426

Parameter	Units	60168814002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.0	102	90-110	

SAMPLE DUPLICATE: 1377427

Parameter	Units	60168818001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	3.6	3.6	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

QC Batch: WETA/29473 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169029001

METHOD BLANK: 1379591 | Matrix: Water
Associated Lab Samples: 60169029001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/19/14 13:33	

LABORATORY CONTROL SAMPLE: 1379592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	47.2	94	90-110	

MATRIX SPIKE SAMPLE: 1379593

Parameter	Units	60168924001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	61700	25000	85900	97	90-110	

MATRIX SPIKE SAMPLE: 1379595

Parameter	Units	60168787001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	50.8	92	90-110	

SAMPLE DUPLICATE: 1379594

Parameter	Units	60168924001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	61700	55300	11	25	

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QUALIFIERS

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-295
Pace Project No.: 60169029

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169029001	**316-295**	EPA 200.7	MPRP/27213	EPA 200.7	ICP/20616
60169029001	**316-295**	EPA 200.7	MPRP/27278	EPA 200.7	ICP/20662
60169029001	**316-295**	EPA 245.1	MERP/8408	EPA 245.1	MERC/8362
60169029001	**316-295**	EPA 245.1	MERP/8407	EPA 245.1	MERC/8363
60169029001	**316-295**	EPA 625	OEXT/44202	EPA 625	MSSV/14134
60169029001	**316-295**	EPA 624 Low	MSV/61584		
60169029002	**TRIP BLANK**	EPA 624 Low	MSV/61584		
60169029001	**316-295**	EPA 1664A	WET/47915		
60169029001	**316-295**	EPA 1664A	WET/47925		
60169029001	**316-295**	SM 2540D	WET/47871		
60169029001	**316-295**	SM 4500-H+B	WET/47823		
60169029001	**316-295**	SM 5210B	WET/47802	SM 5210B	WET/47937
60169029001	**316-295**	EPA 350.1	WETA/29412		
60169029001	**316-295**	EPA 410.4	WETA/29473		

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Sample Condition Upon Receipt

WO#: 60169029

60169029

Client Name: Barr / Republic

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other ☐ XFreads

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-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: _____

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JF 5/12/14 1400

Chain of Custody present:	☒Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☒Yes	☒No	☐N/A	2. no sample collect date/time on COC!!
Chain of Custody relinquished:	☒Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☒Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☒Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☒Yes	☐No	☐N/A	6. BOD / pH
Rush Turn Around Time requested:	☐Yes	☒No	☐N/A	7.
Sufficient volume:	☒Yes	☐No	☐N/A	8.
Correct containers used:	☒Yes	☐No	☐N/A	
Pace containers used:	☒Yes	☐No	☐N/A	9.
Containers intact:	☒Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☒N/A	12.
Sample labels match COC:	☒Yes	☐No	☐N/A	
Includes date/time/ID/analyses Matrix: water				13.
All containers needing preservation have been checked.	☒Yes	☐No	☐N/A	BPSN + BPSS unable to be preserved.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☒No	☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☐Yes	☐No		Initial when completed JF — Lot # of added preservative
Trip Blank present:	☒Yes	☐No	☐N/A	
Pace Trip Blank lot # (if purchased): covered				15.
Headspace in VOA vials (>6mm):	☐Yes	☒No	☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☒N/A	17. List State: MO

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: 5/12/14

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical

Page : 1 Of 1

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.	
Client Project ID:	BRIDGETON LF
Container Order Number:	

Section C — Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	130426_7588
Pace Project Manager:	Brown, Angie
Pace Profile #:	7585 LINE 2

Regulatory Agency
State / Location
Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N) 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	BOD SM 5210B	Residual Chlorine (Y/N)	60169029
																														2(PVA) 1(BZN) 1(BZN) 1(BZN) 1(BZN)
1	516-295	OT	G						14	10	4	1	0					X	X	X	X	X	X	X	X	X	X	X		3(HCL)2(PVA) 5(DG9A) 001
2	TRIP BLANK								2	2															X					2(DG9A) 002
3																														
4																														
5																														
6																														METALS LIST total & LF Dis:
7																														Al,Sb,As,Be,Cd,Cr,
8																														Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																														and Mercury
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FET	5-12-14	9:00am	Bill Stone 412	5-12-14	9:00am				
SITE ADDRESS: BRIDGETON LF				Pace	5/12/14	1325	3.8	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: Paul Linscott					
SIGNATURE of SAMPLER: Paul Linscott	DATE Signed: 05/10/14				

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Lenexa, KS 66219
(913)599-5665

May 19, 2014

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

RE: Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 12, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

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 316-296
Pace Project No.: 60169030

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169030001	**316-296**	Water	05/11/14 09:30	05/12/14 13:25
60169030002	**TRIP BLANK**	Water	05/11/14 08:00	05/12/14 13:25

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169030001	**316-296**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	TDS	1
		EPA 245.1	TDS	1
		EPA 625	JMT	18
		EPA 624 Low	PRG	28
		EPA 1664A	DJR	1
		EPA 1664A	CRT	1
		SM 2540D	RAH	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60169030002	**TRIP BLANK**	EPA 624 Low	PRG	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

Sample: 316-296 **Lab ID: 60169030001** Collected: 05/11/14 09:30 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**16100**	ug/L	750	2	05/13/14 09:55	05/14/14 18:00	7429-90-5	
Antimony	ND	ug/L	100	2	05/13/14 09:55	05/14/14 18:00	7440-36-0	D3
Arsenic	**1150**	ug/L	50.0	1	05/13/14 09:55	05/14/14 17:57	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/13/14 09:55	05/14/14 17:57	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:57	7440-43-9	
Chromium	**263**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:57	7440-47-3	
Cobalt	**49.3**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:57	7440-48-4	
Copper	ND	ug/L	50.0	1	05/13/14 09:55	05/14/14 17:57	7440-50-8	
Iron	**871000**	ug/L	250	1	05/13/14 09:55	05/14/14 17:57	7439-89-6	
Lead	**114**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:57	7439-92-1	
Nickel	**134**	ug/L	25.0	1	05/13/14 09:55	05/14/14 17:57	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/13/14 09:55	05/14/14 17:57	7782-49-2	
Silver	ND	ug/L	35.0	1	05/13/14 09:55	05/14/14 17:57	7440-22-4	
Thallium	ND	ug/L	100	1	05/13/14 09:55	05/14/14 17:57	7440-28-0	
Zinc	**4700**	ug/L	500	2	05/13/14 09:55	05/14/14 18:00	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**2060**	ug/L	750	2	05/16/14 17:00	05/18/14 15:10	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:17	7440-36-0	
Arsenic, Dissolved	**1050**	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:17	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/16/14 17:00	05/18/14 15:17	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:17	7440-43-9	
Chromium, Dissolved	**177**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:17	7440-47-3	
Cobalt, Dissolved	**26.8**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:17	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:17	7440-50-8	
Iron, Dissolved	**398000**	ug/L	250	1	05/16/14 17:00	05/18/14 15:17	7439-89-6	
Lead, Dissolved	**27.3**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:17	7439-92-1	
Nickel, Dissolved	**79.2**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:17	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/16/14 17:00	05/18/14 15:17	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/16/14 17:00	05/18/14 15:17	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/16/14 17:00	05/18/14 15:17	7440-28-0	
Zinc, Dissolved	**4020**	ug/L	500	2	05/16/14 17:00	05/18/14 15:10	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**27.3**	ug/L	6.0	1	05/19/14 11:00	05/19/14 15:46	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/19/14 11:00	05/19/14 16:19	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/16/14 00:00	05/19/14 06:54	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:54	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:54	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:54	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/16/14 00:00	05/19/14 06:54	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7590**	ug/L	4000	2	05/16/14 00:00	05/19/14 06:54		N2

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

Sample: 316-296 **Lab ID: 60169030001** Collected: 05/11/14 09:30 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1710**	ug/L	1000	2	05/16/14 00:00	05/19/14 06:54	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:54	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:54	87-86-5	
Phenol	**10700**	ug/L	1000	2	05/16/14 00:00	05/19/14 06:54	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:54	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 06:54	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	162	%	33-120	2	05/16/14 00:00	05/19/14 06:54	4165-60-0	S0
2-Fluorobiphenyl (S)	73	%	39-120	2	05/16/14 00:00	05/19/14 06:54	321-60-8	
Terphenyl-d14 (S)	73	%	45-120	2	05/16/14 00:00	05/19/14 06:54	1718-51-0	
Phenol-d6 (S)	40	%	11-120	2	05/16/14 00:00	05/19/14 06:54	13127-88-3	
2-Fluorophenol (S)	46	%	17-120	2	05/16/14 00:00	05/19/14 06:54	367-12-4	
2,4,6-Tribromophenol (S)	81	%	39-120	2	05/16/14 00:00	05/19/14 06:54	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**141000**	ug/L	2500	250		05/15/14 12:51	67-64-1	N2
Benzene	ND	ug/L	250	250		05/15/14 12:51	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/15/14 12:51	75-27-4	
Bromoform	ND	ug/L	250	250		05/15/14 12:51	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/15/14 12:51	74-83-9	
2-Butanone (MEK)	**52800**	ug/L	2500	250		05/15/14 12:51	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/15/14 12:51	56-23-5	
Chloroethane	ND	ug/L	250	250		05/15/14 12:51	75-00-3	
Chloroform	ND	ug/L	250	250		05/15/14 12:51	67-66-3	
1,4-Dichlorobenzene	**507**	ug/L	250	250		05/15/14 12:51	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/15/14 12:51	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 12:51	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 12:51	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/15/14 12:51	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/15/14 12:51	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/15/14 12:51	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/15/14 12:51	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/15/14 12:51	127-18-4	
Toluene	ND	ug/L	250	250		05/15/14 12:51	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/15/14 12:51	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/15/14 12:51	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/15/14 12:51	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/15/14 12:51	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/15/14 12:51	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	91	%	80-120	250		05/15/14 12:51	460-00-4	
Toluene-d8 (S)	100	%	80-120	250		05/15/14 12:51	2037-26-5	
1,2-Dichloroethane-d4 (S)	94	%	80-120	250		05/15/14 12:51	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/15/14 12:51		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1180**	mg/L	5.0	1		05/16/14 16:04		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

Sample: 316-296 **Lab ID: 60169030001** Collected: 05/11/14 09:30 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**6.7**	mg/L	5.0	1		05/19/14 08:33		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4280**	mg/L	5.0	1		05/15/14 10:07		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.3**	Std. Units	0.10	1		05/13/14 09:40		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**30900**	mg/L	2.0	1	05/12/14 16:19	05/17/14 08:04		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**619**	mg/L	20.0	200		05/16/14 08:07	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**55700**	mg/L	5000	500		05/19/14 13:35		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

Sample: TRIP BLANK **Lab ID: 60169030002** Collected: 05/11/14 08:00 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/15/14 10:28	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/15/14 10:28	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/15/14 10:28	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/15/14 10:28	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/15/14 10:28	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/15/14 10:28	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/15/14 10:28	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/15/14 10:28	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/15/14 10:28	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/15/14 10:28	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/15/14 10:28	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 10:28	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 10:28	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/15/14 10:28	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/15/14 10:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/15/14 10:28	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/15/14 10:28	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/15/14 10:28	127-18-4	
Toluene	ND	ug/L	1.0	1		05/15/14 10:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/15/14 10:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/15/14 10:28	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/15/14 10:28	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/15/14 10:28	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/15/14 10:28	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	93	%	80-120	1		05/15/14 10:28	460-00-4	
Toluene-d8 (S)	103	%	80-120	1		05/15/14 10:28	2037-26-5	
1,2-Dichloroethane-d4 (S)	96	%	80-120	1		05/15/14 10:28	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/15/14 10:28		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: MERP/8408 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169030001

METHOD BLANK: 1380593 | Matrix: Water
Associated Lab Samples: 60169030001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/19/14 15:35	

LABORATORY CONTROL SAMPLE: 1380594

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380595 1380596

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	46.5	150	150	164	174	78	85	70-130	6	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: MERP/8407
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169030001

METHOD BLANK: 1380589
Matrix: Water
Associated Lab Samples: 60169030001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/19/14 16:08	

LABORATORY CONTROL SAMPLE: 1380590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.7	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380591 1380592

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	118	112	79	74	70-130	5	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: MPRP/27213 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169030001

METHOD BLANK: 1376844 | Matrix: Water
Associated Lab Samples: 60169030001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/14/14 17:04	
Antimony	ug/L	ND	10.0	05/14/14 17:04	
Arsenic	ug/L	ND	10.0	05/14/14 17:04	
Beryllium	ug/L	ND	1.0	05/14/14 17:04	
Cadmium	ug/L	ND	5.0	05/14/14 17:04	
Chromium	ug/L	ND	5.0	05/14/14 17:04	
Cobalt	ug/L	ND	5.0	05/14/14 17:04	
Copper	ug/L	ND	10.0	05/14/14 17:04	
Iron	ug/L	ND	50.0	05/14/14 17:04	
Lead	ug/L	ND	5.0	05/14/14 17:04	
Nickel	ug/L	ND	5.0	05/14/14 17:04	
Selenium	ug/L	ND	15.0	05/14/14 17:04	
Silver	ug/L	ND	7.0	05/14/14 17:04	
Thallium	ug/L	ND	20.0	05/14/14 17:04	
Zinc	ug/L	ND	50.0	05/14/14 17:04	

LABORATORY CONTROL SAMPLE: 1376845

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	986	99	85-115	
Beryllium	ug/L	1000	1020	102	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	992	99	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	1000	100	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	492	98	85-115	
Thallium	ug/L	1000	985	98	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	18200	50000	81700	127	70-130	
Antimony	ug/L	ND	5000	5150	101	70-130	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1140	5000	6570	109	70-130	
Beryllium	ug/L	ND	5000	4970	99	70-130	
Cadmium	ug/L	ND	5000	5200	104	70-130	
Chromium	ug/L	269	5000	5130	97	70-130	
Cobalt	ug/L	47.5	5000	4950	98	70-130	
Copper	ug/L	ND	5000	5300	106	70-130	
Iron	ug/L	872000	50000	939000	134	70-130	M1
Lead	ug/L	123	5000	4770	93	70-130	
Nickel	ug/L	132	5000	4970	97	70-130	
Selenium	ug/L	ND	5000	5880	117	70-130	
Silver	ug/L	ND	2500	2640	105	70-130	
Thallium	ug/L	ND	5000	4390	88	70-130	
Zinc	ug/L	4860	5000	9580	94	70-130	

MATRIX SPIKE SAMPLE: 1376847

Parameter	Units	60168779001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	ND	10000	9860	99	70-130	
Antimony	ug/L	ND	1000	1010	100	70-130	
Arsenic	ug/L	ND	1000	990	99	70-130	
Beryllium	ug/L	ND	1000	1000	100	70-130	
Cadmium	ug/L	ND	1000	992	99	70-130	
Chromium	ug/L	ND	1000	985	98	70-130	
Cobalt	ug/L	ND	1000	1020	102	70-130	
Copper	ug/L	24.9	1000	1040	101	70-130	
Iron	ug/L	163	10000	10200	100	70-130	
Lead	ug/L	ND	1000	999	100	70-130	
Nickel	ug/L	7.1	1000	1010	100	70-130	
Selenium	ug/L	ND	1000	1010	101	70-130	
Silver	ug/L	ND	500	497	99	70-130	
Thallium	ug/L	ND	1000	951	95	70-130	
Zinc	ug/L	ND	1000	1040	100	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: MPRP/27278
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169030001

METHOD BLANK: 1379437
Matrix: Water
Associated Lab Samples: 60169030001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/18/14 14:51	
Antimony, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Arsenic, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Beryllium, Dissolved	ug/L	ND	1.0	05/18/14 14:51	
Cadmium, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Chromium, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Cobalt, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Copper, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Iron, Dissolved	ug/L	ND	50.0	05/18/14 14:51	
Lead, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Nickel, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Selenium, Dissolved	ug/L	ND	15.0	05/18/14 14:51	
Silver, Dissolved	ug/L	ND	7.0	05/18/14 14:51	
Thallium, Dissolved	ug/L	ND	20.0	05/18/14 14:51	
Zinc, Dissolved	ug/L	ND	50.0	05/18/14 14:51	

LABORATORY CONTROL SAMPLE: 1379438

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	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	972	97	85-115	
Beryllium, Dissolved	ug/L	1000	1000	100	85-115	
Cadmium, Dissolved	ug/L	1000	1010	101	85-115	
Chromium, Dissolved	ug/L	1000	974	97	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9760	98	85-115	
Lead, Dissolved	ug/L	1000	1020	102	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	491	98	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	961	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379439 1379440

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1960	50000	50000	52000	53300	100	103	70-130	3	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379439 1379440

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	57.1	5000	5000	4940	5610	98	111	70-130	13	7	R1
Arsenic, Dissolved	ug/L	1000	5000	5000	5890	6640	98	113	70-130	12	10	R1
Beryllium, Dissolved	ug/L	ND	5000	5000	4700	4830	94	97	70-130	3	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5020	5400	100	108	70-130	7	10	
Chromium, Dissolved	ug/L	165	5000	5000	5270	4910	102	95	70-130	7	10	
Cobalt, Dissolved	ug/L	26.4	5000	5000	4760	4860	95	97	70-130	2	6	
Copper, Dissolved	ug/L	53.8	5000	5000	5000	5560	99	110	70-130	11	11	
Iron, Dissolved	ug/L	358000	50000	50000	393000	409000	70	103	70-130	4	10	
Lead, Dissolved	ug/L	30.6	5000	5000	4650	4690	92	93	70-130	1	10	
Nickel, Dissolved	ug/L	80.8	5000	5000	4720	4910	93	97	70-130	4	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5280	6200	106	124	70-130	16	10	R1
Silver, Dissolved	ug/L	ND	2500	2500	2600	2700	104	108	70-130	4	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4250	4390	85	88	70-130	3	6	
Zinc, Dissolved	ug/L	3820	5000	5000	8210	8670	88	97	70-130	5	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: MSV/61584 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169030001, 60169030002

METHOD BLANK: 1377791 | Matrix: Water
Associated Lab Samples: 60169030001, 60169030002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/15/14 09:26	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,2-Dichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/15/14 09:26	
2-Butanone (MEK)	ug/L	ND	10.0	05/15/14 09:26	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/15/14 09:26	N2
Acetone	ug/L	ND	10.0	05/15/14 09:26	N2
Benzene	ug/L	ND	1.0	05/15/14 09:26	
Bromodichloromethane	ug/L	ND	1.0	05/15/14 09:26	
Bromoform	ug/L	ND	1.0	05/15/14 09:26	
Bromomethane	ug/L	ND	5.0	05/15/14 09:26	
Carbon tetrachloride	ug/L	ND	1.0	05/15/14 09:26	
Chloroethane	ug/L	ND	1.0	05/15/14 09:26	
Chloroform	ug/L	ND	1.0	05/15/14 09:26	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	N2
Ethylbenzene	ug/L	ND	1.0	05/15/14 09:26	
Methylene chloride	ug/L	ND	1.0	05/15/14 09:26	
Tetrachloroethene	ug/L	ND	1.0	05/15/14 09:26	
Toluene	ug/L	ND	1.0	05/15/14 09:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Trichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Vinyl chloride	ug/L	ND	1.0	05/15/14 09:26	
Xylene (Total)	ug/L	ND	3.0	05/15/14 09:26	N2
1,2-Dichloroethane-d4 (S)	%	91	80-120	05/15/14 09:26	
4-Bromofluorobenzene (S)	%	97	80-120	05/15/14 09:26	
Toluene-d8 (S)	%	103	80-120	05/15/14 09:26	

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.6	103	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.2	106	67-127	N2
1,1,2-Trichloroethane	ug/L	20	21.6	108	67-124	
1,2-Dichloroethane	ug/L	20	20.0	100	70-126	
1,4-Dichlorobenzene	ug/L	20	22.6	113	74-120	
2-Butanone (MEK)	ug/L	100	93.7	94	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	93.3	93	59-131	N2
Acetone	ug/L	100	94.3	94	38-134	N2
Benzene	ug/L	20	19.9	99	75-120	
Bromodichloromethane	ug/L	20	21.2	106	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	23.2	116	65-127	
Bromomethane	ug/L	20	18.8	94	13-157	
Carbon tetrachloride	ug/L	20	20.1	100	70-131	
Chloroethane	ug/L	20	18.0	90	47-133	
Chloroform	ug/L	20	20.2	101	65-127	
cis-1,2-Dichloroethene	ug/L	20	20.3	102	68-127	N2
Ethylbenzene	ug/L	20	22.8	114	74-122	
Methylene chloride	ug/L	20	20.4	102	64-129	
Tetrachloroethene	ug/L	20	24.5	123	73-125	
Toluene	ug/L	20	21.7	108	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.8	94	66-129	
Trichloroethene	ug/L	20	19.6	98	71-123	
Vinyl chloride	ug/L	20	16.7	83	43-129	
Xylene (Total)	ug/L	60	68.3	114	75-121	N2
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	6000	120	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5810	116	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	6110	122	52-143	
1,2-Dichloroethane	ug/L	ND	5000	5470	109	49-144	
1,4-Dichlorobenzene	ug/L	308	5000	6650	127	33-140	
2-Butanone (MEK)	ug/L	55300	25000	82800	110	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	25500	95	40-160	N2
Acetone	ug/L	149000	25000	185000	144	10-160	N2
Benzene	ug/L	ND	5000	5840	117	37-151	
Bromodichloromethane	ug/L	ND	5000	5810	116	35-142	
Bromoform	ug/L	ND	5000	6700	134	45-142	
Bromomethane	ug/L	ND	5000	4660	93	10-158	
Carbon tetrachloride	ug/L	ND	5000	5950	119	70-140	
Chloroethane	ug/L	ND	5000	5880	118	19-152	
Chloroform	ug/L	ND	5000	5670	113	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	5950	116	34-147	N2
Ethylbenzene	ug/L	ND	5000	6630	132	40-142	
Methylene chloride	ug/L	ND	5000	5790	114	31-144	
Tetrachloroethene	ug/L	ND	5000	7450	149	64-148	M1
Toluene	ug/L	ND	5000	6380	127	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	5650	113	54-151	
Trichloroethene	ug/L	413	5000	5550	103	71-149	
Vinyl chloride	ug/L	ND	5000	5580	111	22-146	
Xylene (Total)	ug/L	ND	15000	19700	131	37-144	N2
1,2-Dichloroethane-d4 (S)	%				92	80-120	
4-Bromofluorobenzene (S)	%				96	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				104	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: OEXT/44202 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169030001

METHOD BLANK: 1379015 | Matrix: Water
Associated Lab Samples: 60169030001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/19/14 05:08	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/19/14 05:08	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/19/14 05:08	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/19/14 05:08	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/19/14 05:08	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/19/14 05:08	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/19/14 05:08	
Hexachloroethane	ug/L	ND	5.0	05/19/14 05:08	
Naphthalene	ug/L	ND	5.0	05/19/14 05:08	
Nitrobenzene	ug/L	ND	5.0	05/19/14 05:08	
Pentachlorophenol	ug/L	ND	5.0	05/19/14 05:08	
Phenol	ug/L	ND	5.0	05/19/14 05:08	
2,4,6-Tribromophenol (S)	%	68	39-120	05/19/14 05:08	
2-Fluorobiphenyl (S)	%	69	39-120	05/19/14 05:08	
2-Fluorophenol (S)	%	44	17-120	05/19/14 05:08	
Nitrobenzene-d5 (S)	%	67	33-120	05/19/14 05:08	
Phenol-d6 (S)	%	29	11-120	05/19/14 05:08	
Terphenyl-d14 (S)	%	73	45-120	05/19/14 05:08	

LABORATORY CONTROL SAMPLE: 1379016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.1	78	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.8	86	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.4	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	28.4	57	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	47.0	94	40-133	
Hexachloro-1,3-butadiene	ug/L	50	36.1	72	44-116	
Hexachlorocyclopentadiene	ug/L	100	75.3	75	24-120	
Hexachloroethane	ug/L	50	35.6	71	43-113	
Naphthalene	ug/L	50	41.1	82	48-120	
Nitrobenzene	ug/L	50	40.3	81	48-120	
Pentachlorophenol	ug/L	50	42.0	84	47-120	
Phenol	ug/L	50	16.7	33	16-112	
2,4,6-Tribromophenol (S)	%			91	39-120	
2-Fluorobiphenyl (S)	%			84	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			82	33-120	
Phenol-d6 (S)	%			29	11-120	
Terphenyl-d14 (S)	%			86	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

MATRIX SPIKE SAMPLE: 1379017

Parameter	Units	60168930001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	41.4	83	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	48.4	97	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	37.0	74	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	33.6	67	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	51.3	103	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	40.6	81	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	90.7	91	11-120	
Hexachloroethane	ug/L	ND	50	40.9	82	40-113	
Naphthalene	ug/L	ND	50	44.2	88	45-120	
Nitrobenzene	ug/L	ND	50	43.1	86	38-120	
Pentachlorophenol	ug/L	ND	50	47.6	95	43-135	
Phenol	ug/L	ND	50	17.7	35	13-112	
2,4,6-Tribromophenol (S)	%				100	39-120	
2-Fluorobiphenyl (S)	%				90	39-120	
2-Fluorophenol (S)	%				46	17-120	
Nitrobenzene-d5 (S)	%				85	33-120	
Phenol-d6 (S)	%				33	11-120	
Terphenyl-d14 (S)	%				93	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: WET/47915 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169030001

METHOD BLANK: 1379599 | Matrix: Water
Associated Lab Samples: 60169030001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/16/14 16:01	

LABORATORY CONTROL SAMPLE: 1379600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	40.0	100	78-114	

MATRIX SPIKE SAMPLE: 1379601

Parameter	Units	60168397002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	17.6	44.4	59.6	95	78-114	

SAMPLE DUPLICATE: 1379602

Parameter	Units	60168405001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	12.3	12.0	3	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: WET/47925 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169030001

METHOD BLANK: 1380379 | Matrix: Water
Associated Lab Samples: 60169030001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/19/14 08:31	

LABORATORY CONTROL SAMPLE: 1380380

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.3	106	64-132	

MATRIX SPIKE SAMPLE: 1380381

Parameter	Units	60168924001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	8.8	76.9	221	276	64-132	M1

SAMPLE DUPLICATE: 1380382

Parameter	Units	60169029001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	6.4	18.3	96	34	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: WET/47871 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169030001

METHOD BLANK: 1378311 | Matrix: Water
Associated Lab Samples: 60169030001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/15/14 10:05	

SAMPLE DUPLICATE: 1378312

Parameter	Units	60168924001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	5780	5720	1	10	

SAMPLE DUPLICATE: 1378313

Parameter	Units	60169119003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	40.0	41.0	2	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: WET/47823
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169030001

SAMPLE DUPLICATE: 1376884

Parameter	Units	60168497002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.0	8.0	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: WET/47802 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169030001

METHOD BLANK: 1376583 | Matrix: Water
Associated Lab Samples: 60169030001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/17/14 07:54	

LABORATORY CONTROL SAMPLE: 1376584

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	175	89	85-115	

SAMPLE DUPLICATE: 1376585

Parameter	Units	60169029001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	32900	31700	4	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: WETA/29412 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169030001

METHOD BLANK: 1377423 | Matrix: Water
Associated Lab Samples: 60169030001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/16/14 07:37	

LABORATORY CONTROL SAMPLE: 1377424

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

MATRIX SPIKE SAMPLE: 1377425

Parameter	Units	60168805001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	3.6	2	5.0	71	90-110	M1

MATRIX SPIKE SAMPLE: 1377426

Parameter	Units	60168814002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.0	102	90-110	

SAMPLE DUPLICATE: 1377427

Parameter	Units	60168818001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	3.6	3.6	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

QC Batch: WETA/29473 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169030001

METHOD BLANK: 1379591 | Matrix: Water
Associated Lab Samples: 60169030001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/19/14 13:33	

LABORATORY CONTROL SAMPLE: 1379592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	47.2	94	90-110	

MATRIX SPIKE SAMPLE: 1379593

Parameter	Units	60168924001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	61700	25000	85900	97	90-110	

MATRIX SPIKE SAMPLE: 1379595

Parameter	Units	60168787001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	50.8	92	90-110	

SAMPLE DUPLICATE: 1379594

Parameter	Units	60168924001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	61700	55300	11	25	

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QUALIFIERS

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-296
Pace Project No.: 60169030

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169030001	**316-296**	EPA 200.7	MPRP/27213	EPA 200.7	ICP/20616
60169030001	**316-296**	EPA 200.7	MPRP/27278	EPA 200.7	ICP/20662
60169030001	**316-296**	EPA 245.1	MERP/8408	EPA 245.1	MERC/8362
60169030001	**316-296**	EPA 245.1	MERP/8407	EPA 245.1	MERC/8363
60169030001	**316-296**	EPA 625	OEXT/44202	EPA 625	MSSV/14134
60169030001	**316-296**	EPA 624 Low	MSV/61584		
60169030002	**TRIP BLANK**	EPA 624 Low	MSV/61584		
60169030001	**316-296**	EPA 1664A	WET/47915		
60169030001	**316-296**	EPA 1664A	WET/47925		
60169030001	**316-296**	SM 2540D	WET/47871		
60169030001	**316-296**	SM 4500-H+B	WET/47823		
60169030001	**316-296**	SM 5210B	WET/47802	SM 5210B	WET/47937
60169030001	**316-296**	EPA 350.1	WETA/29412		
60169030001	**316-296**	EPA 410.4	WETA/29473		

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Sample Condition Upon Receipt

WO#: 60169030
60169030

Client Name: Barr / Republic

Optional
Proj Due Date:
Proj Name:

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-239 / T-194 **Type of Ice:** Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: _____

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JS 5/12/14 1400

Chain of Custody present:	☒Yes	☐No	☐N/A	1.	
Chain of Custody filled out:	☒Yes	☐No	☐N/A	2.	
Chain of Custody relinquished:	☒Yes	☐No	☐N/A	3.	
Sampler name & signature on COC:	☒Yes	☐No	☐N/A	4.	
Samples arrived within holding time:	☒Yes	☐No	☐N/A	5.	
Short Hold Time analyses (<72hr):	☒Yes	☐No	☐N/A	6.	BOD / pH
Rush Turn Around Time requested:	☐Yes	☒No	☐N/A	7.	
Sufficient volume:	☒Yes	☐No	☐N/A	8.	
Correct containers used:	☒Yes	☐No	☐N/A		
Pace containers used:	☒Yes	☐No	☐N/A	9.	
Containers intact:	☒Yes	☐No	☐N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☒N/A	11.	
Filtered volume received for dissolved tests?	☐Yes	☐No	☒N/A	12.	
Sample labels match COC:	☒Yes	☐No	☐N/A		
Includes date/time/ID/analyses Matrix: water				13.	
All containers needing preservation have been checked.	☒Yes	☐No	☐N/A		BPSN + BPSS unable to be preserved.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☒No	☐N/A	14.	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☐Yes	☐No		Initial when completed JS	Lot # of added preservative
Trip Blank present:	☒Yes	☐No	☐N/A		
Pace Trip Blank lot # (if purchased): covered				15.	
Headspace in VOA vials (>6mm):	☐Yes	☒No	☐N/A	16.	
Project sampled in USDA Regulated Area:	☐Yes	☐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: _____ Date: 4/21/14

Pace Analytical

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

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:	AMY HARGROVE/BRIAN POWER
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

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

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B	Residual Chlorine (Y/N)	6069030
1	316-296	OT	G	5/11/14	0930	—	—		45	10	4	1	0						X	X	X	X	X	X	X	X	X	X	X		2(VOA) 2(VOA) 5(1L Amb)
2	TRIP BLANK	—	—	—	—	—	—		2	2																X					2(VOA)
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

Residual Chlorine (Y/N): 2(VOA) 1(1L Amb) 1(1L Amb) 5(1L Amb) 2(VOA) 2(VOA) 5(1L Amb) 2(VOA)

METALS LIST total & LF Dis: Al,Sb,As,Be,Cd,Cr, Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn and Mercury

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-12-14	9:00am	Bill Stone 4/17	5-12-14	9:00am				
SITE ADDRESS: BRIDGETON LF					5/12/14	1325	4.0	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:	WILLIAM ABERNATHY				
SIGNATURE of SAMPLER:	DATE Signed: 5/11/14				

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May 19, 2014

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

RE: Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 12, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

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 316-297
Pace Project No.: 60169031

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169031001	**316-297**	Water	05/12/14 07:45	05/12/14 13:25
60169031002	**TRIP BLANK**	Water	05/12/14 08:00	05/12/14 13:25

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169031001	**316-297**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	TDS	1
		EPA 245.1	TDS	1
		EPA 625	JMT	18
		EPA 624 Low	PRG	28
		EPA 1664A	DJR	1
		EPA 1664A	CRT	1
		SM 2540D	RAH	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60169031002	**TRIP BLANK**	EPA 624 Low	PRG	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

Sample: 316-297 **Lab ID: 60169031001** Collected: 05/12/14 07:45 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**12700**	ug/L	750	2	05/13/14 09:55	05/14/14 18:07	7429-90-5	
Antimony	ND	ug/L	100	2	05/13/14 09:55	05/14/14 18:07	7440-36-0	D3
Arsenic	**1030**	ug/L	50.0	1	05/13/14 09:55	05/14/14 18:04	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/13/14 09:55	05/14/14 18:04	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/13/14 09:55	05/14/14 18:04	7440-43-9	
Chromium	**237**	ug/L	25.0	1	05/13/14 09:55	05/14/14 18:04	7440-47-3	
Cobalt	**44.0**	ug/L	25.0	1	05/13/14 09:55	05/14/14 18:04	7440-48-4	
Copper	ND	ug/L	50.0	1	05/13/14 09:55	05/14/14 18:04	7440-50-8	
Iron	**796000**	ug/L	250	1	05/13/14 09:55	05/14/14 18:04	7439-89-6	
Lead	**108**	ug/L	25.0	1	05/13/14 09:55	05/14/14 18:04	7439-92-1	
Nickel	**123**	ug/L	25.0	1	05/13/14 09:55	05/14/14 18:04	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/13/14 09:55	05/14/14 18:04	7782-49-2	
Silver	ND	ug/L	35.0	1	05/13/14 09:55	05/14/14 18:04	7440-22-4	
Thallium	ND	ug/L	100	1	05/13/14 09:55	05/14/14 18:04	7440-28-0	
Zinc	**4360**	ug/L	500	2	05/13/14 09:55	05/14/14 18:07	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**2040**	ug/L	750	2	05/16/14 17:00	05/18/14 15:20	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:22	7440-36-0	
Arsenic, Dissolved	**1010**	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:22	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/16/14 17:00	05/18/14 15:22	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:22	7440-43-9	
Chromium, Dissolved	**174**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:22	7440-47-3	
Cobalt, Dissolved	**27.1**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:22	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:22	7440-50-8	
Iron, Dissolved	**410000**	ug/L	250	1	05/16/14 17:00	05/18/14 15:22	7439-89-6	
Lead, Dissolved	ND	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:22	7439-92-1	
Nickel, Dissolved	**87.4**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:22	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/16/14 17:00	05/18/14 15:22	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/16/14 17:00	05/18/14 15:22	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/16/14 17:00	05/18/14 15:22	7440-28-0	
Zinc, Dissolved	**4080**	ug/L	500	2	05/16/14 17:00	05/18/14 15:20	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**27.2**	ug/L	6.0	1	05/19/14 11:00	05/19/14 15:48	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/19/14 11:00	05/19/14 16:21	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/16/14 00:00	05/19/14 07:15	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 07:15	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 07:15	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 07:15	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/16/14 00:00	05/19/14 07:15	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7930**	ug/L	4000	2	05/16/14 00:00	05/19/14 07:15		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

Sample: 316-297 **Lab ID: 60169031001** Collected: 05/12/14 07:45 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1220**	ug/L	1000	2	05/16/14 00:00	05/19/14 07:15	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 07:15	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 07:15	87-86-5	
Phenol	**11500**	ug/L	1000	2	05/16/14 00:00	05/19/14 07:15	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 07:15	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/16/14 00:00	05/19/14 07:15	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	170	%	33-120	2	05/16/14 00:00	05/19/14 07:15	4165-60-0	S0
2-Fluorobiphenyl (S)	81	%	39-120	2	05/16/14 00:00	05/19/14 07:15	321-60-8	
Terphenyl-d14 (S)	85	%	45-120	2	05/16/14 00:00	05/19/14 07:15	1718-51-0	
Phenol-d6 (S)	44	%	11-120	2	05/16/14 00:00	05/19/14 07:15	13127-88-3	
2-Fluorophenol (S)	35	%	17-120	2	05/16/14 00:00	05/19/14 07:15	367-12-4	
2,4,6-Tribromophenol (S)	100	%	39-120	2	05/16/14 00:00	05/19/14 07:15	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**145000**	ug/L	2500	250		05/15/14 13:06	67-64-1	N2
Benzene	ND	ug/L	250	250		05/15/14 13:06	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/15/14 13:06	75-27-4	
Bromoform	ND	ug/L	250	250		05/15/14 13:06	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/15/14 13:06	74-83-9	
2-Butanone (MEK)	**56800**	ug/L	2500	250		05/15/14 13:06	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/15/14 13:06	56-23-5	
Chloroethane	ND	ug/L	250	250		05/15/14 13:06	75-00-3	
Chloroform	ND	ug/L	250	250		05/15/14 13:06	67-66-3	
1,4-Dichlorobenzene	**641**	ug/L	250	250		05/15/14 13:06	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/15/14 13:06	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 13:06	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 13:06	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/15/14 13:06	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/15/14 13:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/15/14 13:06	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/15/14 13:06	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/15/14 13:06	127-18-4	
Toluene	ND	ug/L	250	250		05/15/14 13:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/15/14 13:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/15/14 13:06	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/15/14 13:06	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/15/14 13:06	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/15/14 13:06	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	93	%	80-120	250		05/15/14 13:06	460-00-4	
Toluene-d8 (S)	105	%	80-120	250		05/15/14 13:06	2037-26-5	
1,2-Dichloroethane-d4 (S)	94	%	80-120	250		05/15/14 13:06	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/15/14 13:06		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1340**	mg/L	5.0	1		05/16/14 16:05		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

Sample: 316-297 **Lab ID: 60169031001** Collected: 05/12/14 07:45 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	ND	mg/L	5.0	1		05/19/14 08:33		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**1820**	mg/L	5.0	1		05/15/14 10:07		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.3**	Std. Units	0.10	1		05/13/14 09:40		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**32800**	mg/L	2.0	1	05/12/14 16:40	05/17/14 08:15		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**617**	mg/L	20.0	200		05/16/14 08:09	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**54400**	mg/L	5000	500		05/19/14 13:36		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

Sample: TRIP BLANK **Lab ID: 60169031002** Collected: 05/12/14 08:00 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/15/14 10:42	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/15/14 10:42	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/15/14 10:42	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/15/14 10:42	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/15/14 10:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/15/14 10:42	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/15/14 10:42	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/15/14 10:42	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/15/14 10:42	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/15/14 10:42	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/15/14 10:42	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 10:42	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 10:42	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/15/14 10:42	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/15/14 10:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/15/14 10:42	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/15/14 10:42	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/15/14 10:42	127-18-4	
Toluene	ND	ug/L	1.0	1		05/15/14 10:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/15/14 10:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/15/14 10:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/15/14 10:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/15/14 10:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/15/14 10:42	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	1		05/15/14 10:42	460-00-4	
Toluene-d8 (S)	104	%	80-120	1		05/15/14 10:42	2037-26-5	
1,2-Dichloroethane-d4 (S)	93	%	80-120	1		05/15/14 10:42	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/15/14 10:42		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: MERP/8408 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169031001

METHOD BLANK: 1380593 | Matrix: Water
Associated Lab Samples: 60169031001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/19/14 15:35	

LABORATORY CONTROL SAMPLE: 1380594

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380595 1380596

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	46.5	150	150	164	174	78	85	70-130	6	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: MERP/8407
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169031001

METHOD BLANK: 1380589
Matrix: Water
Associated Lab Samples: 60169031001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/19/14 16:08	

LABORATORY CONTROL SAMPLE: 1380590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.7	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380591 1380592

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	118	112	79	74	70-130	5	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: MPRP/27213 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169031001

METHOD BLANK: 1376844 | Matrix: Water
Associated Lab Samples: 60169031001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/14/14 17:04	
Antimony	ug/L	ND	10.0	05/14/14 17:04	
Arsenic	ug/L	ND	10.0	05/14/14 17:04	
Beryllium	ug/L	ND	1.0	05/14/14 17:04	
Cadmium	ug/L	ND	5.0	05/14/14 17:04	
Chromium	ug/L	ND	5.0	05/14/14 17:04	
Cobalt	ug/L	ND	5.0	05/14/14 17:04	
Copper	ug/L	ND	10.0	05/14/14 17:04	
Iron	ug/L	ND	50.0	05/14/14 17:04	
Lead	ug/L	ND	5.0	05/14/14 17:04	
Nickel	ug/L	ND	5.0	05/14/14 17:04	
Selenium	ug/L	ND	15.0	05/14/14 17:04	
Silver	ug/L	ND	7.0	05/14/14 17:04	
Thallium	ug/L	ND	20.0	05/14/14 17:04	
Zinc	ug/L	ND	50.0	05/14/14 17:04	

LABORATORY CONTROL SAMPLE: 1376845

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	986	99	85-115	
Beryllium	ug/L	1000	1020	102	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	992	99	85-115	
Iron	ug/L	10000	10100	101	85-115	
Lead	ug/L	1000	1000	100	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	492	98	85-115	
Thallium	ug/L	1000	985	98	85-115	
Zinc	ug/L	1000	1020	102	85-115	

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	18200	50000	81700	127	70-130	
Antimony	ug/L	ND	5000	5150	101	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

MATRIX SPIKE SAMPLE: 1376846

Parameter	Units	60168703001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	1140	5000	6570	109	70-130	
Beryllium	ug/L	ND	5000	4970	99	70-130	
Cadmium	ug/L	ND	5000	5200	104	70-130	
Chromium	ug/L	269	5000	5130	97	70-130	
Cobalt	ug/L	47.5	5000	4950	98	70-130	
Copper	ug/L	ND	5000	5300	106	70-130	
Iron	ug/L	872000	50000	939000	134	70-130	M1
Lead	ug/L	123	5000	4770	93	70-130	
Nickel	ug/L	132	5000	4970	97	70-130	
Selenium	ug/L	ND	5000	5880	117	70-130	
Silver	ug/L	ND	2500	2640	105	70-130	
Thallium	ug/L	ND	5000	4390	88	70-130	
Zinc	ug/L	4860	5000	9580	94	70-130	

MATRIX SPIKE SAMPLE: 1376847

Parameter	Units	60168779001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	ND	10000	9860	99	70-130	
Antimony	ug/L	ND	1000	1010	100	70-130	
Arsenic	ug/L	ND	1000	990	99	70-130	
Beryllium	ug/L	ND	1000	1000	100	70-130	
Cadmium	ug/L	ND	1000	992	99	70-130	
Chromium	ug/L	ND	1000	985	98	70-130	
Cobalt	ug/L	ND	1000	1020	102	70-130	
Copper	ug/L	24.9	1000	1040	101	70-130	
Iron	ug/L	163	10000	10200	100	70-130	
Lead	ug/L	ND	1000	999	100	70-130	
Nickel	ug/L	7.1	1000	1010	100	70-130	
Selenium	ug/L	ND	1000	1010	101	70-130	
Silver	ug/L	ND	500	497	99	70-130	
Thallium	ug/L	ND	1000	951	95	70-130	
Zinc	ug/L	ND	1000	1040	100	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: MPRP/27278
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169031001

METHOD BLANK: 1379437
Matrix: Water
Associated Lab Samples: 60169031001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/18/14 14:51	
Antimony, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Arsenic, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Beryllium, Dissolved	ug/L	ND	1.0	05/18/14 14:51	
Cadmium, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Chromium, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Cobalt, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Copper, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Iron, Dissolved	ug/L	ND	50.0	05/18/14 14:51	
Lead, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Nickel, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Selenium, Dissolved	ug/L	ND	15.0	05/18/14 14:51	
Silver, Dissolved	ug/L	ND	7.0	05/18/14 14:51	
Thallium, Dissolved	ug/L	ND	20.0	05/18/14 14:51	
Zinc, Dissolved	ug/L	ND	50.0	05/18/14 14:51	

LABORATORY CONTROL SAMPLE: 1379438

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	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	972	97	85-115	
Beryllium, Dissolved	ug/L	1000	1000	100	85-115	
Cadmium, Dissolved	ug/L	1000	1010	101	85-115	
Chromium, Dissolved	ug/L	1000	974	97	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9760	98	85-115	
Lead, Dissolved	ug/L	1000	1020	102	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	491	98	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	961	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379439 1379440

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1960	50000	50000	52000	53300	100	103	70-130	3	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379439 1379440

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	57.1	5000	5000	4940	5610	98	111	70-130	13	7	R1
Arsenic, Dissolved	ug/L	1000	5000	5000	5890	6640	98	113	70-130	12	10	R1
Beryllium, Dissolved	ug/L	ND	5000	5000	4700	4830	94	97	70-130	3	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5020	5400	100	108	70-130	7	10	
Chromium, Dissolved	ug/L	165	5000	5000	5270	4910	102	95	70-130	7	10	
Cobalt, Dissolved	ug/L	26.4	5000	5000	4760	4860	95	97	70-130	2	6	
Copper, Dissolved	ug/L	53.8	5000	5000	5000	5560	99	110	70-130	11	11	
Iron, Dissolved	ug/L	358000	50000	50000	393000	409000	70	103	70-130	4	10	
Lead, Dissolved	ug/L	30.6	5000	5000	4650	4690	92	93	70-130	1	10	
Nickel, Dissolved	ug/L	80.8	5000	5000	4720	4910	93	97	70-130	4	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5280	6200	106	124	70-130	16	10	R1
Silver, Dissolved	ug/L	ND	2500	2500	2600	2700	104	108	70-130	4	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4250	4390	85	88	70-130	3	6	
Zinc, Dissolved	ug/L	3820	5000	5000	8210	8670	88	97	70-130	5	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: MSV/61584 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169031001, 60169031002

METHOD BLANK: 1377791 | Matrix: Water
Associated Lab Samples: 60169031001, 60169031002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/15/14 09:26	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,2-Dichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/15/14 09:26	
2-Butanone (MEK)	ug/L	ND	10.0	05/15/14 09:26	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/15/14 09:26	N2
Acetone	ug/L	ND	10.0	05/15/14 09:26	N2
Benzene	ug/L	ND	1.0	05/15/14 09:26	
Bromodichloromethane	ug/L	ND	1.0	05/15/14 09:26	
Bromoform	ug/L	ND	1.0	05/15/14 09:26	
Bromomethane	ug/L	ND	5.0	05/15/14 09:26	
Carbon tetrachloride	ug/L	ND	1.0	05/15/14 09:26	
Chloroethane	ug/L	ND	1.0	05/15/14 09:26	
Chloroform	ug/L	ND	1.0	05/15/14 09:26	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	N2
Ethylbenzene	ug/L	ND	1.0	05/15/14 09:26	
Methylene chloride	ug/L	ND	1.0	05/15/14 09:26	
Tetrachloroethene	ug/L	ND	1.0	05/15/14 09:26	
Toluene	ug/L	ND	1.0	05/15/14 09:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Trichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Vinyl chloride	ug/L	ND	1.0	05/15/14 09:26	
Xylene (Total)	ug/L	ND	3.0	05/15/14 09:26	N2
1,2-Dichloroethane-d4 (S)	%	91	80-120	05/15/14 09:26	
4-Bromofluorobenzene (S)	%	97	80-120	05/15/14 09:26	
Toluene-d8 (S)	%	103	80-120	05/15/14 09:26	

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.6	103	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.2	106	67-127	N2
1,1,2-Trichloroethane	ug/L	20	21.6	108	67-124	
1,2-Dichloroethane	ug/L	20	20.0	100	70-126	
1,4-Dichlorobenzene	ug/L	20	22.6	113	74-120	
2-Butanone (MEK)	ug/L	100	93.7	94	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	93.3	93	59-131	N2
Acetone	ug/L	100	94.3	94	38-134	N2
Benzene	ug/L	20	19.9	99	75-120	
Bromodichloromethane	ug/L	20	21.2	106	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	23.2	116	65-127	
Bromomethane	ug/L	20	18.8	94	13-157	
Carbon tetrachloride	ug/L	20	20.1	100	70-131	
Chloroethane	ug/L	20	18.0	90	47-133	
Chloroform	ug/L	20	20.2	101	65-127	
cis-1,2-Dichloroethene	ug/L	20	20.3	102	68-127	N2
Ethylbenzene	ug/L	20	22.8	114	74-122	
Methylene chloride	ug/L	20	20.4	102	64-129	
Tetrachloroethene	ug/L	20	24.5	123	73-125	
Toluene	ug/L	20	21.7	108	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.8	94	66-129	
Trichloroethene	ug/L	20	19.6	98	71-123	
Vinyl chloride	ug/L	20	16.7	83	43-129	
Xylene (Total)	ug/L	60	68.3	114	75-121	N2
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	6000	120	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5810	116	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	6110	122	52-143	
1,2-Dichloroethane	ug/L	ND	5000	5470	109	49-144	
1,4-Dichlorobenzene	ug/L	308	5000	6650	127	33-140	
2-Butanone (MEK)	ug/L	55300	25000	82800	110	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	25500	95	40-160	N2
Acetone	ug/L	149000	25000	185000	144	10-160	N2
Benzene	ug/L	ND	5000	5840	117	37-151	
Bromodichloromethane	ug/L	ND	5000	5810	116	35-142	
Bromoform	ug/L	ND	5000	6700	134	45-142	
Bromomethane	ug/L	ND	5000	4660	93	10-158	
Carbon tetrachloride	ug/L	ND	5000	5950	119	70-140	
Chloroethane	ug/L	ND	5000	5880	118	19-152	
Chloroform	ug/L	ND	5000	5670	113	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	5950	116	34-147	N2
Ethylbenzene	ug/L	ND	5000	6630	132	40-142	
Methylene chloride	ug/L	ND	5000	5790	114	31-144	
Tetrachloroethene	ug/L	ND	5000	7450	149	64-148	M1
Toluene	ug/L	ND	5000	6380	127	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	5650	113	54-151	
Trichloroethene	ug/L	413	5000	5550	103	71-149	
Vinyl chloride	ug/L	ND	5000	5580	111	22-146	
Xylene (Total)	ug/L	ND	15000	19700	131	37-144	N2
1,2-Dichloroethane-d4 (S)	%				92	80-120	
4-Bromofluorobenzene (S)	%				96	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				104	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: OEXT/44202 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169031001

METHOD BLANK: 1379015 | Matrix: Water
Associated Lab Samples: 60169031001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/19/14 05:08	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/19/14 05:08	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/19/14 05:08	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/19/14 05:08	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/19/14 05:08	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/19/14 05:08	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/19/14 05:08	
Hexachloroethane	ug/L	ND	5.0	05/19/14 05:08	
Naphthalene	ug/L	ND	5.0	05/19/14 05:08	
Nitrobenzene	ug/L	ND	5.0	05/19/14 05:08	
Pentachlorophenol	ug/L	ND	5.0	05/19/14 05:08	
Phenol	ug/L	ND	5.0	05/19/14 05:08	
2,4,6-Tribromophenol (S)	%	68	39-120	05/19/14 05:08	
2-Fluorobiphenyl (S)	%	69	39-120	05/19/14 05:08	
2-Fluorophenol (S)	%	44	17-120	05/19/14 05:08	
Nitrobenzene-d5 (S)	%	67	33-120	05/19/14 05:08	
Phenol-d6 (S)	%	29	11-120	05/19/14 05:08	
Terphenyl-d14 (S)	%	73	45-120	05/19/14 05:08	

LABORATORY CONTROL SAMPLE: 1379016

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.1	78	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.8	86	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.4	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	28.4	57	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	47.0	94	40-133	
Hexachloro-1,3-butadiene	ug/L	50	36.1	72	44-116	
Hexachlorocyclopentadiene	ug/L	100	75.3	75	24-120	
Hexachloroethane	ug/L	50	35.6	71	43-113	
Naphthalene	ug/L	50	41.1	82	48-120	
Nitrobenzene	ug/L	50	40.3	81	48-120	
Pentachlorophenol	ug/L	50	42.0	84	47-120	
Phenol	ug/L	50	16.7	33	16-112	
2,4,6-Tribromophenol (S)	%			91	39-120	
2-Fluorobiphenyl (S)	%			84	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			82	33-120	
Phenol-d6 (S)	%			29	11-120	
Terphenyl-d14 (S)	%			86	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

MATRIX SPIKE SAMPLE: 1379017

Parameter	Units	60168930001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	41.4	83	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	48.4	97	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	37.0	74	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	33.6	67	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	51.3	103	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	40.6	81	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	90.7	91	11-120	
Hexachloroethane	ug/L	ND	50	40.9	82	40-113	
Naphthalene	ug/L	ND	50	44.2	88	45-120	
Nitrobenzene	ug/L	ND	50	43.1	86	38-120	
Pentachlorophenol	ug/L	ND	50	47.6	95	43-135	
Phenol	ug/L	ND	50	17.7	35	13-112	
2,4,6-Tribromophenol (S)	%				100	39-120	
2-Fluorobiphenyl (S)	%				90	39-120	
2-Fluorophenol (S)	%				46	17-120	
Nitrobenzene-d5 (S)	%				85	33-120	
Phenol-d6 (S)	%				33	11-120	
Terphenyl-d14 (S)	%				93	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: WET/47915
QC Batch Method: EPA 1664A
Analysis Method: EPA 1664A
Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169031001

METHOD BLANK: 1379599
Matrix: Water
Associated Lab Samples: 60169031001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/16/14 16:01	

LABORATORY CONTROL SAMPLE: 1379600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	40.0	100	78-114	

MATRIX SPIKE SAMPLE: 1379601

Parameter	Units	60168397002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	17.6	44.4	59.6	95	78-114	

SAMPLE DUPLICATE: 1379602

Parameter	Units	60168405001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	12.3	12.0	3	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: WET/47925 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169031001

METHOD BLANK: 1380379 | Matrix: Water
Associated Lab Samples: 60169031001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/19/14 08:31	

LABORATORY CONTROL SAMPLE: 1380380

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.3	106	64-132	

MATRIX SPIKE SAMPLE: 1380381

Parameter	Units	60168924001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	8.8	76.9	221	276	64-132	M1

SAMPLE DUPLICATE: 1380382

Parameter	Units	60169029001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	6.4	18.3	96	34	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: WET/47871 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169031001

METHOD BLANK: 1378311 | Matrix: Water
Associated Lab Samples: 60169031001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/15/14 10:05	

SAMPLE DUPLICATE: 1378312

Parameter	Units	60168924001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	5780	5720	1	10	

SAMPLE DUPLICATE: 1378313

Parameter	Units	60169119003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	40.0	41.0	2	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: WET/47823
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169031001

SAMPLE DUPLICATE: 1376884

Parameter	Units	60168497002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	8.0	8.0	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: WET/47802 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169031001

METHOD BLANK: 1376583 | Matrix: Water
Associated Lab Samples: 60169031001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/17/14 07:54	

LABORATORY CONTROL SAMPLE: 1376584

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	175	89	85-115	

SAMPLE DUPLICATE: 1376585

Parameter	Units	60169029001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	32900	31700	4	17	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: WETA/29412 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169031001

METHOD BLANK: 1377423 | Matrix: Water
Associated Lab Samples: 60169031001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/16/14 07:37	

LABORATORY CONTROL SAMPLE: 1377424

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

MATRIX SPIKE SAMPLE: 1377425

Parameter	Units	60168805001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	3.6	2	5.0	71	90-110	M1

MATRIX SPIKE SAMPLE: 1377426

Parameter	Units	60168814002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.0	102	90-110	

SAMPLE DUPLICATE: 1377427

Parameter	Units	60168818001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	3.6	3.6	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

QC Batch: WETA/29473 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169031001

METHOD BLANK: 1379591 | Matrix: Water
Associated Lab Samples: 60169031001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/19/14 13:33	

LABORATORY CONTROL SAMPLE: 1379592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	47.2	94	90-110	

MATRIX SPIKE SAMPLE: 1379593

Parameter	Units	60168924001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	61700	25000	85900	97	90-110	

MATRIX SPIKE SAMPLE: 1379595

Parameter	Units	60168787001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	50.8	92	90-110	

SAMPLE DUPLICATE: 1379594

Parameter	Units	60168924001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	61700	55300	11	25	

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QUALIFIERS

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-297
Pace Project No.: 60169031

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169031001	**316-297**	EPA 200.7	MPRP/27213	EPA 200.7	ICP/20616
60169031001	**316-297**	EPA 200.7	MPRP/27278	EPA 200.7	ICP/20662
60169031001	**316-297**	EPA 245.1	MERP/8408	EPA 245.1	MERC/8362
60169031001	**316-297**	EPA 245.1	MERP/8407	EPA 245.1	MERC/8363
60169031001	**316-297**	EPA 625	OEXT/44202	EPA 625	MSSV/14134
60169031001	**316-297**	EPA 624 Low	MSV/61584		
60169031002	**TRIP BLANK**	EPA 624 Low	MSV/61584		
60169031001	**316-297**	EPA 1664A	WET/47915		
60169031001	**316-297**	EPA 1664A	WET/47925		
60169031001	**316-297**	SM 2540D	WET/47871		
60169031001	**316-297**	SM 4500-H+B	WET/47823		
60169031001	**316-297**	SM 5210B	WET/47802	SM 5210B	WET/47937
60169031001	**316-297**	EPA 350.1	WETA/29412		
60169031001	**316-297**	EPA 410.4	WETA/29473		

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Sample Condition Upon Receipt

WO#: 60169031
60169031

Client Name: Barr / Republic

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other ☐ XFreds

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-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: _____

Temperature should be above freezing to 6°C

Date and initials of person examining contents: JF 5/12/14 1400

Chain of Custody present:	☒Yes ☐No ☐N/A	1.	
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.	
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.	
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	6.	BOD / pH
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.	
Sufficient volume:	☒Yes ☐No ☐N/A	8.	
Correct containers used:	☒Yes ☐No ☐N/A		
Pace containers used:	☒Yes ☐No ☐N/A	9.	
Containers intact:	☒Yes ☐No ☐N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.	
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.	
Sample labels match COC: Includes date/time/ID/analyses Matrix: water	☒Yes ☐No ☐N/A	13.	
All containers needing preservation have been checked.	☒Yes ☐No ☐N/A		BPSN + BPBS unable to be preserved.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☒No ☐N/A	14.	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☐Yes ☐No	Initial when completed JF	Lot # of added preservative
Trip Blank present: Pace Trip Blank lot # (if purchased): covered	☒Yes ☐No ☐N/A	15.	
Headspace in VOA vials (>6mm):	☐Yes ☒No ☐N/A	16.	
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State: MD	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency	
State / Location	
	Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B		Residual Chlorine (Y/N)	60169031
1	316-297	OT	G	5/12/14	0745	—	—		14	10	4	1	0						X	X	X	X	X	X	X	X	X	X	X			3(HCl) 2(H2SO4) 5(HCl) 001
2	TRIP BLANK	—	—	—	—	—	—		2	2																X						2(HCl) 002
3																																
4																																
5																																
6																																METALS LIST total & LF Dis:
7																																Al,Sb,As,Be,Cd,Cr,
8																																Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																																and Mercury
10																																
11																																
12																																

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299		5-12-14	9:00am	Bob Stein 412	5-12-14	9:00am				
SITE ADDRESS: BRIDGETON LF					5/12/14	1325	5.2	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:	WILLIAM ABERNATHY					
SIGNATURE of SAMPLER:		DATE Signed: 5/12/14				

Pace Analytical Services, Inc.
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(913)599-5665

May 22, 2014

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

RE: Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 12, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

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

Dallas Certification IDs:
400 West Bethany Dr Suite 190 75013 Allen TX 75013
Texas Certification #: T104704232-13-5
Kansas Certification #: E-10388
Arkansas Certification #: 88-0647
Oklahoma Certification #: 2012-080
Louisiana Certification #: 02007

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SAMPLE SUMMARY

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169037001	**TCLP MAY 2014**	Water	05/10/14 14:00	05/12/14 13:25
60169037002	**TRIP BLANK**	Water	05/10/14 14:00	05/12/14 13:25

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SAMPLE ANALYTE COUNT

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60169037001	**TCLP MAY 2014**	EPA 8081	TA	9	PASI-D
		EPA 8151	PMS	3	PASI-D
		EPA 6010	SMW	7	PASI-K
		EPA 7470	TDS	1	PASI-K
		EPA 8270	JMT	18	PASI-K
		EPA 8260	JKL	13	PASI-K
		EPA 5030B/8260	PRG	28	PASI-K
		EPA 1664A	DJR	1	PASI-K
		SM 2540B	JML	1	PASI-K
60169037002	**TRIP BLANK**	EPA 5030B/8260	PRG	28	PASI-K

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PROJECT NARRATIVE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Date: May 22, 2014

Please note the Total Solids results are outside of the method window of 7 calendar days due to a scheduling error within the laboratory.

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PROJECT NARRATIVE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Method: **EPA 8081**
Description: 8081 GCS Pesticides, TCLP
Client: Republic Services_Barr Engineering
Date: May 22, 2014

General Information:
1 sample was analyzed for EPA 8081. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Method: **EPA 8151**
Description: 8151 Chlorinate Herbicide TCLP
Client: Republic Services_Barr Engineering
Date: May 22, 2014

General Information:
1 sample was analyzed for EPA 8151. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 8151 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: OEXT/3923

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

- TCLP MAY 2014 (Lab ID: 60169037001)
  - 2,4-DCAA (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Method: **EPA 6010**
Description: 6010 MET ICP, TCLP
Client: Republic Services_Barr Engineering
Date: May 22, 2014

General Information:
1 sample was analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Method: **EPA 7470**
Description: 7470 Mercury, TCLP
Client: Republic Services_Barr Engineering
Date: May 22, 2014

General Information:
1 sample was analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Method: **EPA 8270**
Description: 8270 MSSV TCLP Sep Funnel
Client: Republic Services_Barr Engineering
Date: May 22, 2014

General Information:
1 sample was analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: OEXT/44216

S0: Surrogate recovery outside laboratory control limits.

- TCLP MAY 2014 (Lab ID: 60169037001)
  - Nitrobenzene-d5 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Method: **EPA 8260**
Description: 8260 MSV TCLP
Client: Republic Services_Barr Engineering
Date: May 22, 2014

General Information:
1 sample was analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Method: **EPA 5030B/8260**
Description: 8260 MSV
Client: Republic Services_Barr Engineering
Date: May 22, 2014

General Information:
2 samples were analyzed for EPA 5030B/8260. All samples were received in acceptable condition with any exceptions noted below.

pH: Post-analysis pH measurement indicates insufficient VOA sample preservation.
- TCLP MAY 2014 (Lab ID: 60169037001)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Method: **EPA 1664A**
Description: HEM, Oil and Grease
Client: Republic Services_Barr Engineering
Date: May 22, 2014

General Information:
1 sample was analyzed for EPA 1664A. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Method: **SM 2540B**
Description: 2540B Total Solids
Client: Republic Services_Barr Engineering
Date: May 22, 2014

General Information:
1 sample was analyzed for SM 2540B. All samples were received in acceptable condition with any exceptions noted below.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

H1: Analysis conducted outside the EPA method holding time.
- TCLP MAY 2014 (Lab ID: 60169037001)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Sample: TCLP MAY 2014 **Lab ID: 60169037001** Collected: 05/10/14 14:00 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8081 GCS Pesticides, TCLP	Analytical Method: EPA 8081 Preparation Method: EPA 3510								
	Leachate Method/Date: EPA 1311; 05/15/14 12:00								
gamma-BHC (Lindane)	ND	mg/L	0.00020	.4	1	05/20/14 10:41	05/20/14 21:22	58-89-9	
Chlordane (Technical)	ND	mg/L	0.0050	.03	1	05/20/14 10:41	05/20/14 21:22	57-74-9	
Endrin	ND	mg/L	0.00020	.02	1	05/20/14 10:41	05/20/14 21:22	72-20-8	
Heptachlor	ND	mg/L	0.00020	.008	1	05/20/14 10:41	05/20/14 21:22	76-44-8	
Heptachlor epoxide	ND	mg/L	0.00050	.008	1	05/20/14 10:41	05/20/14 21:22	1024-57-3	
Methoxychlor	ND	mg/L	0.00050	10	1	05/20/14 10:41	05/20/14 21:22	72-43-5	
Toxaphene	ND	mg/L	0.010	.5	1	05/20/14 10:41	05/20/14 21:22	8001-35-2	
Surrogates									
Decachlorobiphenyl (S)	42	%.	40-140		1	05/20/14 10:41	05/20/14 21:22	2051-24-3	
Tetrachloro-m-xylene (S)	63	%.	40-140		1	05/20/14 10:41	05/20/14 21:22	877-09-8	
8151 Chlorinate Herbicide TCLP	Analytical Method: EPA 8151 Preparation Method: EPA 8151								
	Leachate Method/Date: EPA 1311; 05/15/14 12:00								
2,4-D	ND	mg/L	0.025	10	50	05/20/14 17:30	05/21/14 16:41	94-75-7	
2,4,5-TP (Silvex)	ND	mg/L	0.025	1	50	05/20/14 17:30	05/21/14 16:41	93-72-1	
Surrogates									
2,4-DCAA (S)	655	%.	40-140		50	05/20/14 17:30	05/21/14 16:41	19719-28-9	S4
6010 MET ICP, TCLP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
	Leachate Method/Date: EPA 1311; 05/16/14 00:00								
Arsenic	**0.78**	mg/L	0.50	5	1	05/16/14 15:30	05/18/14 13:39	7440-38-2	
Barium	**3.3**	mg/L	2.5	100	1	05/16/14 15:30	05/18/14 13:39	7440-39-3	
Cadmium	ND	mg/L	0.050	1	1	05/16/14 15:30	05/18/14 13:39	7440-43-9	
Chromium	**0.29**	mg/L	0.10	5	1	05/16/14 15:30	05/18/14 13:39	7440-47-3	
Lead	ND	mg/L	0.50	5	1	05/16/14 15:30	05/18/14 13:39	7439-92-1	
Selenium	ND	mg/L	0.50	1	1	05/16/14 15:30	05/18/14 13:39	7782-49-2	
Silver	ND	mg/L	0.10	5	1	05/16/14 15:30	05/18/14 13:39	7440-22-4	
7470 Mercury, TCLP	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
	Leachate Method/Date: EPA 1311; 05/16/14 00:00								
Mercury	ND	mg/L	0.0020	.2	1	05/19/14 11:00	05/19/14 14:25	7439-97-6	
8270 MSSV TCLP Sep Funnel	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
	Leachate Method/Date: EPA 1311; 05/16/14 00:00								
1,4-Dichlorobenzene	ND	ug/L	100	7500	1	05/16/14 00:00	05/20/14 08:58	106-46-7	
2,4-Dinitrotoluene	ND	ug/L	100	130	1	05/16/14 00:00	05/20/14 08:58	121-14-2	
Hexachloro-1,3-butadiene	ND	ug/L	100	500	1	05/16/14 00:00	05/20/14 08:58	87-68-3	
Hexachlorobenzene	ND	ug/L	100	130	1	05/16/14 00:00	05/20/14 08:58	118-74-1	
Hexachloroethane	ND	ug/L	100	3000	1	05/16/14 00:00	05/20/14 08:58	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	100	200000	1	05/16/14 00:00	05/20/14 08:58	95-48-7	
3&4-Methylphenol(m&p Cresol)	**1120**	ug/L	400	200000	2	05/16/14 00:00	05/19/14 23:12		
Nitrobenzene	ND	ug/L	100	2000	1	05/16/14 00:00	05/20/14 08:58	98-95-3	
Pentachlorophenol	ND	ug/L	500	100000	1	05/16/14 00:00	05/20/14 08:58	87-86-5	
Pyridine	ND	ug/L	100	5000	1	05/16/14 00:00	05/20/14 08:58	110-86-1	
2,4,5-Trichlorophenol	ND	ug/L	500	400000	1	05/16/14 00:00	05/20/14 08:58	95-95-4	

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Sample: TCLP MAY 2014 **Lab ID: 60169037001** Collected: 05/10/14 14:00 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV TCLP Sep Funnel	Analytical Method: EPA 8270 Preparation Method: EPA 3510 Leachate Method/Date: EPA 1311; 05/16/14 00:00								
2,4,6-Trichlorophenol	ND	ug/L	100	2000	1	05/16/14 00:00	05/20/14 08:58	88-06-2	
Surrogates									
Nitrobenzene-d5 (S)	180	%	44-120		1	05/16/14 00:00	05/20/14 08:58	4165-60-0	S0
2-Fluorobiphenyl (S)	89	%	49-120		1	05/16/14 00:00	05/20/14 08:58	321-60-8	
Terphenyl-d14 (S)	85	%	52-122		1	05/16/14 00:00	05/20/14 08:58	1718-51-0	
Phenol-d6 (S)	113	%	36-120		1	05/16/14 00:00	05/20/14 08:58	13127-88-3	
2-Fluorophenol (S)	61	%	37-120		1	05/16/14 00:00	05/20/14 08:58	367-12-4	
2,4,6-Tribromophenol (S)	104	%	36-128		1	05/16/14 00:00	05/20/14 08:58	118-79-6	
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 05/16/14 00:00								
Benzene	**352**	ug/L	250	500	5		05/16/14 18:22	71-43-2	
2-Butanone (MEK)	**55100**	ug/L	5000	200000	5		05/16/14 18:22	78-93-3	
Carbon tetrachloride	ND	ug/L	250	500	5		05/16/14 18:22	56-23-5	
Chlorobenzene	ND	ug/L	250	100000	5		05/16/14 18:22	108-90-7	
Chloroform	**1170**	ug/L	1000	6000	5		05/19/14 11:39	67-66-3	
1,2-Dichloroethane	ND	ug/L	250	500	5		05/16/14 18:22	107-06-2	
1,1-Dichloroethene	ND	ug/L	250	700	5		05/16/14 18:22	75-35-4	
Tetrachloroethene	ND	ug/L	250	700	5		05/16/14 18:22	127-18-4	
Trichloroethene	ND	ug/L	250	500	5		05/16/14 18:22	79-01-6	
Vinyl chloride	ND	ug/L	100	200	5		05/16/14 18:22	75-01-4	
Surrogates									
1,2-Dichloroethane-d4 (S)	102	%	80-120		5		05/16/14 18:22	17060-07-0	
Toluene-d8 (S)	102	%	80-120		5		05/16/14 18:22	2037-26-5	
4-Bromofluorobenzene (S)	100	%	80-120		5		05/16/14 18:22	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**82800**	ug/L	2500		250		05/17/14 15:33	67-64-1	
Benzene	**456**	ug/L	250		250		05/17/14 15:33	71-43-2	
Bromodichloromethane	ND	ug/L	250		250		05/17/14 15:33	75-27-4	
Bromoform	ND	ug/L	250		250		05/17/14 15:33	75-25-2	
Bromomethane	ND	ug/L	1250		250		05/17/14 15:33	74-83-9	
2-Butanone (MEK)	**37600**	ug/L	2500		250		05/17/14 15:33	78-93-3	
Carbon tetrachloride	ND	ug/L	250		250		05/17/14 15:33	56-23-5	
Chloroethane	ND	ug/L	250		250		05/17/14 15:33	75-00-3	
Chloroform	ND	ug/L	250		250		05/17/14 15:33	67-66-3	
1,4-Dichlorobenzene	**1090**	ug/L	250		250		05/17/14 15:33	106-46-7	
1,2-Dichloroethane	ND	ug/L	250		250		05/17/14 15:33	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250		250		05/17/14 15:33	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	250		250		05/17/14 15:33	156-60-5	
Ethylbenzene	**293**	ug/L	250		250		05/17/14 15:33	100-41-4	
Methylene chloride	ND	ug/L	250		250		05/17/14 15:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500		250		05/17/14 15:33	108-10-1	
1,1,2,2-Tetrachloroethane	**326**	ug/L	250		250		05/17/14 15:33	79-34-5	
Tetrachloroethene	ND	ug/L	250		250		05/17/14 15:33	127-18-4	
Toluene	ND	ug/L	250		250		05/17/14 15:33	108-88-3	

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Sample: TCLP MAY 2014 **Lab ID: 60169037001** Collected: 05/10/14 14:00 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
1,1,1-Trichloroethane	ND	ug/L	250		250		05/17/14 15:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250		250		05/17/14 15:33	79-00-5	
Trichloroethene	ND	ug/L	250		250		05/17/14 15:33	79-01-6	
Vinyl chloride	ND	ug/L	250		250		05/17/14 15:33	75-01-4	
Xylene (Total)	**985**	ug/L	750		250		05/17/14 15:33	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	100	%	80-120		250		05/17/14 15:33	460-00-4	
1,2-Dichloroethane-d4 (S)	99	%	80-120		250		05/17/14 15:33	17060-07-0	
Toluene-d8 (S)	97	%	80-120		250		05/17/14 15:33	2037-26-5	
Preservation pH	**6.0**		0.10		250		05/17/14 15:33		pH
HEM, Oil and Grease	Analytical Method: EPA 1664A								
Oil and Grease	**586**	mg/L	5.0		1		05/16/14 16:05		
2540B Total Solids	Analytical Method: SM 2540B								
Total Solids	**19600**	mg/L	5.0		1		05/19/14 18:33		H1

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Sample: TRIP BLANK **Lab ID: 60169037002** Collected: 05/10/14 14:00 Received: 05/12/14 13:25 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0		1		05/17/14 15:19	67-64-1	
Benzene	ND	ug/L	1.0		1		05/17/14 15:19	71-43-2	
Bromodichloromethane	ND	ug/L	1.0		1		05/17/14 15:19	75-27-4	
Bromoform	ND	ug/L	1.0		1		05/17/14 15:19	75-25-2	
Bromomethane	ND	ug/L	5.0		1		05/17/14 15:19	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0		1		05/17/14 15:19	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0		1		05/17/14 15:19	56-23-5	
Chloroethane	ND	ug/L	1.0		1		05/17/14 15:19	75-00-3	
Chloroform	ND	ug/L	1.0		1		05/17/14 15:19	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0		1		05/17/14 15:19	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0		1		05/17/14 15:19	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0		1		05/17/14 15:19	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0		1		05/17/14 15:19	156-60-5	
Ethylbenzene	ND	ug/L	1.0		1		05/17/14 15:19	100-41-4	
Methylene chloride	ND	ug/L	1.0		1		05/17/14 15:19	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0		1		05/17/14 15:19	108-10-1	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1		05/17/14 15:19	79-34-5	
Tetrachloroethene	ND	ug/L	1.0		1		05/17/14 15:19	127-18-4	
Toluene	ND	ug/L	1.0		1		05/17/14 15:19	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0		1		05/17/14 15:19	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0		1		05/17/14 15:19	79-00-5	
Trichloroethene	ND	ug/L	1.0		1		05/17/14 15:19	79-01-6	
Vinyl chloride	ND	ug/L	1.0		1		05/17/14 15:19	75-01-4	
Xylene (Total)	ND	ug/L	3.0		1		05/17/14 15:19	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		05/17/14 15:19	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		05/17/14 15:19	17060-07-0	
Toluene-d8 (S)	98	%	80-120		1		05/17/14 15:19	2037-26-5	
Preservation pH	**1.0**		0.10		1		05/17/14 15:19		

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

QC Batch: MERP/8405
QC Batch Method: EPA 7470
Analysis Method: EPA 7470
Analysis Description: 7470 Mercury TCLP
Associated Lab Samples: 60169037001

METHOD BLANK: 1380575
Matrix: Water
Associated Lab Samples: 60169037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/L	ND	0.0020	05/19/14 13:52	

LABORATORY CONTROL SAMPLE: 1380576

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	.005	0.0052	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380577 1380578

Parameter	Units	60169151001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	.015	.015	0.015	0.013	98	88	75-125	11	20	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

QC Batch: MPRP/27283 | Analysis Method: EPA 6010
QC Batch Method: EPA 3010 | Analysis Description: 6010 MET TCLP
Associated Lab Samples: 60169037001

METHOD BLANK: 1379508 | Matrix: Water
Associated Lab Samples: 60169037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.50	05/18/14 13:12	
Barium	mg/L	ND	2.5	05/18/14 13:12	
Cadmium	mg/L	ND	0.050	05/18/14 13:12	
Chromium	mg/L	ND	0.10	05/18/14 13:12	
Lead	mg/L	ND	0.50	05/18/14 13:12	
Selenium	mg/L	ND	0.50	05/18/14 13:12	
Silver	mg/L	ND	0.10	05/18/14 13:12	

LABORATORY CONTROL SAMPLE: 1379509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	1	0.94	94	80-120	
Barium	mg/L	1	0.92	92	80-120	
Cadmium	mg/L	1	0.98	98	80-120	
Chromium	mg/L	1	0.88	88	80-120	
Lead	mg/L	1	0.94	94	80-120	
Selenium	mg/L	1	0.91	91	80-120	
Silver	mg/L	.5	0.45	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379510 1379511

Parameter	Units	60168610002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/L	ND	10	10	9.9	9.7	99	97	75-125	2	20	
Barium	mg/L	ND	10	10	9.9	9.7	92	90	75-125	2	20	
Cadmium	mg/L	ND	10	10	10.1	9.9	101	99	75-125	2	20	
Chromium	mg/L	ND	10	10	8.6	8.6	86	86	75-125	1	20	
Lead	mg/L	ND	10	10	9.0	8.9	90	89	75-125	1	20	
Selenium	mg/L	ND	10	10	9.5	9.4	95	94	75-125	1	20	
Silver	mg/L	ND	5	5	4.6	4.6	91	91	75-125	0	20	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

QC Batch: MSV/61632 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 60169037001

METHOD BLANK: 1379485 | Matrix: Water
Associated Lab Samples: 60169037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	50.0	05/16/14 17:20	
1,2-Dichloroethane	ug/L	ND	50.0	05/16/14 17:20	
2-Butanone (MEK)	ug/L	ND	1000	05/16/14 17:20	
Benzene	ug/L	ND	50.0	05/16/14 17:20	
Carbon tetrachloride	ug/L	ND	50.0	05/16/14 17:20	
Chlorobenzene	ug/L	ND	50.0	05/16/14 17:20	
Tetrachloroethene	ug/L	ND	50.0	05/16/14 17:20	
Trichloroethene	ug/L	ND	50.0	05/16/14 17:20	
Vinyl chloride	ug/L	ND	20.0	05/16/14 17:20	
1,2-Dichloroethane-d4 (S)	%	106	80-120	05/16/14 17:20	
4-Bromofluorobenzene (S)	%	98	80-120	05/16/14 17:20	
Toluene-d8 (S)	%	103	80-120	05/16/14 17:20	

LABORATORY CONTROL SAMPLE: 1379486

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	1000	885	89	78-126	
1,2-Dichloroethane	ug/L	1000	978	98	77-123	
2-Butanone (MEK)	ug/L	5000	4920	98	52-145	
Benzene	ug/L	1000	912	91	80-120	
Carbon tetrachloride	ug/L	1000	900	90	78-128	
Chlorobenzene	ug/L	1000	921	92	80-120	
Tetrachloroethene	ug/L	1000	875	88	80-121	
Trichloroethene	ug/L	1000	941	94	80-120	
Vinyl chloride	ug/L	1000	998	100	59-120	
1,2-Dichloroethane-d4 (S)	%			105	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Toluene-d8 (S)	%			102	80-120	

MATRIX SPIKE SAMPLE: 1379487

Parameter	Units	60168799001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	ND	50000	42600	85	60-144	
1,2-Dichloroethane	ug/L	ND	50000	47000	94	49-148	
2-Butanone (MEK)	ug/L	ND	250000	238000	95	36-145	
Benzene	ug/L	ND	50000	44200	88	37-157	
Carbon tetrachloride	ug/L	ND	50000	44600	89	68-142	
Chlorobenzene	ug/L	ND	50000	45600	91	66-133	
Tetrachloroethene	ug/L	ND	50000	42200	84	69-133	
Trichloroethene	ug/L	ND	50000	45000	90	61-135	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

MATRIX SPIKE SAMPLE: 1379487

Parameter	Units	60168799001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Vinyl chloride	ug/L	ND	50000	46400	93	44-128	
1,2-Dichloroethane-d4 (S)	%				104	80-120	
4-Bromofluorobenzene (S)	%				99	80-120	
Toluene-d8 (S)	%				103	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

QC Batch: MSV/61671 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 60169037001

METHOD BLANK: 1380612 | Matrix: Water
Associated Lab Samples: 60169037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloroform	ug/L	ND	200	05/19/14 10:52	
1,2-Dichloroethane-d4 (S)	%	104	80-120	05/19/14 10:52	
4-Bromofluorobenzene (S)	%	100	80-120	05/19/14 10:52	
Toluene-d8 (S)	%	103	80-120	05/19/14 10:52	

LABORATORY CONTROL SAMPLE: 1380613

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloroform	ug/L	1000	1050	105	79-120	
1,2-Dichloroethane-d4 (S)	%			104	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			106	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

QC Batch: MSV/61616 | Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 | Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60169037001, 60169037002

METHOD BLANK: 1379144 | Matrix: Water
Associated Lab Samples: 60169037001, 60169037002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/17/14 14:51	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/17/14 14:51	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/17/14 14:51	
1,2-Dichloroethane	ug/L	ND	1.0	05/17/14 14:51	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/17/14 14:51	
2-Butanone (MEK)	ug/L	ND	10.0	05/17/14 14:51	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/17/14 14:51	
Acetone	ug/L	ND	10.0	05/17/14 14:51	
Benzene	ug/L	ND	1.0	05/17/14 14:51	
Bromodichloromethane	ug/L	ND	1.0	05/17/14 14:51	
Bromoform	ug/L	ND	1.0	05/17/14 14:51	
Bromomethane	ug/L	ND	5.0	05/17/14 14:51	
Carbon tetrachloride	ug/L	ND	1.0	05/17/14 14:51	
Chloroethane	ug/L	ND	1.0	05/17/14 14:51	
Chloroform	ug/L	ND	1.0	05/17/14 14:51	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/17/14 14:51	
Ethylbenzene	ug/L	ND	1.0	05/17/14 14:51	
Methylene chloride	ug/L	ND	1.0	05/17/14 14:51	
Tetrachloroethene	ug/L	ND	1.0	05/17/14 14:51	
Toluene	ug/L	ND	1.0	05/17/14 14:51	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/17/14 14:51	
Trichloroethene	ug/L	ND	1.0	05/17/14 14:51	
Vinyl chloride	ug/L	ND	1.0	05/17/14 14:51	
Xylene (Total)	ug/L	ND	3.0	05/17/14 14:51	
1,2-Dichloroethane-d4 (S)	%	102	80-120	05/17/14 14:51	
4-Bromofluorobenzene (S)	%	98	80-120	05/17/14 14:51	
Toluene-d8 (S)	%	98	80-120	05/17/14 14:51	

LABORATORY CONTROL SAMPLE: 1379145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.9	104	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	20.9	105	73-124	
1,1,2-Trichloroethane	ug/L	20	19.9	100	80-120	
1,2-Dichloroethane	ug/L	20	21.6	108	77-123	
1,4-Dichlorobenzene	ug/L	20	21.6	108	80-120	
2-Butanone (MEK)	ug/L	100	100	100	52-145	
4-Methyl-2-pentanone (MIBK)	ug/L	100	113	113	71-131	
Acetone	ug/L	100	108	108	32-155	
Benzene	ug/L	20	20.8	104	80-120	
Bromodichloromethane	ug/L	20	21.2	106	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

LABORATORY CONTROL SAMPLE: 1379145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	22.1	111	73-124	
Bromomethane	ug/L	20	22.1	110	31-144	
Carbon tetrachloride	ug/L	20	20.2	101	78-128	
Chloroethane	ug/L	20	20.3	102	55-137	
Chloroform	ug/L	20	19.7	99	79-120	
cis-1,2-Dichloroethene	ug/L	20	20.3	101	80-120	
Ethylbenzene	ug/L	20	21.1	106	80-121	
Methylene chloride	ug/L	20	21.0	105	73-126	
Tetrachloroethene	ug/L	20	20.7	103	80-121	
Toluene	ug/L	20	20.5	102	80-122	
trans-1,2-Dichloroethene	ug/L	20	18.9	95	79-121	
Trichloroethene	ug/L	20	20.7	104	80-120	
Vinyl chloride	ug/L	20	19.3	96	59-120	
Xylene (Total)	ug/L	60	64.0	107	80-121	
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379146 1379147

Parameter	Units	60168830001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	ND	20	20	20.4	21.9	102	110	71-136	7	20	
1,1,2,2-Tetrachloroethane	ug/L	ND	20	20	17.8	19.6	89	98	61-127	10	21	
1,1,2-Trichloroethane	ug/L	ND	20	20	17.8	20.6	89	103	63-123	14	22	
1,2-Dichloroethane	ug/L	ND	20	20	19.5	21.0	97	105	49-148	7	35	
1,4-Dichlorobenzene	ug/L	ND	20	20	19.2	20.7	96	104	67-125	8	20	
2-Butanone (MEK)	ug/L	ND	100	100	84.0	90.5	84	91	36-145	8	23	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	100	100	92.7	101	93	101	52-137	9	24	
Acetone	ug/L	ND	100	100	94.9	107	90	102	24-151	12	23	
Benzene	ug/L	ND	20	20	19.4	20.6	97	103	37-157	6	32	
Bromodichloromethane	ug/L	ND	20	20	19.1	20.6	95	103	67-125	8	21	
Bromoform	ug/L	ND	20	20	18.5	20.6	93	103	55-124	10	23	
Bromomethane	ug/L	ND	20	20	16.7	22.0	84	110	25-138	27	42	
Carbon tetrachloride	ug/L	ND	20	20	20.3	21.7	101	109	68-142	7	21	
Chloroethane	ug/L	ND	20	20	21.2	21.6	106	108	46-147	2	28	
Chloroform	ug/L	ND	20	20	19.4	20.3	97	101	66-127	5	20	
cis-1,2-Dichloroethene	ug/L	14.1	20	20	34.1	37.6	100	117	55-140	10	23	
Ethylbenzene	ug/L	ND	20	20	13.9	15.2	70	76	31-160	8	32	
Methylene chloride	ug/L	ND	20	20	18.9	20.2	95	101	55-132	6	23	
Tetrachloroethene	ug/L	ND	20	20	19.8	21.5	99	108	69-133	8	20	
Toluene	ug/L	ND	20	20	15.0	16.9	75	85	35-157	12	37	
trans-1,2-Dichloroethene	ug/L	1.2	20	20	18.0	19.8	84	93	66-131	9	23	
Trichloroethene	ug/L	ND	20	20	19.2	20.9	95	103	61-135	9	21	
Vinyl chloride	ug/L	ND	20	20	19.9	20.8	93	97	44-128	4	22	
Xylene (Total)	ug/L	ND	60	60	33.6	36.5	56	61	34-156	8	37	
1,2-Dichloroethane-d4 (S)	%						102	98	80-120			

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379146 1379147

Parameter	Units	60168830001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4-Bromofluorobenzene (S)	%						98	99	80-120			
Toluene-d8 (S)	%						97	101	80-120			
Preservation pH		1.0			1.0	1.0				0		

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

QC Batch: OEXT/3922 | Analysis Method: EPA 8081
QC Batch Method: EPA 3510 | Analysis Description: 8081 GCS TCLP Pesticides
Associated Lab Samples: 60169037001

METHOD BLANK: 76486 | Matrix: Water
Associated Lab Samples: 60169037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chlordane (Technical)	mg/L	ND	0.00050	05/20/14 16:01	
Endrin	mg/L	ND	0.000020	05/20/14 16:01	
gamma-BHC (Lindane)	mg/L	ND	0.000020	05/20/14 16:01	
Heptachlor	mg/L	ND	0.000020	05/20/14 16:01	
Heptachlor epoxide	mg/L	ND	0.000050	05/20/14 16:01	
Methoxychlor	mg/L	ND	0.000050	05/20/14 16:01	
Toxaphene	mg/L	ND	0.0010	05/20/14 16:01	
Decachlorobiphenyl (S)	%.	102	40-140	05/20/14 16:01	
Tetrachloro-m-xylene (S)	%.	101	40-140	05/20/14 16:01	

LABORATORY CONTROL SAMPLE: 76487

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chlordane (Technical)	mg/L		ND			
Endrin	mg/L	.001	0.0011	109	40-140	
gamma-BHC (Lindane)	mg/L	.001	0.0010	104	40-140	
Heptachlor	mg/L	.001	0.0012	118	40-140	
Heptachlor epoxide	mg/L	.001	0.0010	101	40-140	
Methoxychlor	mg/L	.001	0.0012	122	40-140	
Toxaphene	mg/L		ND			
Decachlorobiphenyl (S)	%.			102	40-140	
Tetrachloro-m-xylene (S)	%.			88	40-140	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76541 76542

Parameter	Units	60169247002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chlordane (Technical)	mg/L	ND			ND	ND					40	
Endrin	mg/L	ND	.01	.01	0.011	0.011	114	112	40-140	2	40	
gamma-BHC (Lindane)	mg/L	ND	.01	.01	0.011	0.011	111	108	40-140	3	40	
Heptachlor	mg/L	ND	.01	.01	0.013	0.013	128	126	40-140	2	40	
Heptachlor epoxide	mg/L	ND	.01	.01	0.010	0.010	105	102	40-140	3	40	
Methoxychlor	mg/L	ND	.01	.01	0.013	0.013	131	127	40-140	3	40	
Toxaphene	mg/L	ND			ND	ND					40	
Decachlorobiphenyl (S)	%.						114	116	40-140			
Tetrachloro-m-xylene (S)	%.						107	106	40-140			

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

QC Batch: OEXT/3923 | Analysis Method: EPA 8151
QC Batch Method: EPA 8151 | Analysis Description: 8151 GCS TCLP Herbicides
Associated Lab Samples: 60169037001

METHOD BLANK: 76489 | Matrix: Water
Associated Lab Samples: 60169037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
2,4,5-TP (Silvex)	mg/L	ND	0.000050	05/21/14 12:20	
2,4-D	mg/L	ND	0.000050	05/21/14 12:20	
2,4-DCAA (S)	%.	80	40-140	05/21/14 12:20	

LABORATORY CONTROL SAMPLE: 76490

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
2,4,5-TP (Silvex)	mg/L	.002	0.0024	119	10-140	
2,4-D	mg/L	.002	0.0023	115	40-140	
2,4-DCAA (S)	%.			109	40-140	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 76521 76522

Parameter	Units	60169247001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
2,4,5-TP (Silvex)	mg/L	ND	.02	.02	0.023	0.024	116	121	10-140	4	40	
2,4-D	mg/L	ND	.02	.02	0.021	0.023	107	113	40-140	6	40	
2,4-DCAA (S)	%.						81	101	40-140			

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

QC Batch: OEXT/44216 | Analysis Method: EPA 8270
QC Batch Method: EPA 3510 | Analysis Description: 8270 TCLP MSSV
Associated Lab Samples: 60169037001

METHOD BLANK: 1379391 | Matrix: Water
Associated Lab Samples: 60169037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	100	05/19/14 22:30	
2,4,5-Trichlorophenol	ug/L	ND	500	05/19/14 22:30	
2,4,6-Trichlorophenol	ug/L	ND	100	05/19/14 22:30	
2,4-Dinitrotoluene	ug/L	ND	100	05/19/14 22:30	
2-Methylphenol(o-Cresol)	ug/L	ND	100	05/19/14 22:30	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	200	05/19/14 22:30	
Hexachloro-1,3-butadiene	ug/L	ND	100	05/19/14 22:30	
Hexachlorobenzene	ug/L	ND	100	05/19/14 22:30	
Hexachloroethane	ug/L	ND	100	05/19/14 22:30	
Nitrobenzene	ug/L	ND	100	05/19/14 22:30	
Pentachlorophenol	ug/L	ND	500	05/19/14 22:30	
Pyridine	ug/L	ND	100	05/19/14 22:30	
2,4,6-Tribromophenol (S)	%	98	36-128	05/19/14 22:30	
2-Fluorobiphenyl (S)	%	87	49-120	05/19/14 22:30	
2-Fluorophenol (S)	%	78	37-120	05/19/14 22:30	
Nitrobenzene-d5 (S)	%	89	44-120	05/19/14 22:30	
Phenol-d6 (S)	%	81	36-120	05/19/14 22:30	
Terphenyl-d14 (S)	%	88	52-122	05/19/14 22:30	

LABORATORY CONTROL SAMPLE: 1379392

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	500	302	60	47-120	
2,4,5-Trichlorophenol	ug/L	500	408J	82	51-124	
2,4,6-Trichlorophenol	ug/L	500	367	73	46-120	
2,4-Dinitrotoluene	ug/L	500	325	65	38-120	
2-Methylphenol(o-Cresol)	ug/L	500	300	60	46-120	
3&4-Methylphenol(m&p Cresol)	ug/L	1000	645	64	41-120	
Hexachloro-1,3-butadiene	ug/L	500	311	62	49-120	
Hexachlorobenzene	ug/L	500	400	80	50-120	
Hexachloroethane	ug/L	500	292	58	38-120	
Nitrobenzene	ug/L	500	322	64	49-120	
Pentachlorophenol	ug/L	500	464J	93	35-125	
Pyridine	ug/L	500	170	34	10-120	
2,4,6-Tribromophenol (S)	%			83	36-128	
2-Fluorobiphenyl (S)	%			67	49-120	
2-Fluorophenol (S)	%			58	37-120	
Nitrobenzene-d5 (S)	%			64	44-120	
Phenol-d6 (S)	%			60	36-120	
Terphenyl-d14 (S)	%			85	52-122	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

MATRIX SPIKE SAMPLE: 1379393

Parameter	Units	60168610001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,4-Dichlorobenzene	ug/L	ND	500	410	82	48-120	
2,4,5-Trichlorophenol	ug/L	ND	500	486J	97	57-120	
2,4,6-Trichlorophenol	ug/L	ND	500	475	95	48-120	
2,4-Dinitrotoluene	ug/L	ND	500	406	81	38-120	
2-Methylphenol(o-Cresol)	ug/L	ND	500	421	84	48-120	
3&4-Methylphenol(m&p Cresol)	ug/L	ND	1000	856	86	47-120	
Hexachloro-1,3-butadiene	ug/L	ND	500	402	80	49-120	
Hexachlorobenzene	ug/L	ND	500	394	79	53-120	
Hexachloroethane	ug/L	ND	500	408	82	38-120	
Nitrobenzene	ug/L	ND	500	407	81	51-120	
Pentachlorophenol	ug/L	ND	500	519	104	34-131	
Pyridine	ug/L	ND	500	565	113	10-120	
2,4,6-Tribromophenol (S)	%				98	36-128	
2-Fluorobiphenyl (S)	%				83	49-120	
2-Fluorophenol (S)	%				77	37-120	
Nitrobenzene-d5 (S)	%				78	44-120	
Phenol-d6 (S)	%				81	36-120	
Terphenyl-d14 (S)	%				86	52-122	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

QC Batch: WET/47915 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169037001

METHOD BLANK: 1379599 | Matrix: Water
Associated Lab Samples: 60169037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/16/14 16:01	

LABORATORY CONTROL SAMPLE: 1379600

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	40.0	100	78-114	

MATRIX SPIKE SAMPLE: 1379601

Parameter	Units	60168397002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	17.6	44.4	59.6	95	78-114	

SAMPLE DUPLICATE: 1379602

Parameter	Units	60168405001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	12.3	12.0	3	18	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

QC Batch: WET/47896 | Analysis Method: SM 2540B
QC Batch Method: SM 2540B | Analysis Description: 2540B Total Solids
Associated Lab Samples: 60169037001

METHOD BLANK: 1379060 | Matrix: Water
Associated Lab Samples: 60169037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	05/19/14 18:33	

LABORATORY CONTROL SAMPLE: 1379061

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	1000	960	96	80-120	

SAMPLE DUPLICATE: 1379062

Parameter	Units	60169037001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	19600	19100	3	10	H1

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QUALIFIERS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

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.

LABORATORIES

PASI-D	Pace Analytical Services - Dallas
PASI-K	Pace Analytical Services - Kansas City

ANALYTE QUALIFIERS

H1	Analysis conducted outside the EPA method holding time.
S0	Surrogate recovery outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
pH	Post-analysis pH measurement indicates insufficient VOA sample preservation.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169037

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169037001	**TCLP MAY 2014**	EPA 3510	OEXT/3922	EPA 8081	GCSV/2572
60169037001	**TCLP MAY 2014**	EPA 8151	OEXT/3923	EPA 8151	GCSV/2576
60169037001	**TCLP MAY 2014**	EPA 3010	MPRP/27283	EPA 6010	ICP/20658
60169037001	**TCLP MAY 2014**	EPA 7470	MERP/8405	EPA 7470	MERC/8360
60169037001	**TCLP MAY 2014**	EPA 3510	OEXT/44216	EPA 8270	MSSV/14135
60169037001	**TCLP MAY 2014**	EPA 8260	MSV/61632		
60169037001	**TCLP MAY 2014**	EPA 8260	MSV/61671		
60169037001	**TCLP MAY 2014**	EPA 5030B/8260	MSV/61616		
60169037002	**TRIP BLANK**	EPA 5030B/8260	MSV/61616		
60169037001	**TCLP MAY 2014**	EPA 1664A	WET/47915		
60169037001	**TCLP MAY 2014**	SM 2540B	WET/47896		

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Sample Condition Upon Receipt

WO#: 60169037
60169037

Optional
Proj Due Date:
Proj Name:

Client Name: Barr

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☑ XP

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: (T-239) / T-194 **Type of Ice:** (Wet) Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 4.4

Date and initials of person examining contents: S 5/12/14

Temperature should be above freezing to 6°C

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes ☑No ☐N/A	6.
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC:	☑Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: WT		13.
All containers needing preservation have been checked.	☐Yes ☑No ☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ~~☐No~~ S 5/12/14	Initial when completed / Lot # of added preservative
Trip Blank present:	☑Yes ~~☐No~~ ☐N/A	
Pace Trip Blank lot # (if purchased): Covered		15.
Headspace in VOA vials (>6mm):	☐Yes ☐No ☑N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State: MO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/16/14

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

Page: 1 of 1

Section A Required Client Information:

Company:	BARR ENGINEERING
Address:	
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	

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
Project Name:	BRIDGETON UNTREATED COMMINGLED
Project Number:	

Section C Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	
Pace Project Manager:	Angie Brown 913-563-1402
Pace Profile #:	PROFILE 6787-LINE 6

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☑ RCRA ☐ OTHER _____

Site Location STATE: MO

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	COLLECTED Composite Start Time	COLLECTED Composite End/Grab Date	COLLECTED Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	8260 Volatiles **	TCLP Volatiles *	Total Solids/water matrix	Oil and Grease			TCLP SEMI-VOLATILES	TCLP RCRA 8	TCLP HERBICIDES	TCLP PESTICIDES	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60169037
1	TCLP MAY 2014 2(DG9H)	OT	C	5/10/14	1400	—	—		8	3	2		3	3(DG9H)	2(AG0U)	2(AG0U)	2(AG0U)		✓	✓	✓	✓	2(AG0S)		✓	✓	✓	✓		** total VOCs Bridgeton List 001
2	TRIP BLANK 2(DG9H)	WT	G	—	—	—	—		2				2						X											* footnote %dry solids TCLP 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			
	FEDEX	5-12-14	9:00am	Bill Stone 412	5-12-14	9:00am				
				Shandell McKay/ASI	5/12/14	1325	4.6	Y	Y	Y

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: WILLIAM ABERNATHY

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 5/10/14

*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.

F-ALL-Q-020rev.08, 12-Oct-2007

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TCLP/SPLP Determination of Percent Solids

(Only if sample is liquid or semi-liquid. Skip if sample is obviously 100% solid.)

Date: 5/16/14 Batch: 6344

Analyst: CEM Balance ID: CCC8XT3 Reviewed by: HP

Sample Number	A Weight of Beaker (g)	B Weight of Sample & Beaker (g)	C Weight of Filtrate Container (g)	D Weight of 142-mm TCLP Filter (g)	E Weight of Waste Beaker After Filtration (g)	F Weight of Filtrate & Container (g)	G Weight of Filter and Solid Phase After Filtration (g)	H Weight of Filtrate (g) (F - C)	I Weight of Waste Filtered (g) (E - B)	J Percent WET Solids $\left(\frac{(I - H)}{I \times 0.01}\right)$	K DRY Weight #1 of Solid Phase plus Filter (g)	L DRY Weight #2 of Solid Phase plus Filter (g) (1)	M Percent DRY Solids $\left(\frac{(L - D)}{I \times 0.01}\right)$	If Multiphase, Are Phases Compatible (2)
6616903001	117.0	250.7	277.6	1.3	117.6	405.8	3.2	128.2	133.1	3.8	1.4	1.4	0.08%	Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
						CEM	5/16/14							Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA

NOTE: If Wet Solids are ≥0.5 and <5% and a small amount of liquid is entrapped in the filter, then determine Percent Dry Solids. If the entrapped liquid is oily (non-aqueous) do not determine Percent Dry Solids. If Solids are <0.5%, tumbling is not required because the filtrate is considered to be the TCLP/SPLP extract.

(1) Dry Weight #1 and Dry Weight #2 must be within 1% of each other. If the weights are within 1% of each other, use Dry Weight #2 in further calculations. If not within 1%, continue drying and weighing until two successive weighings are within 1%.

(2) If compatible, combine the filtered liquid resulting from extraction with the initial liquid phase of sample. If the initial liquid phase is not compatible with the filtered liquid resulting from extraction, do not combine. Analyze liquids separately and combine the results mathematically.

If solids are ≥5.0 and <100%	Weight of waste to charge the ZHE = $\frac{25}{\text{Percent solids}} \times 100$ Weight of waste to filter = $\frac{\text{mL of leachate required}}{20 \times \text{Percent solids}} \times 100$

Chain of Custody

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Workorder: 60169037 **Workorder Name:** BRIDGETON UNTREATED COMMINGLED **Owner Received Date:** 5/12/2014 **Results Requested By:** 5/19-5/22

Report To

Angie Brown
Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone (913)599-5665
Fax (913)599-1759

Subcontract To

Pace Analytical Dallas
400 West Bethany Drive
Suite 190
Allen, TX 75013
Phone (972)727-1123

Requested Analysis

WO# : 7515330
7515330

Item	Sample ID	Sample Type	Collect Date/Tim	Lab ID	Matrix	Preserved Containers						TCLP Herbicide	TCLP Pesticide										LAB USE ONLY
1	TCLP MAY 2014	PS	5/10/2014 14:00	60169037001	Water	1						X	X										001
2																							
3																							
4																							
5																							

Transfers	Released By	Date/Time	Received By	Date/Time
1	[signature]	5/16/14 1700	Melissa McCarty PACE	5/17/14 0838
2				
3				

Comments

Sending Leachate of sample and TCLP blank

Cooler Temperature on Receipt 2.6 °C IR01 | **Custody Seal** Y or (N) | **Received on Ice** (Y) or | **Samples Intact** (Y) or N

Pace Analytical

Sample Condition Upon Receipt
Dallas

Client Name: Pace Kansas Project Work order: 7515330

Courier: FedEX ☒ UPS ☐ USPS ☐ Client ☐ Courier ☐ LSO ☐ PACE ☐ Other:_____

Tracking#: 5689 1284 2706

Custody Seal on Cooler/Box: Yes ☐ No ☒ **Seals Intact:** Yes ☐ No ☐ NA ☒

Packing Material: Bubble Wrap ☐ Bubble Bags ☒ Foam ☐ None ☐ Other ☐

Thermometer Used: IR-01 Type of Ice: Wet ☒ Blue ☐ None ☐ Sample Received on ice, cooling process has begun ☒

Cooler Temp: 2.6°C (Temp should be above freezing to 6°C)

Chain of Custody Present	Yes ☒ No ☐ NA ☐	1
Chain of Custody filled out	Yes ☒ No ☐ NA ☐	2
Chain of Custody relinquished	Yes ☒ No ☐ NA ☐	3
Sampler name & signature on COC	Yes ☐ No ☒ NA ☐	4
Sample received within HT	Yes ☒ No ☐ NA ☐	5
Short HT analyses (<72 hrs)	Yes ☐ No ☒ NA ☐	6
Rush TAT requested	Yes ☒ No ☐ NA ☐	7
Sufficient Volume received	Yes ☒ No ☐ NA ☐	8
Correct Container used Pace Container used	Yes ☒ No ☐ NA ☐ Yes ☒ No ☐ NA ☐	9
Container Intact	Yes ☒ No ☐ NA ☐	10
Unpreserved 5035A soil frozen within 48 hrs	Yes ☐ No ☐ NA ☒	11
Filtered volume received for Dissolved tests	Yes ☐ No ☐ NA ☒	12
Sample labels match COC Include date/time/ID/analyses Matrix: water	Yes ☐ No ☐ NA ☐	13
All containers needing preservation have been checked	Yes ☐ No ☐ NA ☒	14a. Lot# of pH strip:_____ pH checked Yes ☐ No ☐ pH<2 ☐ pH>9 ☐ pH>12 ☐ Lot# of Iodine strip:_____ Lot# of Lead Acetate strip:_____
Do containers require preservation at the lab	Yes ☐ No ☐ NA ☒	14b. Preservation: Lot#:
All containers needing preservation are found to be in Compliance with EPA recommendation Exception: VOA, coliform, O&G	Yes ☐ No ☐ NA ☒ Yes ☐ No ☒	14c.
Trip Blank present Trip Blank Custody Seals Intact Pace Trip Blank Lot# (if purchased):_____	Yes ☐ No ☐ NA ☒ Yes ☐ No ☐ NA ☒	15
Headspace in VOA (>6mm)	Yes ☐ No ☐ NA ☒	16
Project sampled in USDA Regulated Area:	Yes ☐ No ☐ NA ☒	17. List State _____

Client Notification/Resolution/Comments:

Person Contacted:_____ Date:_____

Comments/Resolution:_____

Person Examining Contents: KLW Date: 5-19-14

Sample Container Count

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COC PAGE 1 of 1
COC ID#

Pace Project # 75/5330

Sample Line Item	BP2N	AG1U	VG9U	VG9H	BP2S	BP1U	BP2U	BG1H	AG1S	BP20	SP5T	WGFU	WGKU	AG2U		Comments
1														1		
2																
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																

Container Codes

DG9H	40mL HCL amber voa vial	AF	Air Filter	BP1N	1 liter HNO3 plastic	DG9P	40mL TSP amber vial
AG1U	1liter unpreserved amber glass	AG1H	1 liter HCL amber glass	BP1S	1 liter H2SO4 plastic	DG9S	40mL H2SO4 amber vial
WGFU	4oz clear soil jar	AG1S	1 liter H2SO4 amber glass	BP1U	1 liter unpreserved plastic	DG9T	40mL Na Thio amber vial
R	terra core kit	AG1T	1 liter Na Thiosulfate amber gl	BP1Z	1 liter NaOH, Zn, Ac	DG9U	40mL unpreserved **amber** vial
BP2N	500mL HNO3 plastic	AG2N	500mL HNO3 amber glass	BP2A	500mL NaOH, Asc Acid plastic	I	Wipe/Swab
BP2U	500mL unpreserved plastic	AG2S	500mL H2SO4 amber glass	BP2O	500mL NaOH plastic	JGFU	4oz unpreserved amber wide
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber gla	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber gla	BP3A	250mL NaOh, Asc Acid plastic	VG9H	40mL HCL clear vial
BP3U	250mL unpreserved plastic	BG1H	1 liter HCL clear glass	BP3C	250mL NaOH plastic	VG9T	40mL Na Thio. clear vial
BP3S	250mL H2SO4 plastic	BG1S	1 liter H2SO4 clear glass	BP3Z	250mL NaOH, Zn Ac plastic	VG9U	40mL unpreserved **clear** vial
AG3S	250mL H2SO4 glass amber	BG1T	1 liter Na Thiosulfate clear gla	C	Air Cassettes	VSG	Headspace septa vial & HCL
AG1S	1 liter H2SO4 amber glass	BG1U	1 liter unpreserved glass	DG9B	40mL Na Bisulfate amber vial	WGFX	4oz wide jar w/hexane wipe
BP1U	1 liter unpreserved plastic	BP1A	1 liter NaOH, Asc Acid plastic	DG9M	40mL MeOH clear vial	ZPLC	Ziploc Bag
WGKU	8oz wide jar upreserved	SP5T	120mL Coliform Na Thiosulfate	SP5U	120mL Coliform unpreserved	GN	General unpreserved
Other	Other						

F-DAL-C-003 rev.00 11-5-2012

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
(913)599-5665

May 21, 2014

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

RE: Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 14, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

CERTIFICATIONS

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

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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Lenexa, KS 66219
(913)599-5665

SAMPLE SUMMARY

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169171001	**316-298**	Water	05/13/14 07:28	05/14/14 02:40
60169171002	**TRIP BLANK**	Water	05/13/14 07:28	05/14/14 02:40

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169171001	**316-298**	EPA 200.7	TDS	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	TDS	1
		EPA 625	JMT	18
		EPA 624 Low	PRG	28
		EPA 1664A	DJR	1
		EPA 1664A	CRT	1
		SM 2540D	RAH	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60169171002	**TRIP BLANK**	EPA 624 Low	PRG	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

Sample: 316-298 **Lab ID: 60169171001** Collected: 05/13/14 07:28 Received: 05/14/14 02:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**25600**	ug/L	750	2	05/20/14 09:45	05/20/14 15:48	7429-90-5	M1
Antimony	**135**	ug/L	50.0	1	05/20/14 09:45	05/20/14 15:45	7440-36-0	
Arsenic	**1400**	ug/L	50.0	1	05/20/14 09:45	05/20/14 15:45	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/20/14 09:45	05/20/14 15:45	7440-41-7	
Cadmium	**28.6**	ug/L	25.0	1	05/20/14 09:45	05/20/14 15:45	7440-43-9	
Chromium	**253**	ug/L	25.0	1	05/20/14 09:45	05/20/14 15:45	7440-47-3	
Cobalt	**74.6**	ug/L	25.0	1	05/20/14 09:45	05/20/14 15:45	7440-48-4	
Copper	**99.6**	ug/L	50.0	1	05/20/14 09:45	05/20/14 15:45	7440-50-8	
Iron	**830000**	ug/L	250	1	05/20/14 09:45	05/20/14 15:45	7439-89-6	M1
Lead	**150**	ug/L	25.0	1	05/20/14 09:45	05/20/14 15:45	7439-92-1	
Nickel	**154**	ug/L	25.0	1	05/20/14 09:45	05/20/14 15:45	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/20/14 09:45	05/20/14 15:45	7782-49-2	M1
Silver	ND	ug/L	35.0	1	05/20/14 09:45	05/20/14 15:45	7440-22-4	
Thallium	ND	ug/L	100	1	05/20/14 09:45	05/20/14 15:45	7440-28-0	
Zinc	**4490**	ug/L	500	2	05/20/14 09:45	05/20/14 15:48	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1840**	ug/L	750	2	05/16/14 17:00	05/18/14 15:27	7429-90-5	
Antimony, Dissolved	**55.2**	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:29	7440-36-0	
Arsenic, Dissolved	**986**	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:29	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/16/14 17:00	05/18/14 15:29	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:29	7440-43-9	
Chromium, Dissolved	**166**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:29	7440-47-3	
Cobalt, Dissolved	ND	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:29	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:29	7440-50-8	
Iron, Dissolved	**377000**	ug/L	250	1	05/16/14 17:00	05/18/14 15:29	7439-89-6	
Lead, Dissolved	**25.7**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:29	7439-92-1	
Nickel, Dissolved	**86.0**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:29	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/16/14 17:00	05/18/14 15:29	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/16/14 17:00	05/18/14 15:29	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/16/14 17:00	05/18/14 15:29	7440-28-0	
Zinc, Dissolved	**3580**	ug/L	500	2	05/16/14 17:00	05/18/14 15:27	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**17.8**	ug/L	6.0	1	05/20/14 10:00	05/20/14 14:19	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/19/14 11:00	05/19/14 16:28	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/20/14 00:00	05/21/14 11:44	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 11:44	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 11:44	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 11:44	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/20/14 00:00	05/21/14 11:44	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7740**	ug/L	4000	2	05/20/14 00:00	05/21/14 11:44		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

Sample: 316-298 **Lab ID: 60169171001** Collected: 05/13/14 07:28 Received: 05/14/14 02:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1130**	ug/L	1000	2	05/20/14 00:00	05/21/14 11:44	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 11:44	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 11:44	87-86-5	
Phenol	**10500**	ug/L	1000	2	05/20/14 00:00	05/21/14 11:44	108-95-2	M1
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 11:44	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 11:44	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	159	%	33-120	2	05/20/14 00:00	05/21/14 11:44	4165-60-0	S0
2-Fluorobiphenyl (S)	83	%	39-120	2	05/20/14 00:00	05/21/14 11:44	321-60-8	
Terphenyl-d14 (S)	86	%	45-120	2	05/20/14 00:00	05/21/14 11:44	1718-51-0	
Phenol-d6 (S)	46	%	11-120	2	05/20/14 00:00	05/21/14 11:44	13127-88-3	
2-Fluorophenol (S)	50	%	17-120	2	05/20/14 00:00	05/21/14 11:44	367-12-4	
2,4,6-Tribromophenol (S)	103	%	39-120	2	05/20/14 00:00	05/21/14 11:44	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**130000**	ug/L	2500	250		05/15/14 13:20	67-64-1	N2
Benzene	ND	ug/L	250	250		05/15/14 13:20	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/15/14 13:20	75-27-4	
Bromoform	ND	ug/L	250	250		05/15/14 13:20	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/15/14 13:20	74-83-9	
2-Butanone (MEK)	**47800**	ug/L	2500	250		05/15/14 13:20	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/15/14 13:20	56-23-5	
Chloroethane	ND	ug/L	250	250		05/15/14 13:20	75-00-3	
Chloroform	ND	ug/L	250	250		05/15/14 13:20	67-66-3	
1,4-Dichlorobenzene	**514**	ug/L	250	250		05/15/14 13:20	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/15/14 13:20	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 13:20	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/15/14 13:20	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/15/14 13:20	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/15/14 13:20	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/15/14 13:20	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/15/14 13:20	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/15/14 13:20	127-18-4	
Toluene	ND	ug/L	250	250		05/15/14 13:20	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/15/14 13:20	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/15/14 13:20	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/15/14 13:20	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/15/14 13:20	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/15/14 13:20	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	90	%	80-120	250		05/15/14 13:20	460-00-4	
Toluene-d8 (S)	101	%	80-120	250		05/15/14 13:20	2037-26-5	
1,2-Dichloroethane-d4 (S)	95	%	80-120	250		05/15/14 13:20	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/15/14 13:20		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1230**	mg/L	5.0	1		05/16/14 16:09		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

Sample: 316-298 **Lab ID: 60169171001** Collected: 05/13/14 07:28 Received: 05/14/14 02:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**6.4**	mg/L	5.0	1		05/19/14 08:34		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**5440**	mg/L	5.0	1		05/16/14 10:14		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/15/14 10:00		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**30600**	mg/L	2.0	1	05/14/14 17:47	05/19/14 13:24		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**555**	mg/L	20.0	200		05/16/14 15:18	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**59100**	mg/L	5000	500		05/21/14 07:28		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

Sample: TRIP BLANK **Lab ID: 60169171002** Collected: 05/13/14 07:28 Received: 05/14/14 02:40 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/15/14 10:57	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/15/14 10:57	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/15/14 10:57	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/15/14 10:57	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/15/14 10:57	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/15/14 10:57	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/15/14 10:57	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/15/14 10:57	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/15/14 10:57	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/15/14 10:57	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/15/14 10:57	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 10:57	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 10:57	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/15/14 10:57	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/15/14 10:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/15/14 10:57	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/15/14 10:57	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/15/14 10:57	127-18-4	
Toluene	ND	ug/L	1.0	1		05/15/14 10:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/15/14 10:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/15/14 10:57	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/15/14 10:57	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/15/14 10:57	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/15/14 10:57	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	90	%	80-120	1		05/15/14 10:57	460-00-4	
Toluene-d8 (S)	107	%	80-120	1		05/15/14 10:57	2037-26-5	
1,2-Dichloroethane-d4 (S)	97	%	80-120	1		05/15/14 10:57	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/15/14 10:57		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: MERP/8409 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169171001

METHOD BLANK: 1380890 | Matrix: Water
Associated Lab Samples: 60169171001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/20/14 13:06	

LABORATORY CONTROL SAMPLE: 1380891

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	103	85-115	

MATRIX SPIKE SAMPLE: 1380892

Parameter	Units	60168662003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	41.0	5	9.2	-636	70-130	M1

MATRIX SPIKE SAMPLE: 1380893

Parameter	Units	60168833001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	2.5	50	70-130	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: MERP/8407
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169171001

METHOD BLANK: 1380589
Matrix: Water
Associated Lab Samples: 60169171001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/19/14 16:08	

LABORATORY CONTROL SAMPLE: 1380590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.7	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380591 1380592

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	118	112	79	74	70-130	5	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: MPRP/27300
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169171001

METHOD BLANK: 1380737
Matrix: Water
Associated Lab Samples: 60169171001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/20/14 15:41	
Antimony	ug/L	ND	10.0	05/20/14 15:41	
Arsenic	ug/L	ND	10.0	05/20/14 15:41	
Beryllium	ug/L	ND	1.0	05/20/14 15:41	
Cadmium	ug/L	ND	5.0	05/20/14 15:41	
Chromium	ug/L	ND	5.0	05/20/14 15:41	
Cobalt	ug/L	ND	5.0	05/20/14 15:41	
Copper	ug/L	ND	10.0	05/20/14 15:41	
Iron	ug/L	ND	50.0	05/20/14 15:41	
Lead	ug/L	ND	5.0	05/20/14 15:41	
Nickel	ug/L	ND	5.0	05/20/14 15:41	
Selenium	ug/L	ND	15.0	05/20/14 15:41	
Silver	ug/L	ND	7.0	05/20/14 15:41	
Thallium	ug/L	ND	20.0	05/20/14 15:41	
Zinc	ug/L	ND	50.0	05/20/14 15:41	

LABORATORY CONTROL SAMPLE: 1380738

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9960	100	85-115	
Antimony	ug/L	1000	1060	106	85-115	
Arsenic	ug/L	1000	1020	102	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	1020	102	85-115	
Chromium	ug/L	1000	947	95	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	1050	105	85-115	
Nickel	ug/L	1000	1040	104	85-115	
Selenium	ug/L	1000	1060	106	85-115	
Silver	ug/L	500	480	96	85-115	
Thallium	ug/L	1000	1060	106	85-115	
Zinc	ug/L	1000	980	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380739 1380740

Parameter	Units	60169171001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	25600	50000	50000	94000	89600	137	128	70-130	5	8	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380739 1380740

Parameter	Units	60169171001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	135	5000	5000	5720	5740	112	112	70-130	0	7	
Arsenic	ug/L	1400	5000	5000	7530	7620	123	124	70-130	1	10	
Beryllium	ug/L	ND	5000	5000	4980	4970	100	99	70-130	0	7	
Cadmium	ug/L	28.6	5000	5000	5560	5570	111	111	70-130	0	10	
Chromium	ug/L	253	5000	5000	4820	4840	91	92	70-130	0	10	
Cobalt	ug/L	74.6	5000	5000	4970	4980	98	98	70-130	0	6	
Copper	ug/L	99.6	5000	5000	5730	5660	113	111	70-130	1	11	
Iron	ug/L	830000	50000	50000	908000	914000	154	168	70-130	1	10	M1
Lead	ug/L	150	5000	5000	4800	4800	93	93	70-130	0	10	
Nickel	ug/L	154	5000	5000	4980	5000	96	97	70-130	0	10	
Selenium	ug/L	ND	5000	5000	6720	6770	133	134	70-130	1	10	M1
Silver	ug/L	ND	2500	2500	2600	2600	103	103	70-130	0	10	
Thallium	ug/L	ND	5000	5000	4300	4280	86	86	70-130	0	6	
Zinc	ug/L	4490	5000	5000	9350	9010	97	90	70-130	4	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: MPRP/27278
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169171001

METHOD BLANK: 1379437
Matrix: Water
Associated Lab Samples: 60169171001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/18/14 14:51	
Antimony, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Arsenic, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Beryllium, Dissolved	ug/L	ND	1.0	05/18/14 14:51	
Cadmium, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Chromium, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Cobalt, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Copper, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Iron, Dissolved	ug/L	ND	50.0	05/18/14 14:51	
Lead, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Nickel, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Selenium, Dissolved	ug/L	ND	15.0	05/18/14 14:51	
Silver, Dissolved	ug/L	ND	7.0	05/18/14 14:51	
Thallium, Dissolved	ug/L	ND	20.0	05/18/14 14:51	
Zinc, Dissolved	ug/L	ND	50.0	05/18/14 14:51	

LABORATORY CONTROL SAMPLE: 1379438

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	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	972	97	85-115	
Beryllium, Dissolved	ug/L	1000	1000	100	85-115	
Cadmium, Dissolved	ug/L	1000	1010	101	85-115	
Chromium, Dissolved	ug/L	1000	974	97	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9760	98	85-115	
Lead, Dissolved	ug/L	1000	1020	102	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	491	98	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	961	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379439 1379440

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1960	50000	50000	52000	53300	100	103	70-130	3	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379439 1379440

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	57.1	5000	5000	4940	5610	98	111	70-130	13	7	R1
Arsenic, Dissolved	ug/L	1000	5000	5000	5890	6640	98	113	70-130	12	10	R1
Beryllium, Dissolved	ug/L	ND	5000	5000	4700	4830	94	97	70-130	3	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5020	5400	100	108	70-130	7	10	
Chromium, Dissolved	ug/L	165	5000	5000	5270	4910	102	95	70-130	7	10	
Cobalt, Dissolved	ug/L	26.4	5000	5000	4760	4860	95	97	70-130	2	6	
Copper, Dissolved	ug/L	53.8	5000	5000	5000	5560	99	110	70-130	11	11	
Iron, Dissolved	ug/L	358000	50000	50000	393000	409000	70	103	70-130	4	10	
Lead, Dissolved	ug/L	30.6	5000	5000	4650	4690	92	93	70-130	1	10	
Nickel, Dissolved	ug/L	80.8	5000	5000	4720	4910	93	97	70-130	4	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5280	6200	106	124	70-130	16	10	R1
Silver, Dissolved	ug/L	ND	2500	2500	2600	2700	104	108	70-130	4	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4250	4390	85	88	70-130	3	6	
Zinc, Dissolved	ug/L	3820	5000	5000	8210	8670	88	97	70-130	5	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: MSV/61584 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169171001, 60169171002

METHOD BLANK: 1377791 | Matrix: Water
Associated Lab Samples: 60169171001, 60169171002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/15/14 09:26	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,2-Dichloroethane	ug/L	ND	1.0	05/15/14 09:26	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/15/14 09:26	
2-Butanone (MEK)	ug/L	ND	10.0	05/15/14 09:26	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/15/14 09:26	N2
Acetone	ug/L	ND	10.0	05/15/14 09:26	N2
Benzene	ug/L	ND	1.0	05/15/14 09:26	
Bromodichloromethane	ug/L	ND	1.0	05/15/14 09:26	
Bromoform	ug/L	ND	1.0	05/15/14 09:26	
Bromomethane	ug/L	ND	5.0	05/15/14 09:26	
Carbon tetrachloride	ug/L	ND	1.0	05/15/14 09:26	
Chloroethane	ug/L	ND	1.0	05/15/14 09:26	
Chloroform	ug/L	ND	1.0	05/15/14 09:26	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	N2
Ethylbenzene	ug/L	ND	1.0	05/15/14 09:26	
Methylene chloride	ug/L	ND	1.0	05/15/14 09:26	
Tetrachloroethene	ug/L	ND	1.0	05/15/14 09:26	
Toluene	ug/L	ND	1.0	05/15/14 09:26	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Trichloroethene	ug/L	ND	1.0	05/15/14 09:26	
Vinyl chloride	ug/L	ND	1.0	05/15/14 09:26	
Xylene (Total)	ug/L	ND	3.0	05/15/14 09:26	N2
1,2-Dichloroethane-d4 (S)	%	91	80-120	05/15/14 09:26	
4-Bromofluorobenzene (S)	%	97	80-120	05/15/14 09:26	
Toluene-d8 (S)	%	103	80-120	05/15/14 09:26	

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.6	103	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.2	106	67-127	N2
1,1,2-Trichloroethane	ug/L	20	21.6	108	67-124	
1,2-Dichloroethane	ug/L	20	20.0	100	70-126	
1,4-Dichlorobenzene	ug/L	20	22.6	113	74-120	
2-Butanone (MEK)	ug/L	100	93.7	94	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	93.3	93	59-131	N2
Acetone	ug/L	100	94.3	94	38-134	N2
Benzene	ug/L	20	19.9	99	75-120	
Bromodichloromethane	ug/L	20	21.2	106	68-125	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

LABORATORY CONTROL SAMPLE: 1377792

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	23.2	116	65-127	
Bromomethane	ug/L	20	18.8	94	13-157	
Carbon tetrachloride	ug/L	20	20.1	100	70-131	
Chloroethane	ug/L	20	18.0	90	47-133	
Chloroform	ug/L	20	20.2	101	65-127	
cis-1,2-Dichloroethene	ug/L	20	20.3	102	68-127	N2
Ethylbenzene	ug/L	20	22.8	114	74-122	
Methylene chloride	ug/L	20	20.4	102	64-129	
Tetrachloroethene	ug/L	20	24.5	123	73-125	
Toluene	ug/L	20	21.7	108	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.8	94	66-129	
Trichloroethene	ug/L	20	19.6	98	71-123	
Vinyl chloride	ug/L	20	16.7	83	43-129	
Xylene (Total)	ug/L	60	68.3	114	75-121	N2
1,2-Dichloroethane-d4 (S)	%			94	80-120	
4-Bromofluorobenzene (S)	%			98	80-120	
Toluene-d8 (S)	%			103	80-120	

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	6000	120	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5810	116	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	6110	122	52-143	
1,2-Dichloroethane	ug/L	ND	5000	5470	109	49-144	
1,4-Dichlorobenzene	ug/L	308	5000	6650	127	33-140	
2-Butanone (MEK)	ug/L	55300	25000	82800	110	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	25500	95	40-160	N2
Acetone	ug/L	149000	25000	185000	144	10-160	N2
Benzene	ug/L	ND	5000	5840	117	37-151	
Bromodichloromethane	ug/L	ND	5000	5810	116	35-142	
Bromoform	ug/L	ND	5000	6700	134	45-142	
Bromomethane	ug/L	ND	5000	4660	93	10-158	
Carbon tetrachloride	ug/L	ND	5000	5950	119	70-140	
Chloroethane	ug/L	ND	5000	5880	118	19-152	
Chloroform	ug/L	ND	5000	5670	113	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	5950	116	34-147	N2
Ethylbenzene	ug/L	ND	5000	6630	132	40-142	
Methylene chloride	ug/L	ND	5000	5790	114	31-144	
Tetrachloroethene	ug/L	ND	5000	7450	149	64-148	M1
Toluene	ug/L	ND	5000	6380	127	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	5650	113	54-151	
Trichloroethene	ug/L	413	5000	5550	103	71-149	
Vinyl chloride	ug/L	ND	5000	5580	111	22-146	
Xylene (Total)	ug/L	ND	15000	19700	131	37-144	N2
1,2-Dichloroethane-d4 (S)	%				92	80-120	
4-Bromofluorobenzene (S)	%				96	80-120	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

MATRIX SPIKE SAMPLE: 1377793

Parameter	Units	60168816001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				104	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: OEXT/44262 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169171001

METHOD BLANK: 1380823 | Matrix: Water
Associated Lab Samples: 60169171001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	500	05/21/14 10:41	
2,4,6-Trichlorophenol	ug/L	ND	500	05/21/14 10:41	
2-Methylphenol(o-Cresol)	ug/L	ND	1000	05/21/14 10:41	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	2000	05/21/14 10:41	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	2500	05/21/14 10:41	
Hexachloro-1,3-butadiene	ug/L	ND	500	05/21/14 10:41	
Hexachlorocyclopentadiene	ug/L	ND	500	05/21/14 10:41	
Hexachloroethane	ug/L	ND	500	05/21/14 10:41	
Naphthalene	ug/L	ND	500	05/21/14 10:41	
Nitrobenzene	ug/L	ND	500	05/21/14 10:41	
Pentachlorophenol	ug/L	ND	500	05/21/14 10:41	
Phenol	ug/L	ND	500	05/21/14 10:41	
2,4,6-Tribromophenol (S)	%	89	39-120	05/21/14 10:41	
2-Fluorobiphenyl (S)	%	81	39-120	05/21/14 10:41	
2-Fluorophenol (S)	%	34	17-120	05/21/14 10:41	
Nitrobenzene-d5 (S)	%	83	33-120	05/21/14 10:41	
Phenol-d6 (S)	%	20	11-120	05/21/14 10:41	
Terphenyl-d14 (S)	%	79	45-120	05/21/14 10:41	

LABORATORY CONTROL SAMPLE: 1380824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	5000	4030	81	46-120	
2,4,6-Trichlorophenol	ug/L	5000	4370	87	49-120	
2-Methylphenol(o-Cresol)	ug/L	5000	3420	68	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	5000	3050	61	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	5000	4670	93	40-133	
Hexachloro-1,3-butadiene	ug/L	5000	3790	76	44-116	
Hexachlorocyclopentadiene	ug/L	10000	6880	69	24-120	
Hexachloroethane	ug/L	5000	3710	74	43-113	
Naphthalene	ug/L	5000	4270	85	48-120	
Nitrobenzene	ug/L	5000	4130	83	48-120	
Pentachlorophenol	ug/L	5000	4280	86	47-120	
Phenol	ug/L	5000	1670	33	16-112	
2,4,6-Tribromophenol (S)	%			98	39-120	
2-Fluorobiphenyl (S)	%			81	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			30	11-120	
Terphenyl-d14 (S)	%			86	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

MATRIX SPIKE SAMPLE: 1380825

Parameter	Units	60169171001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3740	75	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4480	90	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3980	80	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7740	5000	10500	54	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4670J	93	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3500	70	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	8200	82	11-120	
Hexachloroethane	ug/L	ND	5000	3970	79	40-113	
Naphthalene	ug/L	1130	5000	5290	83	45-120	
Nitrobenzene	ug/L	ND	5000	4370	87	38-120	
Pentachlorophenol	ug/L	ND	5000	5450	109	43-135	
Phenol	ug/L	10500	5000	11100	11	13-112	M1
2,4,6-Tribromophenol (S)	%				93	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				47	17-120	
Nitrobenzene-d5 (S)	%				149	33-120	S0
Phenol-d6 (S)	%				45	11-120	
Terphenyl-d14 (S)	%				88	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: WET/47916 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169171001

METHOD BLANK: 1379603 | Matrix: Water
Associated Lab Samples: 60169171001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/16/14 16:06	

LABORATORY CONTROL SAMPLE: 1379604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	40.2	100	78-114	

MATRIX SPIKE SAMPLE: 1379605

Parameter	Units	60168666006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	36.1	41.2	74.0	92	78-114	

SAMPLE DUPLICATE: 1379606

Parameter	Units	60168666007 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	.92J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: WET/47925 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169171001

METHOD BLANK: 1380379 | Matrix: Water
Associated Lab Samples: 60169171001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/19/14 08:31	

LABORATORY CONTROL SAMPLE: 1380380

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.3	106	64-132	

MATRIX SPIKE SAMPLE: 1380381

Parameter	Units	60168924001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	8.8	76.9	221	276	64-132	M1

SAMPLE DUPLICATE: 1380382

Parameter	Units	60169029001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	6.4	18.3	96	34	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: WET/47900 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169171001

METHOD BLANK: 1379087 | Matrix: Water
Associated Lab Samples: 60169171001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/16/14 10:10	

SAMPLE DUPLICATE: 1379088

Parameter	Units	60169063001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	10	9.0	11	10	D6

SAMPLE DUPLICATE: 1379089

Parameter	Units	60169134003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: WET/47868
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169171001

SAMPLE DUPLICATE: 1378290

Parameter	Units	60169171001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.4	5.3	1	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: WET/47856 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169171001

METHOD BLANK: 1378085 | Matrix: Water
Associated Lab Samples: 60169171001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/19/14 13:19	

LABORATORY CONTROL SAMPLE: 1378086

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	199	101	85-115	

SAMPLE DUPLICATE: 1378087

Parameter	Units	60169204001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	2.7	3.6	29	17	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: WETA/29460
QC Batch Method: EPA 350.1
Analysis Method: EPA 350.1
Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169171001

METHOD BLANK: 1378998
Matrix: Water
Associated Lab Samples: 60169171001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/16/14 15:05	

LABORATORY CONTROL SAMPLE: 1378999

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	100	90-110	

MATRIX SPIKE SAMPLE: 1379000

Parameter	Units	60169145001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	11.2	10	19.2	80	90-110	M1

MATRIX SPIKE SAMPLE: 1379001

Parameter	Units	60169176001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.0	96	90-110	

SAMPLE DUPLICATE: 1379002

Parameter	Units	60169287001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	2.5	2.5	1	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

QC Batch: WETA/29509 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169171001

METHOD BLANK: 1381031 | Matrix: Water
Associated Lab Samples: 60169171001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/21/14 07:26	

LABORATORY CONTROL SAMPLE: 1381032

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	52.9	106	90-110	

MATRIX SPIKE SAMPLE: 1381033

Parameter	Units	60169004003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	28.4	50	91.2	126	90-110	M1

MATRIX SPIKE SAMPLE: 1381035

Parameter	Units	60168883026 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	65.2	126	90-110	M1

SAMPLE DUPLICATE: 1381034

Parameter	Units	60168883018 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	ND	ND		25	

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QUALIFIERS

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-298
Pace Project No.: 60169171

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169171001	**316-298**	EPA 200.7	MPRP/27300	EPA 200.7	ICP/20679
60169171001	**316-298**	EPA 200.7	MPRP/27278	EPA 200.7	ICP/20662
60169171001	**316-298**	EPA 245.1	MERP/8409	EPA 245.1	MERC/8364
60169171001	**316-298**	EPA 245.1	MERP/8407	EPA 245.1	MERC/8363
60169171001	**316-298**	EPA 625	OEXT/44262	EPA 625	MSSV/14155
60169171001	**316-298**	EPA 624 Low	MSV/61584		
60169171002	**TRIP BLANK**	EPA 624 Low	MSV/61584		
60169171001	**316-298**	EPA 1664A	WET/47916		
60169171001	**316-298**	EPA 1664A	WET/47925		
60169171001	**316-298**	SM 2540D	WET/47900		
60169171001	**316-298**	SM 4500-H+B	WET/47868		
60169171001	**316-298**	SM 5210B	WET/47856	SM 5210B	WET/47940
60169171001	**316-298**	EPA 350.1	WETA/29460		
60169171001	**316-298**	EPA 410.4	WETA/29509		

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Sample Condition Upon Receipt

WO#: 60169171
60169171

Client Name: Barr

Optional
Proj Due Date:
Proj Name:

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 ☒ Zip

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 6.6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: S 5/14/14

Chain of Custody present:	☒Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	6. BOD, pH
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.
Sufficient volume:	☒Yes ☐No ☐N/A	8.
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	9.
Containers intact:	☒Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☒Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☒Yes ☐No ☐N/A	added hno3 to 316-298 BP3N 5.0/4.0
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☒No ☐N/A	added h2so4 to 316-298 BP3S 5.0/3.5 14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☒Yes ☐No	Initial when completed S Lot # of added preservative 12522 12513
Trip Blank present: Pace Trip Blank lot # (if purchased): Covered	☒Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☒Yes ☐No ☐N/A	1 of 5 VOA 16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State: MD

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/16/14

CHAIN-OF-CUSTODY / Analytical Request Document

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

Pace Analytical

Page : 1 **Of** 1

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.	
Client Project ID:	BRIDGETON LF
Container Order Number:	

Section C — Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	130426_7588
Pace Project Manager:	Brown, Angie
Pace Profile #:	7585 LINE 2

Regulatory Agency

State / Location: Missouri

Requested Analysis Filtered (Y/N)

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

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	COD EPA 410	pH SM 4500H+B	LF DIS. METALS 200.7/245	TOTAL METALS 200.7/245	AMMONIA EPA 350.1	O/G EPA 1664	625 SVOCs	VOCs EPA 624	TSS SM2540D	TPH/HEM-SGT 1664	BOD SM 5210B		Residual Chlorine (Y/N)	16016971
1	316-298 2(AG4U) 5(DG9U)	OT	G	5/13/14	0728	—	—		15	10	4	1	0						X	X	X	X	X	X	X	X	X	X	X	BP3S, S.C	2(BP2U) BP3U, BP3N, 3(AG3S) 2(DG9U) TB	
2	TRIP BLANK	—	—	—	—	—	—		2	2																X						
3																																
4																																
5																																
6																															METALS LIST total & LF Dis:	
7																															Al,Sb,As,Be,Cd,Cr,	
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn	
9																															and Mercury	
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FST	5-13-14	3:00PM	Bernette Heath	5-13-14	3:00PM				
SITE ADDRESS: BRIDGETON LF				Brandelle Hicks/PASZ	5/14	0240	6.0	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:	WILLIAM ABERNATHY				
SIGNATURE of SAMPLER:		DATE Signed: 5/13/14			

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May 22, 2014

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

RE: Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 15, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

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 316-299
Pace Project No.: 60169282

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169282001	**316-299**	Water	05/14/14 07:51	05/15/14 01:45
60169282002	**TRIP BLANK**	Water	05/14/14 07:51	05/15/14 01:45

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169282001	**316-299**	EPA 200.7	TDS	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	TDS	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	DJR	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60169282002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

Sample: 316-299 **Lab ID: 60169282001** Collected: 05/14/14 07:51 Received: 05/15/14 01:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**18600**	ug/L	750	2	05/20/14 09:45	05/20/14 16:16	7429-90-5	
Antimony	**134**	ug/L	50.0	1	05/20/14 09:45	05/20/14 16:13	7440-36-0	
Arsenic	**1440**	ug/L	50.0	1	05/20/14 09:45	05/20/14 16:13	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/20/14 09:45	05/20/14 16:13	7440-41-7	
Cadmium	**27.0**	ug/L	25.0	1	05/20/14 09:45	05/20/14 16:13	7440-43-9	
Chromium	**239**	ug/L	25.0	1	05/20/14 09:45	05/20/14 16:13	7440-47-3	
Cobalt	**69.6**	ug/L	25.0	1	05/20/14 09:45	05/20/14 16:13	7440-48-4	
Copper	**82.0**	ug/L	50.0	1	05/20/14 09:45	05/20/14 16:13	7440-50-8	
Iron	**786000**	ug/L	250	1	05/20/14 09:45	05/20/14 16:13	7439-89-6	
Lead	**155**	ug/L	25.0	1	05/20/14 09:45	05/20/14 16:13	7439-92-1	
Nickel	**129**	ug/L	25.0	1	05/20/14 09:45	05/20/14 16:13	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/20/14 09:45	05/20/14 16:13	7782-49-2	
Silver	ND	ug/L	35.0	1	05/20/14 09:45	05/20/14 16:13	7440-22-4	
Thallium	ND	ug/L	200	2	05/20/14 09:45	05/20/14 16:16	7440-28-0	D3
Zinc	**4280**	ug/L	500	2	05/20/14 09:45	05/20/14 16:16	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1990**	ug/L	750	2	05/16/14 17:00	05/18/14 15:32	7429-90-5	
Antimony, Dissolved	**50.6**	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:34	7440-36-0	
Arsenic, Dissolved	**1060**	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:34	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/16/14 17:00	05/18/14 15:34	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:34	7440-43-9	
Chromium, Dissolved	**179**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:34	7440-47-3	
Cobalt, Dissolved	**26.7**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:34	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/16/14 17:00	05/18/14 15:34	7440-50-8	
Iron, Dissolved	**383000**	ug/L	250	1	05/16/14 17:00	05/18/14 15:34	7439-89-6	
Lead, Dissolved	**29.7**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:34	7439-92-1	
Nickel, Dissolved	**88.0**	ug/L	25.0	1	05/16/14 17:00	05/18/14 15:34	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/16/14 17:00	05/18/14 15:34	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/16/14 17:00	05/18/14 15:34	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/16/14 17:00	05/18/14 15:34	7440-28-0	
Zinc, Dissolved	**3890**	ug/L	500	2	05/16/14 17:00	05/18/14 15:32	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**47.1**	ug/L	6.0	1	05/21/14 15:45	05/22/14 11:17	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/19/14 11:00	05/19/14 16:30	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/20/14 00:00	05/21/14 20:46	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 20:46	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 20:46	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 20:46	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/20/14 00:00	05/21/14 20:46	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**8470**	ug/L	4000	2	05/20/14 00:00	05/21/14 20:46		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

Sample: 316-299 **Lab ID: 60169282001** Collected: 05/14/14 07:51 Received: 05/15/14 01:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1780**	ug/L	1000	2	05/20/14 00:00	05/21/14 20:46	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 20:46	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 20:46	87-86-5	
Phenol	**11500**	ug/L	1000	2	05/20/14 00:00	05/21/14 20:46	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 20:46	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 20:46	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	158	%	33-120	2	05/20/14 00:00	05/21/14 20:46	4165-60-0	S0
2-Fluorobiphenyl (S)	74	%	39-120	2	05/20/14 00:00	05/21/14 20:46	321-60-8	
Terphenyl-d14 (S)	81	%	45-120	2	05/20/14 00:00	05/21/14 20:46	1718-51-0	
Phenol-d6 (S)	45	%	11-120	2	05/20/14 00:00	05/21/14 20:46	13127-88-3	
2-Fluorophenol (S)	42	%	17-120	2	05/20/14 00:00	05/21/14 20:46	367-12-4	
2,4,6-Tribromophenol (S)	78	%	39-120	2	05/20/14 00:00	05/21/14 20:46	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**140000**	ug/L	2500	250		05/16/14 14:53	67-64-1	N2
Benzene	ND	ug/L	250	250		05/16/14 14:53	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/16/14 14:53	75-27-4	
Bromoform	ND	ug/L	250	250		05/16/14 14:53	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/16/14 14:53	74-83-9	
2-Butanone (MEK)	**57900**	ug/L	2500	250		05/16/14 14:53	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/16/14 14:53	56-23-5	
Chloroethane	ND	ug/L	250	250		05/16/14 14:53	75-00-3	
Chloroform	ND	ug/L	250	250		05/16/14 14:53	67-66-3	
1,4-Dichlorobenzene	**584**	ug/L	250	250		05/16/14 14:53	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/16/14 14:53	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/16/14 14:53	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/16/14 14:53	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/16/14 14:53	100-41-4	
Methylene chloride	**445**	ug/L	250	250		05/16/14 14:53	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/16/14 14:53	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/16/14 14:53	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/16/14 14:53	127-18-4	
Toluene	ND	ug/L	250	250		05/16/14 14:53	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/16/14 14:53	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/16/14 14:53	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/16/14 14:53	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/16/14 14:53	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/16/14 14:53	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	101	%	80-120	250		05/16/14 14:53	460-00-4	
Toluene-d8 (S)	103	%	80-120	250		05/16/14 14:53	2037-26-5	
1,2-Dichloroethane-d4 (S)	102	%	80-120	250		05/16/14 14:53	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/16/14 14:53		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1000**	mg/L	5.0	1		05/16/14 16:09		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

Sample: 316-299 **Lab ID: 60169282001** Collected: 05/14/14 07:51 Received: 05/15/14 01:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**6.8**	mg/L	5.0	1		05/19/14 08:34		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**6240**	mg/L	5.0	1		05/20/14 10:45		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.3**	Std. Units	0.10	1		05/15/14 10:00		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**31100**	mg/L	2.0	1	05/15/14 13:19	05/20/14 11:55		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**555**	mg/L	20.0	200		05/16/14 15:34	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**53500**	mg/L	5000	500		05/22/14 07:37		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

Sample: TRIP BLANK **Lab ID: 60169282002** Collected: 05/14/14 07:51 Received: 05/15/14 01:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/15/14 16:23	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/15/14 16:23	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/15/14 16:23	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/15/14 16:23	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/15/14 16:23	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/15/14 16:23	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/15/14 16:23	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/15/14 16:23	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/15/14 16:23	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/15/14 16:23	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/15/14 16:23	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 16:23	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/15/14 16:23	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/15/14 16:23	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/15/14 16:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/15/14 16:23	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/15/14 16:23	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/15/14 16:23	127-18-4	
Toluene	ND	ug/L	1.0	1		05/15/14 16:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/15/14 16:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/15/14 16:23	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/15/14 16:23	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/15/14 16:23	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/15/14 16:23	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	102	%	80-120	1		05/15/14 16:23	460-00-4	
Toluene-d8 (S)	102	%	80-120	1		05/15/14 16:23	2037-26-5	
1,2-Dichloroethane-d4 (S)	101	%	80-120	1		05/15/14 16:23	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/15/14 16:23		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: MERP/8419 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169282001

METHOD BLANK: 1381892 | Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/22/14 10:30	

LABORATORY CONTROL SAMPLE: 1381893

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: 1381894 1381895

Parameter	Units	60168883021 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.6	4.5	91	90	70-130	1	20	

MATRIX SPIKE SAMPLE: 1381896

Parameter	Units	60168883022 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	3.9	78	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: MERP/8407
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169282001

METHOD BLANK: 1380589
Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/19/14 16:08	

LABORATORY CONTROL SAMPLE: 1380590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.7	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380591 1380592

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	118	112	79	74	70-130	5	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: MPRP/27300
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169282001

METHOD BLANK: 1380737
Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/20/14 15:41	
Antimony	ug/L	ND	10.0	05/20/14 15:41	
Arsenic	ug/L	ND	10.0	05/20/14 15:41	
Beryllium	ug/L	ND	1.0	05/20/14 15:41	
Cadmium	ug/L	ND	5.0	05/20/14 15:41	
Chromium	ug/L	ND	5.0	05/20/14 15:41	
Cobalt	ug/L	ND	5.0	05/20/14 15:41	
Copper	ug/L	ND	10.0	05/20/14 15:41	
Iron	ug/L	ND	50.0	05/20/14 15:41	
Lead	ug/L	ND	5.0	05/20/14 15:41	
Nickel	ug/L	ND	5.0	05/20/14 15:41	
Selenium	ug/L	ND	15.0	05/20/14 15:41	
Silver	ug/L	ND	7.0	05/20/14 15:41	
Thallium	ug/L	ND	20.0	05/20/14 15:41	
Zinc	ug/L	ND	50.0	05/20/14 15:41	

LABORATORY CONTROL SAMPLE: 1380738

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9960	100	85-115	
Antimony	ug/L	1000	1060	106	85-115	
Arsenic	ug/L	1000	1020	102	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	1020	102	85-115	
Chromium	ug/L	1000	947	95	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	1050	105	85-115	
Nickel	ug/L	1000	1040	104	85-115	
Selenium	ug/L	1000	1060	106	85-115	
Silver	ug/L	500	480	96	85-115	
Thallium	ug/L	1000	1060	106	85-115	
Zinc	ug/L	1000	980	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380739 1380740

Parameter	Units	60169171001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	25600	50000	50000	94000	89600	137	128	70-130	5	8	M1

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380739 1380740

Parameter	Units	60169171001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	135	5000	5000	5720	5740	112	112	70-130	0	7	
Arsenic	ug/L	1400	5000	5000	7530	7620	123	124	70-130	1	10	
Beryllium	ug/L	ND	5000	5000	4980	4970	100	99	70-130	0	7	
Cadmium	ug/L	28.6	5000	5000	5560	5570	111	111	70-130	0	10	
Chromium	ug/L	253	5000	5000	4820	4840	91	92	70-130	0	10	
Cobalt	ug/L	74.6	5000	5000	4970	4980	98	98	70-130	0	6	
Copper	ug/L	99.6	5000	5000	5730	5660	113	111	70-130	1	11	
Iron	ug/L	830000	50000	50000	908000	914000	154	168	70-130	1	10	M1
Lead	ug/L	150	5000	5000	4800	4800	93	93	70-130	0	10	
Nickel	ug/L	154	5000	5000	4980	5000	96	97	70-130	0	10	
Selenium	ug/L	ND	5000	5000	6720	6770	133	134	70-130	1	10	M1
Silver	ug/L	ND	2500	2500	2600	2600	103	103	70-130	0	10	
Thallium	ug/L	ND	5000	5000	4300	4280	86	86	70-130	0	6	
Zinc	ug/L	4490	5000	5000	9350	9010	97	90	70-130	4	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: MPRP/27278
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169282001

METHOD BLANK: 1379437
Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/18/14 14:51	
Antimony, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Arsenic, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Beryllium, Dissolved	ug/L	ND	1.0	05/18/14 14:51	
Cadmium, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Chromium, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Cobalt, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Copper, Dissolved	ug/L	ND	10.0	05/18/14 14:51	
Iron, Dissolved	ug/L	ND	50.0	05/18/14 14:51	
Lead, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Nickel, Dissolved	ug/L	ND	5.0	05/18/14 14:51	
Selenium, Dissolved	ug/L	ND	15.0	05/18/14 14:51	
Silver, Dissolved	ug/L	ND	7.0	05/18/14 14:51	
Thallium, Dissolved	ug/L	ND	20.0	05/18/14 14:51	
Zinc, Dissolved	ug/L	ND	50.0	05/18/14 14:51	

LABORATORY CONTROL SAMPLE: 1379438

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	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	972	97	85-115	
Beryllium, Dissolved	ug/L	1000	1000	100	85-115	
Cadmium, Dissolved	ug/L	1000	1010	101	85-115	
Chromium, Dissolved	ug/L	1000	974	97	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9760	98	85-115	
Lead, Dissolved	ug/L	1000	1020	102	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	491	98	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	961	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379439 1379440

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1960	50000	50000	52000	53300	100	103	70-130	3	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379439 1379440

Parameter	Units	60169029001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	57.1	5000	5000	4940	5610	98	111	70-130	13	7	R1
Arsenic, Dissolved	ug/L	1000	5000	5000	5890	6640	98	113	70-130	12	10	R1
Beryllium, Dissolved	ug/L	ND	5000	5000	4700	4830	94	97	70-130	3	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5020	5400	100	108	70-130	7	10	
Chromium, Dissolved	ug/L	165	5000	5000	5270	4910	102	95	70-130	7	10	
Cobalt, Dissolved	ug/L	26.4	5000	5000	4760	4860	95	97	70-130	2	6	
Copper, Dissolved	ug/L	53.8	5000	5000	5000	5560	99	110	70-130	11	11	
Iron, Dissolved	ug/L	358000	50000	50000	393000	409000	70	103	70-130	4	10	
Lead, Dissolved	ug/L	30.6	5000	5000	4650	4690	92	93	70-130	1	10	
Nickel, Dissolved	ug/L	80.8	5000	5000	4720	4910	93	97	70-130	4	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5280	6200	106	124	70-130	16	10	R1
Silver, Dissolved	ug/L	ND	2500	2500	2600	2700	104	108	70-130	4	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4250	4390	85	88	70-130	3	6	
Zinc, Dissolved	ug/L	3820	5000	5000	8210	8670	88	97	70-130	5	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: MSV/61614 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169282002

METHOD BLANK: 1378785 | Matrix: Water
Associated Lab Samples: 60169282002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/15/14 15:48	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/15/14 15:48	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/15/14 15:48	
1,2-Dichloroethane	ug/L	ND	1.0	05/15/14 15:48	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/15/14 15:48	
2-Butanone (MEK)	ug/L	ND	10.0	05/15/14 15:48	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/15/14 15:48	N2
Acetone	ug/L	ND	10.0	05/15/14 15:48	N2
Benzene	ug/L	ND	1.0	05/15/14 15:48	
Bromodichloromethane	ug/L	ND	1.0	05/15/14 15:48	
Bromoform	ug/L	ND	1.0	05/15/14 15:48	
Bromomethane	ug/L	ND	5.0	05/15/14 15:48	
Carbon tetrachloride	ug/L	ND	1.0	05/15/14 15:48	
Chloroethane	ug/L	ND	1.0	05/15/14 15:48	
Chloroform	ug/L	ND	1.0	05/15/14 15:48	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 15:48	N2
Ethylbenzene	ug/L	ND	1.0	05/15/14 15:48	
Methylene chloride	ug/L	ND	1.0	05/15/14 15:48	
Tetrachloroethene	ug/L	ND	1.0	05/15/14 15:48	
Toluene	ug/L	ND	1.0	05/15/14 15:48	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/15/14 15:48	
Trichloroethene	ug/L	ND	1.0	05/15/14 15:48	
Vinyl chloride	ug/L	ND	1.0	05/15/14 15:48	
Xylene (Total)	ug/L	ND	3.0	05/15/14 15:48	N2
1,2-Dichloroethane-d4 (S)	%	104	80-120	05/15/14 15:48	
4-Bromofluorobenzene (S)	%	101	80-120	05/15/14 15:48	
Toluene-d8 (S)	%	99	80-120	05/15/14 15:48	

LABORATORY CONTROL SAMPLE: 1378786

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.2	96	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	20.4	102	67-127	N2
1,1,2-Trichloroethane	ug/L	20	19.1	95	67-124	
1,2-Dichloroethane	ug/L	20	20.4	102	70-126	
1,4-Dichlorobenzene	ug/L	20	19.5	98	74-120	
2-Butanone (MEK)	ug/L	100	104	104	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	109	109	59-131	N2
Acetone	ug/L	100	103	103	38-134	N2
Benzene	ug/L	20	19.5	97	75-120	
Bromodichloromethane	ug/L	20	20.4	102	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

LABORATORY CONTROL SAMPLE: 1378786

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	19.5	97	65-127	
Bromomethane	ug/L	20	15.9	79	13-157	
Carbon tetrachloride	ug/L	20	19.0	95	70-131	
Chloroethane	ug/L	20	23.3	117	47-133	
Chloroform	ug/L	20	19.8	99	65-127	
cis-1,2-Dichloroethene	ug/L	20	19.9	99	68-127	N2
Ethylbenzene	ug/L	20	19.3	97	74-122	
Methylene chloride	ug/L	20	21.2	106	64-129	
Tetrachloroethene	ug/L	20	18.5	92	73-125	
Toluene	ug/L	20	19.2	96	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.6	93	66-129	
Trichloroethene	ug/L	20	18.8	94	71-123	
Vinyl chloride	ug/L	20	24.1	121	43-129	
Xylene (Total)	ug/L	60	60.4	101	75-121	N2
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			98	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: MSV/61625 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169282001

METHOD BLANK: 1379285 | Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/16/14 13:05	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/16/14 13:05	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/16/14 13:05	
1,2-Dichloroethane	ug/L	ND	1.0	05/16/14 13:05	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/16/14 13:05	
2-Butanone (MEK)	ug/L	ND	10.0	05/16/14 13:05	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/16/14 13:05	N2
Acetone	ug/L	ND	10.0	05/16/14 13:05	N2
Benzene	ug/L	ND	1.0	05/16/14 13:05	
Bromodichloromethane	ug/L	ND	1.0	05/16/14 13:05	
Bromoform	ug/L	ND	1.0	05/16/14 13:05	
Bromomethane	ug/L	ND	5.0	05/16/14 13:05	
Carbon tetrachloride	ug/L	ND	1.0	05/16/14 13:05	
Chloroethane	ug/L	ND	1.0	05/16/14 13:05	
Chloroform	ug/L	ND	1.0	05/16/14 13:05	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/16/14 13:05	N2
Ethylbenzene	ug/L	ND	1.0	05/16/14 13:05	
Methylene chloride	ug/L	ND	1.0	05/16/14 13:05	
Tetrachloroethene	ug/L	ND	1.0	05/16/14 13:05	
Toluene	ug/L	ND	1.0	05/16/14 13:05	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/16/14 13:05	
Trichloroethene	ug/L	ND	1.0	05/16/14 13:05	
Vinyl chloride	ug/L	ND	1.0	05/16/14 13:05	
Xylene (Total)	ug/L	ND	3.0	05/16/14 13:05	N2
1,2-Dichloroethane-d4 (S)	%	101	80-120	05/16/14 13:05	
4-Bromofluorobenzene (S)	%	97	80-120	05/16/14 13:05	
Toluene-d8 (S)	%	102	80-120	05/16/14 13:05	

LABORATORY CONTROL SAMPLE: 1379286

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.8	99	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	22.2	111	67-127	N2
1,1,2-Trichloroethane	ug/L	20	20.2	101	67-124	
1,2-Dichloroethane	ug/L	20	20.9	105	70-126	
1,4-Dichlorobenzene	ug/L	20	19.8	99	74-120	
2-Butanone (MEK)	ug/L	100	107	107	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	113	113	59-131	N2
Acetone	ug/L	100	107	107	38-134	N2
Benzene	ug/L	20	19.9	99	75-120	
Bromodichloromethane	ug/L	20	20.4	102	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

LABORATORY CONTROL SAMPLE: 1379286

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	20.0	100	65-127	
Bromomethane	ug/L	20	15.8	79	13-157	
Carbon tetrachloride	ug/L	20	19.4	97	70-131	
Chloroethane	ug/L	20	22.6	113	47-133	
Chloroform	ug/L	20	19.8	99	65-127	
cis-1,2-Dichloroethene	ug/L	20	19.3	97	68-127	N2
Ethylbenzene	ug/L	20	19.5	98	74-122	
Methylene chloride	ug/L	20	22.0	110	64-129	
Tetrachloroethene	ug/L	20	18.5	93	73-125	
Toluene	ug/L	20	19.4	97	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.5	93	66-129	
Trichloroethene	ug/L	20	19.0	95	71-123	
Vinyl chloride	ug/L	20	24.3	121	43-129	
Xylene (Total)	ug/L	60	62.1	103	75-121	N2
1,2-Dichloroethane-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			105	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1379287

Parameter	Units	60169282001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4900	98	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5420	108	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	5180	104	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4920	98	49-144	
1,4-Dichlorobenzene	ug/L	584	5000	5200	92	33-140	
2-Butanone (MEK)	ug/L	57900	25000	82800	100	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	28400	110	40-160	N2
Acetone	ug/L	140000	25000	155000	60	10-160	N2
Benzene	ug/L	ND	5000	5650	113	37-151	
Bromodichloromethane	ug/L	ND	5000	4970	99	35-142	
Bromoform	ug/L	ND	5000	4730	95	45-142	
Bromomethane	ug/L	ND	5000	4040	81	10-158	
Carbon tetrachloride	ug/L	ND	5000	4900	98	70-140	
Chloroethane	ug/L	ND	5000	5510	110	19-152	
Chloroform	ug/L	ND	5000	4710	94	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4660	93	34-147	N2
Ethylbenzene	ug/L	ND	5000	5840	116	40-142	
Methylene chloride	ug/L	445	5000	5440	100	31-144	
Tetrachloroethene	ug/L	ND	5000	4750	95	64-148	
Toluene	ug/L	ND	5000	5600	111	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4490	90	54-151	
Trichloroethene	ug/L	ND	5000	4610	92	71-149	
Vinyl chloride	ug/L	ND	5000	5960	119	22-146	
Xylene (Total)	ug/L	ND	15000	18400	122	37-144	N2
1,2-Dichloroethane-d4 (S)	%				101	80-120	
4-Bromofluorobenzene (S)	%				106	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

MATRIX SPIKE SAMPLE: 1379287

Parameter	Units	60169282001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				100	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: OEXT/44262 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169282001

METHOD BLANK: 1380823 | Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	500	05/21/14 10:41	
2,4,6-Trichlorophenol	ug/L	ND	500	05/21/14 10:41	
2-Methylphenol(o-Cresol)	ug/L	ND	1000	05/21/14 10:41	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	2000	05/21/14 10:41	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	2500	05/21/14 10:41	
Hexachloro-1,3-butadiene	ug/L	ND	500	05/21/14 10:41	
Hexachlorocyclopentadiene	ug/L	ND	500	05/21/14 10:41	
Hexachloroethane	ug/L	ND	500	05/21/14 10:41	
Naphthalene	ug/L	ND	500	05/21/14 10:41	
Nitrobenzene	ug/L	ND	500	05/21/14 10:41	
Pentachlorophenol	ug/L	ND	500	05/21/14 10:41	
Phenol	ug/L	ND	500	05/21/14 10:41	
2,4,6-Tribromophenol (S)	%	89	39-120	05/21/14 10:41	
2-Fluorobiphenyl (S)	%	81	39-120	05/21/14 10:41	
2-Fluorophenol (S)	%	34	17-120	05/21/14 10:41	
Nitrobenzene-d5 (S)	%	83	33-120	05/21/14 10:41	
Phenol-d6 (S)	%	20	11-120	05/21/14 10:41	
Terphenyl-d14 (S)	%	79	45-120	05/21/14 10:41	

LABORATORY CONTROL SAMPLE: 1380824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	5000	4030	81	46-120	
2,4,6-Trichlorophenol	ug/L	5000	4370	87	49-120	
2-Methylphenol(o-Cresol)	ug/L	5000	3420	68	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	5000	3050	61	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	5000	4670	93	40-133	
Hexachloro-1,3-butadiene	ug/L	5000	3790	76	44-116	
Hexachlorocyclopentadiene	ug/L	10000	6880	69	24-120	
Hexachloroethane	ug/L	5000	3710	74	43-113	
Naphthalene	ug/L	5000	4270	85	48-120	
Nitrobenzene	ug/L	5000	4130	83	48-120	
Pentachlorophenol	ug/L	5000	4280	86	47-120	
Phenol	ug/L	5000	1670	33	16-112	
2,4,6-Tribromophenol (S)	%			98	39-120	
2-Fluorobiphenyl (S)	%			81	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			30	11-120	
Terphenyl-d14 (S)	%			86	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

MATRIX SPIKE SAMPLE: 1380825

Parameter	Units	60169171001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3740	75	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4480	90	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3980	80	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7740	5000	10500	54	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4670J	93	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3500	70	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	8200	82	11-120	
Hexachloroethane	ug/L	ND	5000	3970	79	40-113	
Naphthalene	ug/L	1130	5000	5290	83	45-120	
Nitrobenzene	ug/L	ND	5000	4370	87	38-120	
Pentachlorophenol	ug/L	ND	5000	5450	109	43-135	
Phenol	ug/L	10500	5000	11100	11	13-112	M1
2,4,6-Tribromophenol (S)	%				93	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				47	17-120	
Nitrobenzene-d5 (S)	%				149	33-120	S0
Phenol-d6 (S)	%				45	11-120	
Terphenyl-d14 (S)	%				88	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: WET/47916 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169282001

METHOD BLANK: 1379603 | Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/16/14 16:06	

LABORATORY CONTROL SAMPLE: 1379604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	40.2	100	78-114	

MATRIX SPIKE SAMPLE: 1379605

Parameter	Units	60168666006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	36.1	41.2	74.0	92	78-114	

SAMPLE DUPLICATE: 1379606

Parameter	Units	60168666007 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	.92J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: WET/47925 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169282001

METHOD BLANK: 1380379 | Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/19/14 08:31	

LABORATORY CONTROL SAMPLE: 1380380

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	21.3	106	64-132	

MATRIX SPIKE SAMPLE: 1380381

Parameter	Units	60168924001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	8.8	76.9	221	276	64-132	M1

SAMPLE DUPLICATE: 1380382

Parameter	Units	60169029001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	6.4	18.3	96	34	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: WET/47954 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169282001

METHOD BLANK: 1381036 | Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/20/14 10:44	

SAMPLE DUPLICATE: 1381037

Parameter	Units	60169466002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	6480	7640	16	10	D6

SAMPLE DUPLICATE: 1381038

Parameter	Units	60169192001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	8.0	9.0	12	10	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: WET/47868
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169282001

SAMPLE DUPLICATE: 1378290

Parameter	Units	60169171001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.4	5.3	1	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: WET/47880 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169282001

METHOD BLANK: 1378470 | Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/20/14 11:28	

LABORATORY CONTROL SAMPLE: 1378471

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	194	98	85-115	

SAMPLE DUPLICATE: 1378472

Parameter	Units	60169278002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	4.9	4.1	19	17	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: WETA/29460
QC Batch Method: EPA 350.1
Analysis Method: EPA 350.1
Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169282001

METHOD BLANK: 1378998
Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/16/14 15:05	

LABORATORY CONTROL SAMPLE: 1378999

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.0	100	90-110	

MATRIX SPIKE SAMPLE: 1379000

Parameter	Units	60169145001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	11.2	10	19.2	80	90-110	M1

MATRIX SPIKE SAMPLE: 1379001

Parameter	Units	60169176001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.0	96	90-110	

SAMPLE DUPLICATE: 1379002

Parameter	Units	60169287001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	2.5	2.5	1	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

QC Batch: WETA/29514 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169282001

METHOD BLANK: 1381490 | Matrix: Water
Associated Lab Samples: 60169282001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/22/14 07:23	

LABORATORY CONTROL SAMPLE: 1381491

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	54.8	110	90-110	

MATRIX SPIKE SAMPLE: 1381492

Parameter	Units	60169109001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	44.7	50	92.4	95	90-110	

MATRIX SPIKE SAMPLE: 1381494

Parameter	Units	60169170001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	30.4	50	79.1	97	90-110	

SAMPLE DUPLICATE: 1381493

Parameter	Units	60169113001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	6960	7380	6	25	

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QUALIFIERS

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

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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BATCH QUALIFIERS

Batch: MSV/61614

[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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-299
Pace Project No.: 60169282

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169282001	**316-299**	EPA 200.7	MPRP/27300	EPA 200.7	ICP/20679
60169282001	**316-299**	EPA 200.7	MPRP/27278	EPA 200.7	ICP/20662
60169282001	**316-299**	EPA 245.1	MERP/8419	EPA 245.1	MERC/8376
60169282001	**316-299**	EPA 245.1	MERP/8407	EPA 245.1	MERC/8363
60169282001	**316-299**	EPA 625	OEXT/44262	EPA 625	MSSV/14155
60169282001	**316-299**	EPA 624 Low	MSV/61625		
60169282002	**TRIP BLANK**	EPA 624 Low	MSV/61614		
60169282001	**316-299**	EPA 1664A	WET/47916		
60169282001	**316-299**	EPA 1664A	WET/47925		
60169282001	**316-299**	SM 2540D	WET/47954		
60169282001	**316-299**	SM 4500-H+B	WET/47868		
60169282001	**316-299**	SM 5210B	WET/47880	SM 5210B	WET/47959
60169282001	**316-299**	EPA 350.1	WETA/29460		
60169282001	**316-299**	EPA 410.4	WETA/29514		

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Sample Condition Upon Receipt

WO# : 60169282

60169282

Optional
Proj Due Date:
Proj Name:

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 ☑ ZPlc

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 5.4

Temperature should be above freezing to 6°C

Date and initials of person examining contents: PVS/15/14

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. BOD pH
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	~~Added~~ Added 2.5 mL of HNO3 to BP2N. pH 6.0/4.0
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A	Added 2.0 mL of H2SO4 to BP3S. pH 6.0/2.5 14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed: PV Lot # of added preservative: 12513 12522
Trip Blank present: Pace Trip Blank lot # (if purchased): Cover	☑Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐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: _____ Date: 5/15/14

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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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency
State / Location
Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B		Residual Chlorine (Y/N)	40169282
1	1BP3U 316-299 2AG4U 2BP2U 1BP3S-5	OT	G	5/14/14	0751	—	—		5	10	4	1	0	1BP3N 4-6					X	X	X	X	X	X	X	X	X	X	X	3A633		5DG4U W1
2	TRIP BLANK	—	—	—	—	—	—		2	2																X						2DG4U W2
3																																
4																																
5																																
6																																METALS LIST total & LF Dis:
7																																Al,Sb,As,Be,Cd,Cr,
8																																Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																																and Mercury
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	[signature] FEI	5-14-14	3:05pm	[signature]	5-14-14	3:05pm				
SITE ADDRESS: BRIDGETON LF				[signature] PASE	5/15/14	0145	5.4	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:	WILLIAM ABERNATHY					
SIGNATURE of SAMPLER:	[signature]	DATE Signed: 5/14/14				

Pace Analytical Services, Inc.
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(913)599-5665

May 23, 2014

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

RE: Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 16, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

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 316-300
Pace Project No.: 60169395

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169395001	**316-300**	Water	05/15/14 08:56	05/16/14 01:20
60169395002	**TRIP BLANK**	Water	05/15/14 08:56	05/16/14 01:20

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169395001	**316-300**	EPA 200.7	TDS	15
		EPA 200.7	TDS	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	DJR	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60169395002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

Sample: 316-300 **Lab ID: 60169395001** Collected: 05/15/14 08:56 Received: 05/16/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**12400**	ug/L	750	2	05/20/14 09:45	05/20/14 16:21	7429-90-5	
Antimony	**108**	ug/L	50.0	1	05/20/14 09:45	05/20/14 16:18	7440-36-0	
Arsenic	**1320**	ug/L	50.0	1	05/20/14 09:45	05/20/14 16:18	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/20/14 09:45	05/20/14 16:18	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/20/14 09:45	05/20/14 16:18	7440-43-9	
Chromium	**191**	ug/L	25.0	1	05/20/14 09:45	05/20/14 16:18	7440-47-3	
Cobalt	**54.7**	ug/L	25.0	1	05/20/14 09:45	05/20/14 16:18	7440-48-4	
Copper	ND	ug/L	50.0	1	05/20/14 09:45	05/20/14 16:18	7440-50-8	
Iron	**610000**	ug/L	250	1	05/20/14 09:45	05/20/14 16:18	7439-89-6	
Lead	**101**	ug/L	25.0	1	05/20/14 09:45	05/20/14 16:18	7439-92-1	
Nickel	**108**	ug/L	25.0	1	05/20/14 09:45	05/20/14 16:18	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/20/14 09:45	05/20/14 16:18	7782-49-2	
Silver	ND	ug/L	35.0	1	05/20/14 09:45	05/20/14 16:18	7440-22-4	
Thallium	ND	ug/L	200	2	05/20/14 09:45	05/20/14 16:21	7440-28-0	D3
Zinc	**3640**	ug/L	500	2	05/20/14 09:45	05/20/14 16:21	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1570**	ug/L	750	2	05/21/14 11:40	05/23/14 09:49	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/21/14 11:40	05/23/14 09:47	7440-36-0	
Arsenic, Dissolved	**1030**	ug/L	50.0	1	05/21/14 11:40	05/23/14 09:47	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/21/14 11:40	05/23/14 09:47	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/21/14 11:40	05/23/14 09:47	7440-43-9	
Chromium, Dissolved	**153**	ug/L	25.0	1	05/21/14 11:40	05/23/14 09:47	7440-47-3	
Cobalt, Dissolved	**29.0**	ug/L	25.0	1	05/21/14 11:40	05/23/14 09:47	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/21/14 11:40	05/23/14 09:47	7440-50-8	
Iron, Dissolved	**343000**	ug/L	250	1	05/21/14 11:40	05/23/14 09:47	7439-89-6	M1
Lead, Dissolved	ND	ug/L	25.0	1	05/21/14 11:40	05/23/14 09:47	7439-92-1	
Nickel, Dissolved	**83.6**	ug/L	25.0	1	05/21/14 11:40	05/23/14 09:47	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/21/14 11:40	05/23/14 09:47	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/21/14 11:40	05/23/14 09:47	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/21/14 11:40	05/23/14 09:47	7440-28-0	
Zinc, Dissolved	**3710**	ug/L	500	2	05/21/14 11:40	05/23/14 09:49	7440-66-6	D9
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**26.9**	ug/L	6.0	1	05/22/14 13:45	05/23/14 10:15	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/22/14 13:45	05/23/14 09:22	7439-97-6	M1,R1
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/20/14 00:00	05/21/14 21:06	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 21:06	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 21:06	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 21:06	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/20/14 00:00	05/21/14 21:06	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7000**	ug/L	4000	2	05/20/14 00:00	05/21/14 21:06		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

Sample: 316-300 **Lab ID: 60169395001** Collected: 05/15/14 08:56 Received: 05/16/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**2380**	ug/L	1000	2	05/20/14 00:00	05/21/14 21:06	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 21:06	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 21:06	87-86-5	
Phenol	**9250**	ug/L	1000	2	05/20/14 00:00	05/21/14 21:06	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 21:06	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/21/14 21:06	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	153	%	33-120	2	05/20/14 00:00	05/21/14 21:06	4165-60-0	S0
2-Fluorobiphenyl (S)	75	%	39-120	2	05/20/14 00:00	05/21/14 21:06	321-60-8	
Terphenyl-d14 (S)	82	%	45-120	2	05/20/14 00:00	05/21/14 21:06	1718-51-0	
Phenol-d6 (S)	39	%	11-120	2	05/20/14 00:00	05/21/14 21:06	13127-88-3	
2-Fluorophenol (S)	45	%	17-120	2	05/20/14 00:00	05/21/14 21:06	367-12-4	
2,4,6-Tribromophenol (S)	85	%	39-120	2	05/20/14 00:00	05/21/14 21:06	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**152000**	ug/L	2500	250		05/19/14 13:52	67-64-1	M1,N2
Benzene	ND	ug/L	250	250		05/19/14 13:52	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/19/14 13:52	75-27-4	
Bromoform	ND	ug/L	250	250		05/19/14 13:52	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/19/14 13:52	74-83-9	
2-Butanone (MEK)	**66600**	ug/L	2500	250		05/19/14 13:52	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/19/14 13:52	56-23-5	
Chloroethane	ND	ug/L	250	250		05/19/14 13:52	75-00-3	
Chloroform	ND	ug/L	250	250		05/19/14 13:52	67-66-3	
1,4-Dichlorobenzene	**301**	ug/L	250	250		05/19/14 13:52	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/19/14 13:52	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/19/14 13:52	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/19/14 13:52	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/19/14 13:52	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/19/14 13:52	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/19/14 13:52	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/19/14 13:52	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/19/14 13:52	127-18-4	
Toluene	ND	ug/L	250	250		05/19/14 13:52	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/19/14 13:52	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/19/14 13:52	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/19/14 13:52	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/19/14 13:52	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/19/14 13:52	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	105	%	80-120	250		05/19/14 13:52	460-00-4	
Toluene-d8 (S)	100	%	80-120	250		05/19/14 13:52	2037-26-5	
1,2-Dichloroethane-d4 (S)	108	%	80-120	250		05/19/14 13:52	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/19/14 13:52		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1230**	mg/L	5.0	1		05/16/14 16:09		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

Sample: 316-300 **Lab ID: 60169395001** Collected: 05/15/14 08:56 Received: 05/16/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**14.0**	mg/L	5.0	1		05/22/14 08:05		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4120**	mg/L	5.0	1		05/21/14 10:51		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/20/14 14:00		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**28100**	mg/L	2.0	1	05/16/14 15:13	05/21/14 16:31		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**536**	mg/L	20.0	200		05/17/14 11:54	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**47800**	mg/L	5000	500		05/22/14 07:43		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

Sample: TRIP BLANK **Lab ID: 60169395002** Collected: 05/15/14 08:56 Received: 05/16/14 01:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/19/14 13:21	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/19/14 13:21	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/19/14 13:21	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/19/14 13:21	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/19/14 13:21	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/19/14 13:21	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/19/14 13:21	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/19/14 13:21	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/19/14 13:21	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/19/14 13:21	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/19/14 13:21	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/19/14 13:21	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/19/14 13:21	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/19/14 13:21	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/19/14 13:21	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/19/14 13:21	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/19/14 13:21	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/19/14 13:21	127-18-4	
Toluene	ND	ug/L	1.0	1		05/19/14 13:21	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/19/14 13:21	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/19/14 13:21	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/19/14 13:21	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/19/14 13:21	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/19/14 13:21	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	101	%	80-120	1		05/19/14 13:21	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		05/19/14 13:21	2037-26-5	
1,2-Dichloroethane-d4 (S)	105	%	80-120	1		05/19/14 13:21	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/19/14 13:21		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: MERP/8424 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169395001

METHOD BLANK: 1382565 | Matrix: Water
Associated Lab Samples: 60169395001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/23/14 09:43	

LABORATORY CONTROL SAMPLE: 1382566

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE SAMPLE: 1382567

Parameter	Units	60169041002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	.13J	3	70-130	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382568 1382569

Parameter	Units	60169150001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.5	4.6	90	93	70-130	4	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: MERP/8423
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169395001

METHOD BLANK: 1382557
Matrix: Water
Associated Lab Samples: 60169395001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/23/14 09:15	

LABORATORY CONTROL SAMPLE: 1382558

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.8	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382559 1382560

Parameter	Units	60169395001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	83.7	119	56	80	70-130	35	20	M1,R1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: MPRP/27300
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169395001

METHOD BLANK: 1380737
Matrix: Water
Associated Lab Samples: 60169395001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/20/14 15:41	
Antimony	ug/L	ND	10.0	05/20/14 15:41	
Arsenic	ug/L	ND	10.0	05/20/14 15:41	
Beryllium	ug/L	ND	1.0	05/20/14 15:41	
Cadmium	ug/L	ND	5.0	05/20/14 15:41	
Chromium	ug/L	ND	5.0	05/20/14 15:41	
Cobalt	ug/L	ND	5.0	05/20/14 15:41	
Copper	ug/L	ND	10.0	05/20/14 15:41	
Iron	ug/L	ND	50.0	05/20/14 15:41	
Lead	ug/L	ND	5.0	05/20/14 15:41	
Nickel	ug/L	ND	5.0	05/20/14 15:41	
Selenium	ug/L	ND	15.0	05/20/14 15:41	
Silver	ug/L	ND	7.0	05/20/14 15:41	
Thallium	ug/L	ND	20.0	05/20/14 15:41	
Zinc	ug/L	ND	50.0	05/20/14 15:41	

LABORATORY CONTROL SAMPLE: 1380738

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9960	100	85-115	
Antimony	ug/L	1000	1060	106	85-115	
Arsenic	ug/L	1000	1020	102	85-115	
Beryllium	ug/L	1000	1010	101	85-115	
Cadmium	ug/L	1000	1020	102	85-115	
Chromium	ug/L	1000	947	95	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	1050	105	85-115	
Nickel	ug/L	1000	1040	104	85-115	
Selenium	ug/L	1000	1060	106	85-115	
Silver	ug/L	500	480	96	85-115	
Thallium	ug/L	1000	1060	106	85-115	
Zinc	ug/L	1000	980	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380739 1380740

Parameter	Units	60169171001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	25600	50000	50000	94000	89600	137	128	70-130	5	8	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380739 1380740

Parameter	Units	60169171001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	135	5000	5000	5720	5740	112	112	70-130	0	7	
Arsenic	ug/L	1400	5000	5000	7530	7620	123	124	70-130	1	10	
Beryllium	ug/L	ND	5000	5000	4980	4970	100	99	70-130	0	7	
Cadmium	ug/L	28.6	5000	5000	5560	5570	111	111	70-130	0	10	
Chromium	ug/L	253	5000	5000	4820	4840	91	92	70-130	0	10	
Cobalt	ug/L	74.6	5000	5000	4970	4980	98	98	70-130	0	6	
Copper	ug/L	99.6	5000	5000	5730	5660	113	111	70-130	1	11	
Iron	ug/L	830000	50000	50000	908000	914000	154	168	70-130	1	10	M1
Lead	ug/L	150	5000	5000	4800	4800	93	93	70-130	0	10	
Nickel	ug/L	154	5000	5000	4980	5000	96	97	70-130	0	10	
Selenium	ug/L	ND	5000	5000	6720	6770	133	134	70-130	1	10	M1
Silver	ug/L	ND	2500	2500	2600	2600	103	103	70-130	0	10	
Thallium	ug/L	ND	5000	5000	4300	4280	86	86	70-130	0	6	
Zinc	ug/L	4490	5000	5000	9350	9010	97	90	70-130	4	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: MPRP/27328
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169395001

METHOD BLANK: 1381769
Matrix: Water
Associated Lab Samples: 60169395001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/23/14 09:42	
Antimony, Dissolved	ug/L	ND	10.0	05/23/14 09:42	
Arsenic, Dissolved	ug/L	ND	10.0	05/23/14 09:42	
Beryllium, Dissolved	ug/L	ND	1.0	05/23/14 09:42	
Cadmium, Dissolved	ug/L	ND	5.0	05/23/14 09:42	
Chromium, Dissolved	ug/L	ND	5.0	05/23/14 09:42	
Cobalt, Dissolved	ug/L	ND	5.0	05/23/14 09:42	
Copper, Dissolved	ug/L	ND	10.0	05/23/14 09:42	
Iron, Dissolved	ug/L	ND	50.0	05/23/14 09:42	
Lead, Dissolved	ug/L	ND	5.0	05/23/14 09:42	
Nickel, Dissolved	ug/L	ND	5.0	05/23/14 09:42	
Selenium, Dissolved	ug/L	ND	15.0	05/23/14 09:42	
Silver, Dissolved	ug/L	ND	7.0	05/23/14 09:42	
Thallium, Dissolved	ug/L	ND	20.0	05/23/14 09:42	
Zinc, Dissolved	ug/L	ND	50.0	05/23/14 09:42	

LABORATORY CONTROL SAMPLE: 1381770

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9450	94	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	999	100	85-115	
Beryllium, Dissolved	ug/L	1000	955	95	85-115	
Cadmium, Dissolved	ug/L	1000	1030	103	85-115	
Chromium, Dissolved	ug/L	1000	983	98	85-115	
Cobalt, Dissolved	ug/L	1000	1090	109	85-115	
Copper, Dissolved	ug/L	1000	1030	103	85-115	
Iron, Dissolved	ug/L	10000	9960	100	85-115	
Lead, Dissolved	ug/L	1000	1040	104	85-115	
Nickel, Dissolved	ug/L	1000	1050	105	85-115	
Selenium, Dissolved	ug/L	1000	1020	102	85-115	
Silver, Dissolved	ug/L	500	481	96	85-115	
Thallium, Dissolved	ug/L	1000	1050	105	85-115	
Zinc, Dissolved	ug/L	1000	1040	104	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1381771 1381772

Parameter	Units	60169395001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1570	50000	50000	48800	50100	95	97	70-130	3	8	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1381771 1381772

Parameter	Units	60169395001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony, Dissolved	ug/L	ND	5000	5000	5460	5600	108	111	70-130	3	7	
Arsenic, Dissolved	ug/L	1030	5000	5000	6400	6640	108	112	70-130	4	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4600	4700	92	94	70-130	2	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5330	5440	107	109	70-130	2	10	
Chromium, Dissolved	ug/L	153	5000	5000	4840	4910	94	95	70-130	1	10	
Cobalt, Dissolved	ug/L	29.0	5000	5000	5120	5240	102	104	70-130	2	6	
Copper, Dissolved	ug/L	ND	5000	5000	5460	5600	109	111	70-130	3	11	
Iron, Dissolved	ug/L	343000	50000	50000	345000	356000	4	27	70-130	3	10	M1
Lead, Dissolved	ug/L	ND	5000	5000	4690	4780	93	95	70-130	2	10	
Nickel, Dissolved	ug/L	83.6	5000	5000	4940	5000	97	98	70-130	1	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5950	6160	119	123	70-130	3	10	
Silver, Dissolved	ug/L	ND	2500	2500	2530	2570	101	103	70-130	2	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4370	4470	87	89	70-130	2	6	
Zinc, Dissolved	ug/L	3710	5000	5000	7840	7980	83	85	70-130	2	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: MSV/61675 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169395001, 60169395002

METHOD BLANK: 1380622 | Matrix: Water
Associated Lab Samples: 60169395001, 60169395002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/19/14 13:05	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/19/14 13:05	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/19/14 13:05	
1,2-Dichloroethane	ug/L	ND	1.0	05/19/14 13:05	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/19/14 13:05	
2-Butanone (MEK)	ug/L	ND	10.0	05/19/14 13:05	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/19/14 13:05	N2
Acetone	ug/L	ND	10.0	05/19/14 13:05	N2
Benzene	ug/L	ND	1.0	05/19/14 13:05	
Bromodichloromethane	ug/L	ND	1.0	05/19/14 13:05	
Bromoform	ug/L	ND	1.0	05/19/14 13:05	
Bromomethane	ug/L	ND	5.0	05/19/14 13:05	
Carbon tetrachloride	ug/L	ND	1.0	05/19/14 13:05	
Chloroethane	ug/L	ND	1.0	05/19/14 13:05	
Chloroform	ug/L	ND	1.0	05/19/14 13:05	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/19/14 13:05	N2
Ethylbenzene	ug/L	ND	1.0	05/19/14 13:05	
Methylene chloride	ug/L	ND	1.0	05/19/14 13:05	
Tetrachloroethene	ug/L	ND	1.0	05/19/14 13:05	
Toluene	ug/L	ND	1.0	05/19/14 13:05	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/19/14 13:05	
Trichloroethene	ug/L	ND	1.0	05/19/14 13:05	
Vinyl chloride	ug/L	ND	1.0	05/19/14 13:05	
Xylene (Total)	ug/L	ND	3.0	05/19/14 13:05	N2
1,2-Dichloroethane-d4 (S)	%	111	80-120	05/19/14 13:05	
4-Bromofluorobenzene (S)	%	100	80-120	05/19/14 13:05	
Toluene-d8 (S)	%	100	80-120	05/19/14 13:05	

LABORATORY CONTROL SAMPLE: 1380623

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.9	94	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.2	106	67-127	N2
1,1,2-Trichloroethane	ug/L	20	20.7	103	67-124	
1,2-Dichloroethane	ug/L	20	20.7	103	70-126	
1,4-Dichlorobenzene	ug/L	20	19.2	96	74-120	
2-Butanone (MEK)	ug/L	100	108	108	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	113	113	59-131	N2
Acetone	ug/L	100	105	105	38-134	N2
Benzene	ug/L	20	19.0	95	75-120	
Bromodichloromethane	ug/L	20	20.8	104	68-125	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

LABORATORY CONTROL SAMPLE: 1380623

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	20.0	100	65-127	
Bromomethane	ug/L	20	14.3	71	13-157	
Carbon tetrachloride	ug/L	20	18.5	93	70-131	
Chloroethane	ug/L	20	20.4	102	47-133	
Chloroform	ug/L	20	19.4	97	65-127	
cis-1,2-Dichloroethene	ug/L	20	19.5	98	68-127	N2
Ethylbenzene	ug/L	20	19.4	97	74-122	
Methylene chloride	ug/L	20	20.3	101	64-129	
Tetrachloroethene	ug/L	20	18.1	90	73-125	
Toluene	ug/L	20	18.9	94	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.7	93	66-129	
Trichloroethene	ug/L	20	18.3	92	71-123	
Vinyl chloride	ug/L	20	19.5	97	43-129	
Xylene (Total)	ug/L	60	60.6	101	75-121	N2
1,2-Dichloroethane-d4 (S)	%			105	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1380624

Parameter	Units	60169395001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4850	97	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5510	110	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	5010	100	52-143	
1,2-Dichloroethane	ug/L	ND	5000	5000	100	49-144	
1,4-Dichlorobenzene	ug/L	301	5000	4970	93	33-140	
2-Butanone (MEK)	ug/L	66600	25000	98400	128	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	31700	123	40-160	N2
Acetone	ug/L	152000	25000	203000	205	10-160	M1,N2
Benzene	ug/L	ND	5000	4650	93	37-151	
Bromodichloromethane	ug/L	ND	5000	5000	100	35-142	
Bromoform	ug/L	ND	5000	4960	99	45-142	
Bromomethane	ug/L	ND	5000	3100	62	10-158	
Carbon tetrachloride	ug/L	ND	5000	4970	99	70-140	
Chloroethane	ug/L	ND	5000	5200	104	19-152	
Chloroform	ug/L	ND	5000	4700	94	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4760	95	34-147	N2
Ethylbenzene	ug/L	ND	5000	4670	93	40-142	
Methylene chloride	ug/L	ND	5000	4910	98	31-144	
Tetrachloroethene	ug/L	ND	5000	4630	93	64-148	
Toluene	ug/L	ND	5000	4600	92	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4450	89	54-151	
Trichloroethene	ug/L	ND	5000	4820	96	71-149	
Vinyl chloride	ug/L	ND	5000	5620	112	22-146	
Xylene (Total)	ug/L	ND	15000	14900	100	37-144	N2
1,2-Dichloroethane-d4 (S)	%				106	80-120	
4-Bromofluorobenzene (S)	%				102	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

MATRIX SPIKE SAMPLE: 1380624

Parameter	Units	60169395001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Toluene-d8 (S)	%				100	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: OEXT/44262 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169395001

METHOD BLANK: 1380823 | Matrix: Water
Associated Lab Samples: 60169395001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	500	05/21/14 10:41	
2,4,6-Trichlorophenol	ug/L	ND	500	05/21/14 10:41	
2-Methylphenol(o-Cresol)	ug/L	ND	1000	05/21/14 10:41	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	2000	05/21/14 10:41	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	2500	05/21/14 10:41	
Hexachloro-1,3-butadiene	ug/L	ND	500	05/21/14 10:41	
Hexachlorocyclopentadiene	ug/L	ND	500	05/21/14 10:41	
Hexachloroethane	ug/L	ND	500	05/21/14 10:41	
Naphthalene	ug/L	ND	500	05/21/14 10:41	
Nitrobenzene	ug/L	ND	500	05/21/14 10:41	
Pentachlorophenol	ug/L	ND	500	05/21/14 10:41	
Phenol	ug/L	ND	500	05/21/14 10:41	
2,4,6-Tribromophenol (S)	%	89	39-120	05/21/14 10:41	
2-Fluorobiphenyl (S)	%	81	39-120	05/21/14 10:41	
2-Fluorophenol (S)	%	34	17-120	05/21/14 10:41	
Nitrobenzene-d5 (S)	%	83	33-120	05/21/14 10:41	
Phenol-d6 (S)	%	20	11-120	05/21/14 10:41	
Terphenyl-d14 (S)	%	79	45-120	05/21/14 10:41	

LABORATORY CONTROL SAMPLE: 1380824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	5000	4030	81	46-120	
2,4,6-Trichlorophenol	ug/L	5000	4370	87	49-120	
2-Methylphenol(o-Cresol)	ug/L	5000	3420	68	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	5000	3050	61	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	5000	4670	93	40-133	
Hexachloro-1,3-butadiene	ug/L	5000	3790	76	44-116	
Hexachlorocyclopentadiene	ug/L	10000	6880	69	24-120	
Hexachloroethane	ug/L	5000	3710	74	43-113	
Naphthalene	ug/L	5000	4270	85	48-120	
Nitrobenzene	ug/L	5000	4130	83	48-120	
Pentachlorophenol	ug/L	5000	4280	86	47-120	
Phenol	ug/L	5000	1670	33	16-112	
2,4,6-Tribromophenol (S)	%			98	39-120	
2-Fluorobiphenyl (S)	%			81	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			30	11-120	
Terphenyl-d14 (S)	%			86	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

MATRIX SPIKE SAMPLE: 1380825

Parameter	Units	60169171001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3740	75	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4480	90	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3980	80	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7740	5000	10500	54	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4670J	93	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3500	70	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	8200	82	11-120	
Hexachloroethane	ug/L	ND	5000	3970	79	40-113	
Naphthalene	ug/L	1130	5000	5290	83	45-120	
Nitrobenzene	ug/L	ND	5000	4370	87	38-120	
Pentachlorophenol	ug/L	ND	5000	5450	109	43-135	
Phenol	ug/L	10500	5000	11100	11	13-112	M1
2,4,6-Tribromophenol (S)	%				93	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				47	17-120	
Nitrobenzene-d5 (S)	%				149	33-120	S0
Phenol-d6 (S)	%				45	11-120	
Terphenyl-d14 (S)	%				88	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: WET/47916 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169395001

METHOD BLANK: 1379603 | Matrix: Water
Associated Lab Samples: 60169395001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/16/14 16:06	

LABORATORY CONTROL SAMPLE: 1379604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	40.2	100	78-114	

MATRIX SPIKE SAMPLE: 1379605

Parameter	Units	60168666006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	36.1	41.2	74.0	92	78-114	

SAMPLE DUPLICATE: 1379606

Parameter	Units	60168666007 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	ND	.92J		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: WET/48002 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169395001

METHOD BLANK: 1382208 | Matrix: Water
Associated Lab Samples: 60169395001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/22/14 08:03	

LABORATORY CONTROL SAMPLE: 1382209

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	22.2	111	64-132	

MATRIX SPIKE SAMPLE: 1382210

Parameter	Units	60169170001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20	19.8	87	64-132	

SAMPLE DUPLICATE: 1382211

Parameter	Units	60169170002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	2.1J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: WET/47983 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169395001

METHOD BLANK: 1381694 | Matrix: Water
Associated Lab Samples: 60169395001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/21/14 10:50	

SAMPLE DUPLICATE: 1381695

Parameter	Units	1233447002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	33.0	30.0	10	10	

SAMPLE DUPLICATE: 1381696

Parameter	Units	60169329003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	13.0	13.0	0	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: WET/47931
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169395001

SAMPLE DUPLICATE: 1380461

Parameter	Units	60169339001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.4	6.4	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: WET/47912 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169395001

METHOD BLANK: 1379527 | Matrix: Water
Associated Lab Samples: 60169395001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/21/14 16:24	

LABORATORY CONTROL SAMPLE: 1379528

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	200	101	85-115	

SAMPLE DUPLICATE: 1379529

Parameter	Units	60169376001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	17.7	17.5	2	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: WETA/29483 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169395001

METHOD BLANK: 1379850 | Matrix: Water
Associated Lab Samples: 60169395001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/17/14 11:22	

LABORATORY CONTROL SAMPLE: 1379851

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

MATRIX SPIKE SAMPLE: 1379852

Parameter	Units	60169206001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.0	98	90-110	

MATRIX SPIKE SAMPLE: 1379853

Parameter	Units	60169210001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.0	101	90-110	

SAMPLE DUPLICATE: 1379854

Parameter	Units	60169211001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.16	0.16	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

QC Batch: WETA/29514 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169395001

METHOD BLANK: 1381490 | Matrix: Water
Associated Lab Samples: 60169395001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/22/14 07:23	

LABORATORY CONTROL SAMPLE: 1381491

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	54.8	110	90-110	

MATRIX SPIKE SAMPLE: 1381492

Parameter	Units	60169109001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	44.7	50	92.4	95	90-110	

MATRIX SPIKE SAMPLE: 1381494

Parameter	Units	60169170001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	30.4	50	79.1	97	90-110	

SAMPLE DUPLICATE: 1381493

Parameter	Units	60169113001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	6960	7380	6	25	

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QUALIFIERS

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-300
Pace Project No.: 60169395

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169395001	**316-300**	EPA 200.7	MPRP/27300	EPA 200.7	ICP/20679
60169395001	**316-300**	EPA 200.7	MPRP/27328	EPA 200.7	ICP/20690
60169395001	**316-300**	EPA 245.1	MERP/8424	EPA 245.1	MERC/8379
60169395001	**316-300**	EPA 245.1	MERP/8423	EPA 245.1	MERC/8378
60169395001	**316-300**	EPA 625	OEXT/44262	EPA 625	MSSV/14155
60169395001	**316-300**	EPA 624 Low	MSV/61675		
60169395002	**TRIP BLANK**	EPA 624 Low	MSV/61675		
60169395001	**316-300**	EPA 1664A	WET/47916		
60169395001	**316-300**	EPA 1664A	WET/48002		
60169395001	**316-300**	SM 2540D	WET/47983		
60169395001	**316-300**	SM 4500-H+B	WET/47931		
60169395001	**316-300**	SM 5210B	WET/47912	SM 5210B	WET/47997
60169395001	**316-300**	EPA 350.1	WETA/29483		
60169395001	**316-300**	EPA 410.4	WETA/29514		

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Sample Condition Upon Receipt

WO# : 60169395

60169395

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 ☑ ZPIC

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 4.4

Temperature should be above freezing to 6°C

Date and initials of person examining contents: PU 5/16/14

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. BOD pH
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked. All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes ☐No ☐N/A	14. Added 2.5 mL of HNO3 to BPSN. pH 6.0/4.0 added 2.0 mL of H2SO4 to BPS. pH 6.0/3.0
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed: PU Lot # of added preservative: 12522/12513
Trip Blank present: Pace Trip Blank lot # (if purchased): Cover	☑Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State: NO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: KMS Date: 5/16/14

Pace Analytical

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency
State / Location
Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	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	BOD SM 5210B	Residual Chlorine (Y/N)	60169395
1	2AG4U 1BP3U3/6-300 3AG3S 1BP3S 2BP2U	OT	G	5/15/14	0856	—	—		~~14~~ 15	10	4	1	0	1BP3N	4-0				X	X	X	X	X	X	X	X	X	X	X		5DG4U GW
2	TRIP BLANK	—		—	—	—	—		2	2																X					2DG4U GW
3																															
4																															
5																															
6																															METALS LIST total & LF Dis:
7																															Al,Sb,As,Be,Cd,Cr,
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																															and Mercury
10																															
11																															
12																															

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-15-14	2:20PM		5-15-14	2:20PM				
SITE ADDRESS: BRIDGETON LF				PASI	5/16/14	0120	4.4	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:	WILLIAM ABERNATHY				
SIGNATURE of SAMPLER:	DATE Signed: 5/15/14				

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May 28, 2014

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

RE: Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 17, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

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 316-301
Pace Project No.: 60169464

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169464001	**316-301**	Water	05/16/14 12:15	05/17/14 01:35
60169464002	**TRIP BLANK**	Water	05/16/14 12:15	05/17/14 01:35

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169464001	**316-301**	EPA 200.7	SMW	15
		EPA 200.7	TDS	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60169464002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

Sample: 316-301 **Lab ID: 60169464001** Collected: 05/16/14 12:15 Received: 05/17/14 01:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**12800**	ug/L	750	2	05/22/14 15:45	05/27/14 10:43	7429-90-5	
Antimony	ND	ug/L	100	2	05/22/14 15:45	05/27/14 10:43	7440-36-0	D3
Arsenic	**1150**	ug/L	50.0	1	05/22/14 15:45	05/27/14 11:31	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/22/14 15:45	05/27/14 11:31	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/22/14 15:45	05/27/14 11:31	7440-43-9	
Chromium	**231**	ug/L	25.0	1	05/22/14 15:45	05/27/14 10:39	7440-47-3	
Cobalt	**45.4**	ug/L	25.0	1	05/22/14 15:45	05/27/14 11:31	7440-48-4	
Copper	**85.4**	ug/L	50.0	1	05/22/14 15:45	05/27/14 10:39	7440-50-8	
Iron	**630000**	ug/L	250	1	05/22/14 15:45	05/27/14 11:31	7439-89-6	M1,R1
Lead	**138**	ug/L	25.0	1	05/22/14 15:45	05/27/14 11:31	7439-92-1	
Nickel	**135**	ug/L	25.0	1	05/22/14 15:45	05/27/14 11:31	7440-02-0	
Selenium	**91.6**	ug/L	75.0	1	05/22/14 15:45	05/27/14 11:31	7782-49-2	
Silver	ND	ug/L	35.0	1	05/22/14 15:45	05/27/14 10:39	7440-22-4	
Thallium	ND	ug/L	100	1	05/22/14 15:45	05/27/14 11:31	7440-28-0	
Zinc	**3960**	ug/L	500	2	05/22/14 15:45	05/27/14 10:43	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1640**	ug/L	750	2	05/21/14 11:40	05/23/14 10:03	7429-90-5	
Antimony, Dissolved	**62.4**	ug/L	50.0	1	05/21/14 11:40	05/23/14 10:01	7440-36-0	
Arsenic, Dissolved	**1060**	ug/L	50.0	1	05/21/14 11:40	05/23/14 10:01	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/21/14 11:40	05/23/14 10:01	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/21/14 11:40	05/23/14 10:01	7440-43-9	
Chromium, Dissolved	**166**	ug/L	25.0	1	05/21/14 11:40	05/23/14 10:01	7440-47-3	
Cobalt, Dissolved	**33.0**	ug/L	25.0	1	05/21/14 11:40	05/23/14 10:01	7440-48-4	
Copper, Dissolved	**55.0**	ug/L	50.0	1	05/21/14 11:40	05/23/14 10:01	7440-50-8	
Iron, Dissolved	**366000**	ug/L	250	1	05/21/14 11:40	05/23/14 10:01	7439-89-6	
Lead, Dissolved	**35.6**	ug/L	25.0	1	05/21/14 11:40	05/23/14 10:01	7439-92-1	
Nickel, Dissolved	**93.2**	ug/L	25.0	1	05/21/14 11:40	05/23/14 10:01	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/21/14 11:40	05/23/14 10:01	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/21/14 11:40	05/23/14 10:01	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/21/14 11:40	05/23/14 10:01	7440-28-0	
Zinc, Dissolved	**3510**	ug/L	500	2	05/21/14 11:40	05/23/14 10:03	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**10.7**	ug/L	6.0	1	05/22/14 13:45	05/23/14 10:20	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/22/14 13:45	05/23/14 09:28	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/20/14 00:00	05/24/14 18:51	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 18:51	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 18:51	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 18:51	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/20/14 00:00	05/24/14 18:51	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7780**	ug/L	4000	2	05/20/14 00:00	05/24/14 18:51		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

Sample: 316-301 **Lab ID: 60169464001** Collected: 05/16/14 12:15 Received: 05/17/14 01:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**2900**	ug/L	1000	2	05/20/14 00:00	05/24/14 18:51	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 18:51	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 18:51	87-86-5	
Phenol	**10900**	ug/L	1000	2	05/20/14 00:00	05/24/14 18:51	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 18:51	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 18:51	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	173	%	33-120	2	05/20/14 00:00	05/24/14 18:51	4165-60-0	S0
2-Fluorobiphenyl (S)	86	%	39-120	2	05/20/14 00:00	05/24/14 18:51	321-60-8	
Terphenyl-d14 (S)	90	%	45-120	2	05/20/14 00:00	05/24/14 18:51	1718-51-0	
Phenol-d6 (S)	30	%	11-120	2	05/20/14 00:00	05/24/14 18:51	13127-88-3	
2-Fluorophenol (S)	49	%	17-120	2	05/20/14 00:00	05/24/14 18:51	367-12-4	
2,4,6-Tribromophenol (S)	95	%	39-120	2	05/20/14 00:00	05/24/14 18:51	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**169000**	ug/L	2500	250		05/19/14 14:23	67-64-1	N2
Benzene	ND	ug/L	250	250		05/19/14 14:23	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/19/14 14:23	75-27-4	
Bromoform	ND	ug/L	250	250		05/19/14 14:23	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/19/14 14:23	74-83-9	
2-Butanone (MEK)	**74700**	ug/L	2500	250		05/19/14 14:23	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/19/14 14:23	56-23-5	
Chloroethane	ND	ug/L	250	250		05/19/14 14:23	75-00-3	
Chloroform	ND	ug/L	250	250		05/19/14 14:23	67-66-3	
1,4-Dichlorobenzene	**672**	ug/L	250	250		05/19/14 14:23	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/19/14 14:23	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/19/14 14:23	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/19/14 14:23	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/19/14 14:23	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/19/14 14:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/19/14 14:23	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/19/14 14:23	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/19/14 14:23	127-18-4	
Toluene	ND	ug/L	250	250		05/19/14 14:23	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/19/14 14:23	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/19/14 14:23	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/19/14 14:23	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/19/14 14:23	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/19/14 14:23	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	250		05/19/14 14:23	460-00-4	
Toluene-d8 (S)	98	%	80-120	250		05/19/14 14:23	2037-26-5	
1,2-Dichloroethane-d4 (S)	109	%	80-120	250		05/19/14 14:23	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/19/14 14:23		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**2250**	mg/L	5.0	1		05/22/14 15:42		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

Sample: 316-301 **Lab ID: 60169464001** Collected: 05/16/14 12:15 Received: 05/17/14 01:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**20.0**	mg/L	5.0	1		05/27/14 08:54		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4320**	mg/L	5.0	1		05/22/14 11:02		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/20/14 14:00		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**29300**	mg/L	2.0	1	05/17/14 10:26	05/22/14 09:46		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**614**	mg/L	20.0	200		05/22/14 16:42	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**55700**	mg/L	5000	500		05/27/14 08:33		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

Sample: TRIP BLANK **Lab ID: 60169464002** Collected: 05/16/14 12:15 Received: 05/17/14 01:35 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/19/14 13:36	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/19/14 13:36	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/19/14 13:36	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/19/14 13:36	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/19/14 13:36	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/19/14 13:36	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/19/14 13:36	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/19/14 13:36	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/19/14 13:36	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/19/14 13:36	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/19/14 13:36	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/19/14 13:36	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/19/14 13:36	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/19/14 13:36	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/19/14 13:36	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/19/14 13:36	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/19/14 13:36	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/19/14 13:36	127-18-4	
Toluene	ND	ug/L	1.0	1		05/19/14 13:36	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/19/14 13:36	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/19/14 13:36	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/19/14 13:36	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/19/14 13:36	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/19/14 13:36	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	1		05/19/14 13:36	460-00-4	
Toluene-d8 (S)	98	%	80-120	1		05/19/14 13:36	2037-26-5	
1,2-Dichloroethane-d4 (S)	104	%	80-120	1		05/19/14 13:36	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/19/14 13:36		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: MERP/8424 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169464001

METHOD BLANK: 1382565 | Matrix: Water
Associated Lab Samples: 60169464001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/23/14 09:43	

LABORATORY CONTROL SAMPLE: 1382566

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE SAMPLE: 1382567

Parameter	Units	60169041002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	.13J	3	70-130	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382568 1382569

Parameter	Units	60169150001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.5	4.6	90	93	70-130	4	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: MERP/8423
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169464001

METHOD BLANK: 1382557
Matrix: Water
Associated Lab Samples: 60169464001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/23/14 09:15	

LABORATORY CONTROL SAMPLE: 1382558

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.8	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382559 1382560

Parameter	Units	60169395001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	83.7	119	56	80	70-130	35	20	M1,R1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: MPRP/27361
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169464001

METHOD BLANK: 1382829
Matrix: Water
Associated Lab Samples: 60169464001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/27/14 10:33	
Antimony	ug/L	ND	10.0	05/27/14 10:33	
Arsenic	ug/L	ND	10.0	05/27/14 10:33	
Beryllium	ug/L	ND	1.0	05/27/14 10:33	
Cadmium	ug/L	ND	5.0	05/27/14 10:33	
Chromium	ug/L	ND	5.0	05/27/14 11:13	
Cobalt	ug/L	ND	5.0	05/27/14 10:33	
Copper	ug/L	ND	10.0	05/27/14 11:13	
Iron	ug/L	ND	50.0	05/27/14 10:33	
Lead	ug/L	ND	5.0	05/27/14 10:33	
Nickel	ug/L	ND	5.0	05/27/14 10:33	
Selenium	ug/L	ND	15.0	05/27/14 10:33	
Silver	ug/L	ND	7.0	05/27/14 11:13	
Thallium	ug/L	ND	20.0	05/27/14 10:33	
Zinc	ug/L	ND	50.0	05/27/14 10:33	

LABORATORY CONTROL SAMPLE: 1382830

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9910	99	85-115	
Antimony	ug/L	1000	1010	101	85-115	
Arsenic	ug/L	1000	965	97	85-115	
Beryllium	ug/L	1000	978	98	85-115	
Cadmium	ug/L	1000	986	99	85-115	
Chromium	ug/L	1000	999	100	85-115	
Cobalt	ug/L	1000	997	100	85-115	
Copper	ug/L	1000	963	96	85-115	
Iron	ug/L	10000	9870	99	85-115	
Lead	ug/L	1000	1000	100	85-115	
Nickel	ug/L	1000	1010	101	85-115	
Selenium	ug/L	1000	986	99	85-115	
Silver	ug/L	500	487	97	85-115	
Thallium	ug/L	1000	989	99	85-115	
Zinc	ug/L	1000	1000	100	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382831 1382832

Parameter	Units	60169464001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	12800	50000	50000	75100	71000	125	116	70-130	6	8	
Antimony	ug/L	ND	5000	5000	5080	5020	101	100	70-130	1	7	
Arsenic	ug/L	1150	5000	5000	6180	5960	101	96	70-130	4	10	
Beryllium	ug/L	ND	5000	5000	4790	4700	96	94	70-130	2	7	
Cadmium	ug/L	ND	5000	5000	5110	5010	102	100	70-130	2	10	
Chromium	ug/L	231	5000	5000	5120	5010	98	96	70-130	2	10	
Cobalt	ug/L	45.4	5000	5000	4830	4740	96	94	70-130	2	6	
Copper	ug/L	85.4	5000	5000	5120	4970	101	98	70-130	3	11	
Iron	ug/L	630000	50000	50000	658000	584000	57	-91	70-130	12	10	M1,R1
Lead	ug/L	138	5000	5000	4740	4670	92	91	70-130	1	10	
Nickel	ug/L	135	5000	5000	4910	4830	96	94	70-130	2	10	
Selenium	ug/L	91.6	5000	5000	5620	5460	110	107	70-130	3	10	
Silver	ug/L	ND	2500	2500	2610	2530	104	101	70-130	3	10	
Thallium	ug/L	ND	5000	5000	4400	4380	88	88	70-130	0	6	
Zinc	ug/L	3960	5000	5000	8480	8070	90	82	70-130	5	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: MPRP/27328 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169464001

METHOD BLANK: 1381769 | Matrix: Water
Associated Lab Samples: 60169464001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/23/14 09:42	
Antimony, Dissolved	ug/L	ND	10.0	05/23/14 09:42	
Arsenic, Dissolved	ug/L	ND	10.0	05/23/14 09:42	
Beryllium, Dissolved	ug/L	ND	1.0	05/23/14 09:42	
Cadmium, Dissolved	ug/L	ND	5.0	05/23/14 09:42	
Chromium, Dissolved	ug/L	ND	5.0	05/23/14 09:42	
Cobalt, Dissolved	ug/L	ND	5.0	05/23/14 09:42	
Copper, Dissolved	ug/L	ND	10.0	05/23/14 09:42	
Iron, Dissolved	ug/L	ND	50.0	05/23/14 09:42	
Lead, Dissolved	ug/L	ND	5.0	05/23/14 09:42	
Nickel, Dissolved	ug/L	ND	5.0	05/23/14 09:42	
Selenium, Dissolved	ug/L	ND	15.0	05/23/14 09:42	
Silver, Dissolved	ug/L	ND	7.0	05/23/14 09:42	
Thallium, Dissolved	ug/L	ND	20.0	05/23/14 09:42	
Zinc, Dissolved	ug/L	ND	50.0	05/23/14 09:42	

LABORATORY CONTROL SAMPLE: 1381770

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	9450	94	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	999	100	85-115	
Beryllium, Dissolved	ug/L	1000	955	95	85-115	
Cadmium, Dissolved	ug/L	1000	1030	103	85-115	
Chromium, Dissolved	ug/L	1000	983	98	85-115	
Cobalt, Dissolved	ug/L	1000	1090	109	85-115	
Copper, Dissolved	ug/L	1000	1030	103	85-115	
Iron, Dissolved	ug/L	10000	9960	100	85-115	
Lead, Dissolved	ug/L	1000	1040	104	85-115	
Nickel, Dissolved	ug/L	1000	1050	105	85-115	
Selenium, Dissolved	ug/L	1000	1020	102	85-115	
Silver, Dissolved	ug/L	500	481	96	85-115	
Thallium, Dissolved	ug/L	1000	1050	105	85-115	
Zinc, Dissolved	ug/L	1000	1040	104	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1381771 1381772

Parameter	Units	60169395001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1570	50000	50000	48800	50100	95	97	70-130	3	8	
Antimony, Dissolved	ug/L	ND	5000	5000	5460	5600	108	111	70-130	3	7	
Arsenic, Dissolved	ug/L	1030	5000	5000	6400	6640	108	112	70-130	4	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4600	4700	92	94	70-130	2	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5330	5440	107	109	70-130	2	10	
Chromium, Dissolved	ug/L	153	5000	5000	4840	4910	94	95	70-130	1	10	
Cobalt, Dissolved	ug/L	29.0	5000	5000	5120	5240	102	104	70-130	2	6	
Copper, Dissolved	ug/L	ND	5000	5000	5460	5600	109	111	70-130	3	11	
Iron, Dissolved	ug/L	343000	50000	50000	345000	356000	4	27	70-130	3	10	M1
Lead, Dissolved	ug/L	ND	5000	5000	4690	4780	93	95	70-130	2	10	
Nickel, Dissolved	ug/L	83.6	5000	5000	4940	5000	97	98	70-130	1	10	
Selenium, Dissolved	ug/L	ND	5000	5000	5950	6160	119	123	70-130	3	10	
Silver, Dissolved	ug/L	ND	2500	2500	2530	2570	101	103	70-130	2	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4370	4470	87	89	70-130	2	6	
Zinc, Dissolved	ug/L	3710	5000	5000	7840	7980	83	85	70-130	2	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: MSV/61675 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169464001, 60169464002

METHOD BLANK: 1380622 | Matrix: Water
Associated Lab Samples: 60169464001, 60169464002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/19/14 13:05	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/19/14 13:05	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/19/14 13:05	
1,2-Dichloroethane	ug/L	ND	1.0	05/19/14 13:05	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/19/14 13:05	
2-Butanone (MEK)	ug/L	ND	10.0	05/19/14 13:05	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/19/14 13:05	N2
Acetone	ug/L	ND	10.0	05/19/14 13:05	N2
Benzene	ug/L	ND	1.0	05/19/14 13:05	
Bromodichloromethane	ug/L	ND	1.0	05/19/14 13:05	
Bromoform	ug/L	ND	1.0	05/19/14 13:05	
Bromomethane	ug/L	ND	5.0	05/19/14 13:05	
Carbon tetrachloride	ug/L	ND	1.0	05/19/14 13:05	
Chloroethane	ug/L	ND	1.0	05/19/14 13:05	
Chloroform	ug/L	ND	1.0	05/19/14 13:05	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/19/14 13:05	N2
Ethylbenzene	ug/L	ND	1.0	05/19/14 13:05	
Methylene chloride	ug/L	ND	1.0	05/19/14 13:05	
Tetrachloroethene	ug/L	ND	1.0	05/19/14 13:05	
Toluene	ug/L	ND	1.0	05/19/14 13:05	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/19/14 13:05	
Trichloroethene	ug/L	ND	1.0	05/19/14 13:05	
Vinyl chloride	ug/L	ND	1.0	05/19/14 13:05	
Xylene (Total)	ug/L	ND	3.0	05/19/14 13:05	N2
1,2-Dichloroethane-d4 (S)	%	111	80-120	05/19/14 13:05	
4-Bromofluorobenzene (S)	%	100	80-120	05/19/14 13:05	
Toluene-d8 (S)	%	100	80-120	05/19/14 13:05	

LABORATORY CONTROL SAMPLE: 1380623

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.9	94	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	21.2	106	67-127	N2
1,1,2-Trichloroethane	ug/L	20	20.7	103	67-124	
1,2-Dichloroethane	ug/L	20	20.7	103	70-126	
1,4-Dichlorobenzene	ug/L	20	19.2	96	74-120	
2-Butanone (MEK)	ug/L	100	108	108	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	113	113	59-131	N2
Acetone	ug/L	100	105	105	38-134	N2
Benzene	ug/L	20	19.0	95	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

LABORATORY CONTROL SAMPLE: 1380623

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	20.8	104	68-125	
Bromoform	ug/L	20	20.0	100	65-127	
Bromomethane	ug/L	20	14.3	71	13-157	
Carbon tetrachloride	ug/L	20	18.5	93	70-131	
Chloroethane	ug/L	20	20.4	102	47-133	
Chloroform	ug/L	20	19.4	97	65-127	
cis-1,2-Dichloroethene	ug/L	20	19.5	98	68-127	N2
Ethylbenzene	ug/L	20	19.4	97	74-122	
Methylene chloride	ug/L	20	20.3	101	64-129	
Tetrachloroethene	ug/L	20	18.1	90	73-125	
Toluene	ug/L	20	18.9	94	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.7	93	66-129	
Trichloroethene	ug/L	20	18.3	92	71-123	
Vinyl chloride	ug/L	20	19.5	97	43-129	
Xylene (Total)	ug/L	60	60.6	101	75-121	N2
1,2-Dichloroethane-d4 (S)	%			105	80-120	
4-Bromofluorobenzene (S)	%			96	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1380624

Parameter	Units	60169395001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4850	97	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5510	110	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	5010	100	52-143	
1,2-Dichloroethane	ug/L	ND	5000	5000	100	49-144	
1,4-Dichlorobenzene	ug/L	301	5000	4970	93	33-140	
2-Butanone (MEK)	ug/L	66600	25000	98400	128	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	31700	123	40-160	N2
Acetone	ug/L	152000	25000	203000	205	10-160	M1,N2
Benzene	ug/L	ND	5000	4650	93	37-151	
Bromodichloromethane	ug/L	ND	5000	5000	100	35-142	
Bromoform	ug/L	ND	5000	4960	99	45-142	
Bromomethane	ug/L	ND	5000	3100	62	10-158	
Carbon tetrachloride	ug/L	ND	5000	4970	99	70-140	
Chloroethane	ug/L	ND	5000	5200	104	19-152	
Chloroform	ug/L	ND	5000	4700	94	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4760	95	34-147	N2
Ethylbenzene	ug/L	ND	5000	4670	93	40-142	
Methylene chloride	ug/L	ND	5000	4910	98	31-144	
Tetrachloroethene	ug/L	ND	5000	4630	93	64-148	
Toluene	ug/L	ND	5000	4600	92	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4450	89	54-151	
Trichloroethene	ug/L	ND	5000	4820	96	71-149	
Vinyl chloride	ug/L	ND	5000	5620	112	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

MATRIX SPIKE SAMPLE: 1380624

Parameter	Units	60169395001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	14900	100	37-144	N2
1,2-Dichloroethane-d4 (S)	%				106	80-120	
4-Bromofluorobenzene (S)	%				102	80-120	
Toluene-d8 (S)	%				100	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: OEXT/44262 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169464001

METHOD BLANK: 1380823 | Matrix: Water
Associated Lab Samples: 60169464001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	500	05/21/14 10:41	
2,4,6-Trichlorophenol	ug/L	ND	500	05/21/14 10:41	
2-Methylphenol(o-Cresol)	ug/L	ND	1000	05/21/14 10:41	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	2000	05/21/14 10:41	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	2500	05/21/14 10:41	
Hexachloro-1,3-butadiene	ug/L	ND	500	05/21/14 10:41	
Hexachlorocyclopentadiene	ug/L	ND	500	05/21/14 10:41	
Hexachloroethane	ug/L	ND	500	05/21/14 10:41	
Naphthalene	ug/L	ND	500	05/21/14 10:41	
Nitrobenzene	ug/L	ND	500	05/21/14 10:41	
Pentachlorophenol	ug/L	ND	500	05/21/14 10:41	
Phenol	ug/L	ND	500	05/21/14 10:41	
2,4,6-Tribromophenol (S)	%	89	39-120	05/21/14 10:41	
2-Fluorobiphenyl (S)	%	81	39-120	05/21/14 10:41	
2-Fluorophenol (S)	%	34	17-120	05/21/14 10:41	
Nitrobenzene-d5 (S)	%	83	33-120	05/21/14 10:41	
Phenol-d6 (S)	%	20	11-120	05/21/14 10:41	
Terphenyl-d14 (S)	%	79	45-120	05/21/14 10:41	

LABORATORY CONTROL SAMPLE: 1380824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	5000	4030	81	46-120	
2,4,6-Trichlorophenol	ug/L	5000	4370	87	49-120	
2-Methylphenol(o-Cresol)	ug/L	5000	3420	68	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	5000	3050	61	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	5000	4670	93	40-133	
Hexachloro-1,3-butadiene	ug/L	5000	3790	76	44-116	
Hexachlorocyclopentadiene	ug/L	10000	6880	69	24-120	
Hexachloroethane	ug/L	5000	3710	74	43-113	
Naphthalene	ug/L	5000	4270	85	48-120	
Nitrobenzene	ug/L	5000	4130	83	48-120	
Pentachlorophenol	ug/L	5000	4280	86	47-120	
Phenol	ug/L	5000	1670	33	16-112	
2,4,6-Tribromophenol (S)	%			98	39-120	
2-Fluorobiphenyl (S)	%			81	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			30	11-120	
Terphenyl-d14 (S)	%			86	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

MATRIX SPIKE SAMPLE: 1380825

Parameter	Units	60169171001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3740	75	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4480	90	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3980	80	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7740	5000	10500	54	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4670J	93	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3500	70	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	8200	82	11-120	
Hexachloroethane	ug/L	ND	5000	3970	79	40-113	
Naphthalene	ug/L	1130	5000	5290	83	45-120	
Nitrobenzene	ug/L	ND	5000	4370	87	38-120	
Pentachlorophenol	ug/L	ND	5000	5450	109	43-135	
Phenol	ug/L	10500	5000	11100	11	13-112	M1
2,4,6-Tribromophenol (S)	%				93	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				47	17-120	
Nitrobenzene-d5 (S)	%				149	33-120	S0
Phenol-d6 (S)	%				45	11-120	
Terphenyl-d14 (S)	%				88	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: WET/48019 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169464001

METHOD BLANK: 1382709 | Matrix: Water
Associated Lab Samples: 60169464001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/22/14 15:38	

LABORATORY CONTROL SAMPLE: 1382710

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	35.9	90	78-114	

MATRIX SPIKE SAMPLE: 1382711

Parameter	Units	60169233002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.7	36.4	79	78-114	

SAMPLE DUPLICATE: 1382712

Parameter	Units	60169233003 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	9.2	10.1	10	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: WET/48062 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169464001

METHOD BLANK: 1384218 | Matrix: Water
Associated Lab Samples: 60169464001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/27/14 08:51	

LABORATORY CONTROL SAMPLE: 1384219

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: 1384221

Parameter	Units	60169251001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	22.5	33.4	140	64-132	M0

SAMPLE DUPLICATE: 1384220

Parameter	Units	60169173002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	1.6J		34	

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(913)599-5665

QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: WET/48014 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169464001

METHOD BLANK: 1382431 | Matrix: Water
Associated Lab Samples: 60169464001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/22/14 10:58	

SAMPLE DUPLICATE: 1382432

Parameter	Units	60169759002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	820	800	2	10	

SAMPLE DUPLICATE: 1382433

Parameter	Units	60169383001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	233	257	10	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: WET/47931
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169464001

SAMPLE DUPLICATE: 1380461

Parameter	Units	60169339001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.4	6.4	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: WET/47918 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169464001

METHOD BLANK: 1379934 | Matrix: Water
Associated Lab Samples: 60169464001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/22/14 09:20	

LABORATORY CONTROL SAMPLE: 1379935

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	176	89	85-115	

SAMPLE DUPLICATE: 1379936

Parameter	Units	60169465001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	210	205	3	17	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: WETA/29524 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169464001

METHOD BLANK: 1382070 | Matrix: Water
Associated Lab Samples: 60169464001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/22/14 16:14	

LABORATORY CONTROL SAMPLE: 1382071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.2	109	90-110	

MATRIX SPIKE SAMPLE: 1382072

Parameter	Units	60169261002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 1382073

Parameter	Units	60169262002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5.4	4	8.7	83	90-110	M1

SAMPLE DUPLICATE: 1382074

Parameter	Units	60169266001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.95	0.95	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

QC Batch: WETA/29571 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169464001

METHOD BLANK: 1384136 | Matrix: Water
Associated Lab Samples: 60169464001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/27/14 08:26	

LABORATORY CONTROL SAMPLE: 1384137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	49.0	98	90-110	

MATRIX SPIKE SAMPLE: 1384138

Parameter	Units	60169175006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	5.0J	50	55.5	101	90-110	

SAMPLE DUPLICATE: 1384139

Parameter	Units	60169330001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	587	583	1	25	

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QUALIFIERS

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

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.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-301
Pace Project No.: 60169464

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169464001	**316-301**	EPA 200.7	MPRP/27361	EPA 200.7	ICP/20710
60169464001	**316-301**	EPA 200.7	MPRP/27328	EPA 200.7	ICP/20690
60169464001	**316-301**	EPA 245.1	MERP/8424	EPA 245.1	MERC/8379
60169464001	**316-301**	EPA 245.1	MERP/8423	EPA 245.1	MERC/8378
60169464001	**316-301**	EPA 625	OEXT/44262	EPA 625	MSSV/14155
60169464001	**316-301**	EPA 624 Low	MSV/61675		
60169464002	**TRIP BLANK**	EPA 624 Low	MSV/61675		
60169464001	**316-301**	EPA 1664A	WET/48019		
60169464001	**316-301**	EPA 1664A	WET/48062		
60169464001	**316-301**	SM 2540D	WET/48014		
60169464001	**316-301**	SM 4500-H+B	WET/47931		
60169464001	**316-301**	SM 5210B	WET/47918	SM 5210B	WET/48008
60169464001	**316-301**	EPA 350.1	WETA/29524		
60169464001	**316-301**	EPA 410.4	WETA/29571		

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Sample Condition Upon Receipt

WO# : 60169464

60169464

Client Name: Barr Eng

Optional
Proj Due Date:
Proj Name:

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 ☑ ZPLC

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 2-8

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/17/14 BA

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. BOD, pH
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☑No	☐N/A	12.
Sample labels match COC:	☑Yes	☐No	☐N/A	
Includes date/time/ID/analyses Matrix: WT				13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	HNO3 Initial 6.0 Final 4.0 Added 2.5mL / H2SO4 Initial 4.0 Final 2.0 Added 1.0mL
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☑No	☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed BA / Lot # of added preservative HNO3 12513-2-3-2 / H2SO4 12522
Trip Blank present:	☑Yes	☐No	☐N/A	
Pace Trip Blank lot # (if purchased): 032414-38E2				15.
Headspace in VOA vials (>6mm):	☐Yes	☑No	☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☑N/A	17. List State: MO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/19/14

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

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.	
Client Project ID:	BRIDGETON LF
Container Order Number:	

Section C — Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	130426_7588
Pace Project Manager:	Brown, Angie
Pace Profile #:	7585 LINE 2

Regulatory Agency	
State / Location	
	Missouri

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

Requested Analysis Filtered (Y/N)

ITEM#	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B	Residual Chlorine (Y/N)	60169464
1	SIG-301 2BP2U 1BP3U 3AG3S 2AG4U	OT	G	05/16/14	12:15 PM				14	10	4	1	0						X	X	X	X	X	X	X	X	X	X	X		1BP3N$^{4.0}$ 1BP3S$^{2.0}$ 5DG4U Cl
2	TRIP BLANK								2	2																X					2DG4U CO2
3																															
4																															
5																															
6																															METALS LIST total & LF Dis:
7																															Al,Sb,As,Be,Cd,Cr,
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																															and Mercury
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	Paul Linscott / FEI	05/16/14	2:43 pm	[illegible]	05/16/14	2:43 pm				
SITE ADDRESS: BRIDGETON LF				Bendel Cles / PASI KS	5/17/14	0135	2.8	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:	Paul Linscott					
SIGNATURE of SAMPLER:	Paul Linscott	DATE Signed: 05/16/14				

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May 28, 2014

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

RE: Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 19, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

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 316-302
Pace Project No.: 60169528

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169528001	**316-302**	Water	05/17/14 16:30	05/19/14 13:15
60169528002	**TRIP BLANK**	Water	05/17/14 16:30	05/19/14 13:15

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169528001	**316-302**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60169528002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

Sample: 316-302 **Lab ID: 60169528001** Collected: 05/17/14 16:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**20800**	ug/L	750	2	05/27/14 18:00	05/28/14 11:10	7429-90-5	
Antimony	**55.8**	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:08	7440-36-0	
Arsenic	**1180**	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:08	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/27/14 18:00	05/28/14 11:08	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:08	7440-43-9	
Chromium	**244**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:08	7440-47-3	
Cobalt	**46.7**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:08	7440-48-4	
Copper	**73.3**	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:08	7440-50-8	
Iron	**788000**	ug/L	250	1	05/27/14 18:00	05/28/14 11:08	7439-89-6	
Lead	**131**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:08	7439-92-1	
Nickel	**130**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:08	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/27/14 18:00	05/28/14 11:08	7782-49-2	
Silver	ND	ug/L	35.0	1	05/27/14 18:00	05/28/14 11:08	7440-22-4	
Thallium	ND	ug/L	100	1	05/27/14 18:00	05/28/14 11:08	7440-28-0	
Zinc	**4140**	ug/L	500	2	05/27/14 18:00	05/28/14 11:10	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1870**	ug/L	750	2	05/27/14 18:00	05/28/14 11:43	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:41	7440-36-0	
Arsenic, Dissolved	**1010**	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:41	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/27/14 18:00	05/28/14 11:41	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:41	7440-43-9	
Chromium, Dissolved	**154**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:41	7440-47-3	
Cobalt, Dissolved	**29.0**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:41	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:41	7440-50-8	
Iron, Dissolved	**369000**	ug/L	250	1	05/27/14 18:00	05/28/14 11:41	7439-89-6	
Lead, Dissolved	**28.4**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:41	7439-92-1	
Nickel, Dissolved	**85.4**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:41	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/27/14 18:00	05/28/14 11:41	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/27/14 18:00	05/28/14 11:41	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/27/14 18:00	05/28/14 11:41	7440-28-0	
Zinc, Dissolved	**3610**	ug/L	500	2	05/27/14 18:00	05/28/14 11:43	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/22/14 13:45	05/23/14 10:22	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/22/14 13:45	05/23/14 09:31	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/20/14 00:00	05/24/14 19:12	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:12	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:12	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:12	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/20/14 00:00	05/24/14 19:12	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7620**	ug/L	4000	2	05/20/14 00:00	05/24/14 19:12		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

Sample: 316-302 **Lab ID: 60169528001** Collected: 05/17/14 16:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**2770**	ug/L	1000	2	05/20/14 00:00	05/24/14 19:12	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:12	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:12	87-86-5	
Phenol	**8920**	ug/L	1000	2	05/20/14 00:00	05/24/14 19:12	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:12	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:12	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	184	%	33-120	2	05/20/14 00:00	05/24/14 19:12	4165-60-0	S0
2-Fluorobiphenyl (S)	86	%	39-120	2	05/20/14 00:00	05/24/14 19:12	321-60-8	
Terphenyl-d14 (S)	90	%	45-120	2	05/20/14 00:00	05/24/14 19:12	1718-51-0	
Phenol-d6 (S)	27	%	11-120	2	05/20/14 00:00	05/24/14 19:12	13127-88-3	
2-Fluorophenol (S)	42	%	17-120	2	05/20/14 00:00	05/24/14 19:12	367-12-4	
2,4,6-Tribromophenol (S)	93	%	39-120	2	05/20/14 00:00	05/24/14 19:12	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**116000**	ug/L	2500	250		05/22/14 18:57	67-64-1	N2
Benzene	ND	ug/L	250	250		05/22/14 18:57	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/22/14 18:57	75-27-4	
Bromoform	ND	ug/L	250	250		05/22/14 18:57	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/22/14 18:57	74-83-9	
2-Butanone (MEK)	**46400**	ug/L	2500	250		05/22/14 18:57	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/22/14 18:57	56-23-5	
Chloroethane	ND	ug/L	250	250		05/22/14 18:57	75-00-3	
Chloroform	ND	ug/L	250	250		05/22/14 18:57	67-66-3	
1,4-Dichlorobenzene	**512**	ug/L	250	250		05/22/14 18:57	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/22/14 18:57	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/22/14 18:57	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/22/14 18:57	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/22/14 18:57	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/22/14 18:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/22/14 18:57	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/22/14 18:57	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/22/14 18:57	127-18-4	
Toluene	ND	ug/L	250	250		05/22/14 18:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/22/14 18:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/22/14 18:57	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/22/14 18:57	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/22/14 18:57	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/22/14 18:57	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	97	%	80-120	250		05/22/14 18:57	460-00-4	
Toluene-d8 (S)	99	%	80-120	250		05/22/14 18:57	2037-26-5	
1,2-Dichloroethane-d4 (S)	96	%	80-120	250		05/22/14 18:57	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/22/14 18:57		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1540**	mg/L	5.0	1		05/22/14 15:43		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

Sample: 316-302 **Lab ID: 60169528001** Collected: 05/17/14 16:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**7.9**	mg/L	5.0	1		05/27/14 08:54		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**3700**	mg/L	5.0	1		05/22/14 11:02		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/21/14 15:30		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**34500**	mg/L	2.0	1	05/19/14 15:53	05/24/14 09:24		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**605**	mg/L	20.0	200		05/22/14 16:43	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**49100**	mg/L	5000	500		05/27/14 08:34		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

Sample: TRIP BLANK **Lab ID: 60169528002** Collected: 05/17/14 16:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/22/14 17:56	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/22/14 17:56	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/22/14 17:56	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/22/14 17:56	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/22/14 17:56	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/22/14 17:56	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/22/14 17:56	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/22/14 17:56	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/22/14 17:56	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/22/14 17:56	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/22/14 17:56	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/22/14 17:56	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/22/14 17:56	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/22/14 17:56	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/22/14 17:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/22/14 17:56	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/22/14 17:56	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/22/14 17:56	127-18-4	
Toluene	ND	ug/L	1.0	1		05/22/14 17:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/22/14 17:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/22/14 17:56	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/22/14 17:56	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/22/14 17:56	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/22/14 17:56	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	1		05/22/14 17:56	460-00-4	
Toluene-d8 (S)	101	%	80-120	1		05/22/14 17:56	2037-26-5	
1,2-Dichloroethane-d4 (S)	95	%	80-120	1		05/22/14 17:56	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/22/14 17:56		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: MERP/8424 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169528001

METHOD BLANK: 1382565 | Matrix: Water
Associated Lab Samples: 60169528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/23/14 09:43	

LABORATORY CONTROL SAMPLE: 1382566

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE SAMPLE: 1382567

Parameter	Units	60169041002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	.13J	3	70-130	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382568 1382569

Parameter	Units	60169150001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.5	4.6	90	93	70-130	4	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: MERP/8423
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169528001

METHOD BLANK: 1382557
Matrix: Water
Associated Lab Samples: 60169528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/23/14 09:15	

LABORATORY CONTROL SAMPLE: 1382558

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.8	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382559 1382560

Parameter	Units	60169395001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	83.7	119	56	80	70-130	35	20	M1,R1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: MPRP/27399 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169528001

METHOD BLANK: 1384645 | Matrix: Water
Associated Lab Samples: 60169528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/28/14 11:03	
Antimony	ug/L	ND	10.0	05/28/14 11:03	
Arsenic	ug/L	ND	10.0	05/28/14 11:03	
Beryllium	ug/L	ND	1.0	05/28/14 11:03	
Cadmium	ug/L	ND	5.0	05/28/14 11:03	
Chromium	ug/L	ND	5.0	05/28/14 11:03	
Cobalt	ug/L	ND	5.0	05/28/14 11:03	
Copper	ug/L	ND	10.0	05/28/14 11:03	
Iron	ug/L	ND	50.0	05/28/14 11:03	
Lead	ug/L	ND	5.0	05/28/14 11:03	
Nickel	ug/L	ND	5.0	05/28/14 11:03	
Selenium	ug/L	ND	15.0	05/28/14 11:03	
Silver	ug/L	ND	7.0	05/28/14 11:03	
Thallium	ug/L	ND	20.0	05/28/14 11:03	
Zinc	ug/L	ND	50.0	05/28/14 11:03	

LABORATORY CONTROL SAMPLE: 1384646

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9960	100	85-115	
Antimony	ug/L	1000	1020	102	85-115	
Arsenic	ug/L	1000	990	99	85-115	
Beryllium	ug/L	1000	1000	100	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	992	99	85-115	
Cobalt	ug/L	1000	1040	104	85-115	
Copper	ug/L	1000	1000	100	85-115	
Iron	ug/L	10000	10200	102	85-115	
Lead	ug/L	1000	1030	103	85-115	
Nickel	ug/L	1000	1050	105	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	493	99	85-115	
Thallium	ug/L	1000	1040	104	85-115	
Zinc	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384647 1384648

Parameter	Units	60169530001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	14300	50000	50000	73500	74300	118	120	70-130	1	8	
Antimony	ug/L	63.4	5000	5000	5460	5460	108	108	70-130	0	7	
Arsenic	ug/L	1160	5000	5000	6860	6850	114	114	70-130	0	10	
Beryllium	ug/L	ND	5000	5000	4780	4800	96	96	70-130	0	7	
Cadmium	ug/L	ND	5000	5000	5360	5340	107	107	70-130	0	10	
Chromium	ug/L	233	5000	5000	4910	4920	94	94	70-130	0	10	
Cobalt	ug/L	38.3	5000	5000	4890	4870	97	97	70-130	0	6	
Copper	ug/L	ND	5000	5000	5500	5480	109	109	70-130	1	11	
Iron	ug/L	792000	50000	50000	851000	853000	117	121	70-130	0	10	
Lead	ug/L	116	5000	5000	4660	4670	91	91	70-130	0	10	
Nickel	ug/L	116	5000	5000	4940	4950	97	97	70-130	0	10	
Selenium	ug/L	ND	5000	5000	6160	6210	123	124	70-130	1	10	
Silver	ug/L	ND	2500	2500	2640	2640	106	105	70-130	0	10	
Thallium	ug/L	ND	5000	5000	4220	4230	84	85	70-130	0	6	
Zinc	ug/L	4810	5000	5000	9410	9480	92	93	70-130	1	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: MPRP/27401
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169528001

METHOD BLANK: 1384649
Matrix: Water
Associated Lab Samples: 60169528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/28/14 11:38	
Antimony, Dissolved	ug/L	ND	10.0	05/28/14 11:38	
Arsenic, Dissolved	ug/L	ND	10.0	05/28/14 11:38	
Beryllium, Dissolved	ug/L	ND	1.0	05/28/14 11:38	
Cadmium, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Chromium, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Cobalt, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Copper, Dissolved	ug/L	ND	10.0	05/28/14 11:38	
Iron, Dissolved	ug/L	ND	50.0	05/28/14 11:38	
Lead, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Nickel, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Selenium, Dissolved	ug/L	ND	15.0	05/28/14 11:38	
Silver, Dissolved	ug/L	ND	7.0	05/28/14 11:38	
Thallium, Dissolved	ug/L	ND	20.0	05/28/14 11:38	
Zinc, Dissolved	ug/L	ND	50.0	05/28/14 11:38	

LABORATORY CONTROL SAMPLE: 1384650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10000	100	85-115	
Antimony, Dissolved	ug/L	1000	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	981	98	85-115	
Beryllium, Dissolved	ug/L	1000	998	100	85-115	
Cadmium, Dissolved	ug/L	1000	1000	100	85-115	
Chromium, Dissolved	ug/L	1000	968	97	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9970	100	85-115	
Lead, Dissolved	ug/L	1000	1020	102	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	489	98	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	965	97	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384651 1384652

Parameter	Units	60169530001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1920	50000	50000	53100	54000	102	104	70-130	2	8	
Antimony, Dissolved	ug/L	ND	5000	5000	5540	5720	110	114	70-130	3	7	
Arsenic, Dissolved	ug/L	958	5000	5000	6640	6800	114	117	70-130	2	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4790	4830	96	97	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5340	5460	107	109	70-130	2	10	
Chromium, Dissolved	ug/L	156	5000	5000	4770	4780	92	93	70-130	0	10	
Cobalt, Dissolved	ug/L	25.2	5000	5000	4850	4950	97	98	70-130	2	6	
Copper, Dissolved	ug/L	ND	5000	5000	5560	5710	111	114	70-130	3	11	
Iron, Dissolved	ug/L	366000	50000	50000	421000	428000	112	126	70-130	2	10	
Lead, Dissolved	ug/L	43.3	5000	5000	4590	4690	91	93	70-130	2	10	
Nickel, Dissolved	ug/L	84.6	5000	5000	4910	5010	96	99	70-130	2	10	
Selenium, Dissolved	ug/L	ND	5000	5000	6280	6450	125	129	70-130	3	10	
Silver, Dissolved	ug/L	ND	2500	2500	2630	2670	105	107	70-130	2	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4290	4370	86	87	70-130	2	6	
Zinc, Dissolved	ug/L	4150	5000	5000	8720	8910	91	95	70-130	2	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: MSV/61717 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169528001, 60169528002

METHOD BLANK: 1381134 | Matrix: Water
Associated Lab Samples: 60169528001, 60169528002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/22/14 17:40	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,2-Dichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/22/14 17:40	
2-Butanone (MEK)	ug/L	ND	10.0	05/22/14 17:40	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/22/14 17:40	N2
Acetone	ug/L	ND	10.0	05/22/14 17:40	N2
Benzene	ug/L	ND	1.0	05/22/14 17:40	
Bromodichloromethane	ug/L	ND	1.0	05/22/14 17:40	
Bromoform	ug/L	ND	1.0	05/22/14 17:40	
Bromomethane	ug/L	ND	5.0	05/22/14 17:40	
Carbon tetrachloride	ug/L	ND	1.0	05/22/14 17:40	
Chloroethane	ug/L	ND	1.0	05/22/14 17:40	
Chloroform	ug/L	ND	1.0	05/22/14 17:40	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/22/14 17:40	N2
Ethylbenzene	ug/L	ND	1.0	05/22/14 17:40	
Methylene chloride	ug/L	ND	1.0	05/22/14 17:40	
Tetrachloroethene	ug/L	ND	1.0	05/22/14 17:40	
Toluene	ug/L	ND	1.0	05/22/14 17:40	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/22/14 17:40	
Trichloroethene	ug/L	ND	1.0	05/22/14 17:40	
Vinyl chloride	ug/L	ND	1.0	05/22/14 17:40	
Xylene (Total)	ug/L	ND	3.0	05/22/14 17:40	N2
1,2-Dichloroethane-d4 (S)	%	100	80-120	05/22/14 17:40	
4-Bromofluorobenzene (S)	%	99	80-120	05/22/14 17:40	
Toluene-d8 (S)	%	102	80-120	05/22/14 17:40	

LABORATORY CONTROL SAMPLE: 1381135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.4	92	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	18.8	94	67-127	N2
1,1,2-Trichloroethane	ug/L	20	18.2	91	67-124	
1,2-Dichloroethane	ug/L	20	19.9	99	70-126	
1,4-Dichlorobenzene	ug/L	20	19.6	98	74-120	
2-Butanone (MEK)	ug/L	100	88.1	88	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.8	97	59-131	N2
Acetone	ug/L	100	93.9	94	38-134	N2
Benzene	ug/L	20	18.8	94	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

LABORATORY CONTROL SAMPLE: 1381135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	19.3	96	68-125	
Bromoform	ug/L	20	19.9	100	65-127	
Bromomethane	ug/L	20	25.8	129	13-157	
Carbon tetrachloride	ug/L	20	19.2	96	70-131	
Chloroethane	ug/L	20	21.4	107	47-133	
Chloroform	ug/L	20	18.7	94	65-127	
cis-1,2-Dichloroethene	ug/L	20	18.7	94	68-127	N2
Ethylbenzene	ug/L	20	18.6	93	74-122	
Methylene chloride	ug/L	20	16.4	82	64-129	
Tetrachloroethene	ug/L	20	18.8	94	73-125	
Toluene	ug/L	20	18.3	91	69-126	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	66-129	
Trichloroethene	ug/L	20	18.5	92	71-123	
Vinyl chloride	ug/L	20	23.2	116	43-129	
Xylene (Total)	ug/L	60	56.8	95	75-121	N2
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1381136

Parameter	Units	60169528001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4730	95	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4680	94	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4480	90	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4520	90	49-144	
1,4-Dichlorobenzene	ug/L	512	5000	5280	95	33-140	
2-Butanone (MEK)	ug/L	46400	25000	62600	65	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	22400	86	40-160	N2
Acetone	ug/L	116000	25000	125000	35	10-160	N2
Benzene	ug/L	ND	5000	4460	89	37-151	
Bromodichloromethane	ug/L	ND	5000	4440	89	35-142	
Bromoform	ug/L	ND	5000	4670	93	45-142	
Bromomethane	ug/L	ND	5000	5870	117	10-158	
Carbon tetrachloride	ug/L	ND	5000	5040	101	70-140	
Chloroethane	ug/L	ND	5000	5200	104	19-152	
Chloroform	ug/L	ND	5000	4500	90	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4430	89	34-147	N2
Ethylbenzene	ug/L	ND	5000	4930	98	40-142	
Methylene chloride	ug/L	ND	5000	3920	77	31-144	
Tetrachloroethene	ug/L	ND	5000	5060	101	64-148	
Toluene	ug/L	ND	5000	4410	87	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4350	87	54-151	
Trichloroethene	ug/L	ND	5000	4520	90	71-149	
Vinyl chloride	ug/L	ND	5000	5830	117	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

MATRIX SPIKE SAMPLE: 1381136

Parameter	Units	60169528001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	14700	98	37-144	N2
1,2-Dichloroethane-d4 (S)	%				95	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	
Toluene-d8 (S)	%				97	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: OEXT/44262 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169528001

METHOD BLANK: 1380823 | Matrix: Water
Associated Lab Samples: 60169528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	500	05/21/14 10:41	
2,4,6-Trichlorophenol	ug/L	ND	500	05/21/14 10:41	
2-Methylphenol(o-Cresol)	ug/L	ND	1000	05/21/14 10:41	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	2000	05/21/14 10:41	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	2500	05/21/14 10:41	
Hexachloro-1,3-butadiene	ug/L	ND	500	05/21/14 10:41	
Hexachlorocyclopentadiene	ug/L	ND	500	05/21/14 10:41	
Hexachloroethane	ug/L	ND	500	05/21/14 10:41	
Naphthalene	ug/L	ND	500	05/21/14 10:41	
Nitrobenzene	ug/L	ND	500	05/21/14 10:41	
Pentachlorophenol	ug/L	ND	500	05/21/14 10:41	
Phenol	ug/L	ND	500	05/21/14 10:41	
2,4,6-Tribromophenol (S)	%	89	39-120	05/21/14 10:41	
2-Fluorobiphenyl (S)	%	81	39-120	05/21/14 10:41	
2-Fluorophenol (S)	%	34	17-120	05/21/14 10:41	
Nitrobenzene-d5 (S)	%	83	33-120	05/21/14 10:41	
Phenol-d6 (S)	%	20	11-120	05/21/14 10:41	
Terphenyl-d14 (S)	%	79	45-120	05/21/14 10:41	

LABORATORY CONTROL SAMPLE: 1380824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	5000	4030	81	46-120	
2,4,6-Trichlorophenol	ug/L	5000	4370	87	49-120	
2-Methylphenol(o-Cresol)	ug/L	5000	3420	68	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	5000	3050	61	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	5000	4670	93	40-133	
Hexachloro-1,3-butadiene	ug/L	5000	3790	76	44-116	
Hexachlorocyclopentadiene	ug/L	10000	6880	69	24-120	
Hexachloroethane	ug/L	5000	3710	74	43-113	
Naphthalene	ug/L	5000	4270	85	48-120	
Nitrobenzene	ug/L	5000	4130	83	48-120	
Pentachlorophenol	ug/L	5000	4280	86	47-120	
Phenol	ug/L	5000	1670	33	16-112	
2,4,6-Tribromophenol (S)	%			98	39-120	
2-Fluorobiphenyl (S)	%			81	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			30	11-120	
Terphenyl-d14 (S)	%			86	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

MATRIX SPIKE SAMPLE: 1380825

Parameter	Units	60169171001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3740	75	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4480	90	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3980	80	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7740	5000	10500	54	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4670J	93	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3500	70	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	8200	82	11-120	
Hexachloroethane	ug/L	ND	5000	3970	79	40-113	
Naphthalene	ug/L	1130	5000	5290	83	45-120	
Nitrobenzene	ug/L	ND	5000	4370	87	38-120	
Pentachlorophenol	ug/L	ND	5000	5450	109	43-135	
Phenol	ug/L	10500	5000	11100	11	13-112	M1
2,4,6-Tribromophenol (S)	%				93	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				47	17-120	
Nitrobenzene-d5 (S)	%				149	33-120	S0
Phenol-d6 (S)	%				45	11-120	
Terphenyl-d14 (S)	%				88	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: WET/48019 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169528001

METHOD BLANK: 1382709 | Matrix: Water
Associated Lab Samples: 60169528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/22/14 15:38	

LABORATORY CONTROL SAMPLE: 1382710

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	35.9	90	78-114	

MATRIX SPIKE SAMPLE: 1382711

Parameter	Units	60169233002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.7	36.4	79	78-114	

SAMPLE DUPLICATE: 1382712

Parameter	Units	60169233003 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	9.2	10.1	10	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: WET/48062 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169528001

METHOD BLANK: 1384218 | Matrix: Water
Associated Lab Samples: 60169528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/27/14 08:51	

LABORATORY CONTROL SAMPLE: 1384219

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: 1384221

Parameter	Units	60169251001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	22.5	33.4	140	64-132	M0

SAMPLE DUPLICATE: 1384220

Parameter	Units	60169173002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	1.6J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: WET/48015 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169528001

METHOD BLANK: 1382452 | Matrix: Water
Associated Lab Samples: 60169528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/22/14 11:02	

SAMPLE DUPLICATE: 1382453

Parameter	Units	60169528001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	3700	3880	5	10	

SAMPLE DUPLICATE: 1382454

Parameter	Units	60169461003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	2200	2140	3	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: WET/47993
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169528001

SAMPLE DUPLICATE: 1382047

Parameter	Units	60169528001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.4	5.4	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: WET/47942 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169528001

METHOD BLANK: 1380745 | Matrix: Water
Associated Lab Samples: 60169528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/24/14 09:15	

LABORATORY CONTROL SAMPLE: 1380746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	192	97	85-115	

SAMPLE DUPLICATE: 1380747

Parameter	Units	60169523002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	9.2	8.7	5	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: WETA/29524 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169528001

METHOD BLANK: 1382070 | Matrix: Water
Associated Lab Samples: 60169528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/22/14 16:14	

LABORATORY CONTROL SAMPLE: 1382071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.2	109	90-110	

MATRIX SPIKE SAMPLE: 1382072

Parameter	Units	60169261002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 1382073

Parameter	Units	60169262002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5.4	4	8.7	83	90-110	M1

SAMPLE DUPLICATE: 1382074

Parameter	Units	60169266001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.95	0.95	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

QC Batch: WETA/29571 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169528001

METHOD BLANK: 1384136 | Matrix: Water
Associated Lab Samples: 60169528001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/27/14 08:26	

LABORATORY CONTROL SAMPLE: 1384137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	49.0	98	90-110	

MATRIX SPIKE SAMPLE: 1384138

Parameter	Units	60169175006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	5.0J	50	55.5	101	90-110	

SAMPLE DUPLICATE: 1384139

Parameter	Units	60169330001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	587	583	1	25	

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Lenexa, KS 66219
(913)599-5665

QUALIFIERS

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

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

H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-302
Pace Project No.: 60169528

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169528001	**316-302**	EPA 200.7	MPRP/27399	EPA 200.7	ICP/20731
60169528001	**316-302**	EPA 200.7	MPRP/27401	EPA 200.7	ICP/20730
60169528001	**316-302**	EPA 245.1	MERP/8424	EPA 245.1	MERC/8379
60169528001	**316-302**	EPA 245.1	MERP/8423	EPA 245.1	MERC/8378
60169528001	**316-302**	EPA 625	OEXT/44262	EPA 625	MSSV/14155
60169528001	**316-302**	EPA 624 Low	MSV/61717		
60169528002	**TRIP BLANK**	EPA 624 Low	MSV/61717		
60169528001	**316-302**	EPA 1664A	WET/48019		
60169528001	**316-302**	EPA 1664A	WET/48062		
60169528001	**316-302**	SM 2540D	WET/48015		
60169528001	**316-302**	SM 4500-H+B	WET/47993		
60169528001	**316-302**	SM 5210B	WET/47942	SM 5210B	WET/48063
60169528001	**316-302**	EPA 350.1	WETA/29524		
60169528001	**316-302**	EPA 410.4	WETA/29571		

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Sample Condition Upon Receipt

WO#: 60169528
60169528

Optional
Proj Due Date:
Proj Name:

Client Name: Barr

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 ☒ zip

Thermometer Used: (T-239) / 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: 8/5/19/14

Temperature should be above freezing to 6°C

Chain of Custody present:	☒Yes ☐No ☐N/A	1.	
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.	
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.	
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	6.	BOD PH
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.	
Sufficient volume:	☒Yes ☐No ☐N/A	8.	
Correct containers used:	☒Yes ☐No ☐N/A		
Pace containers used:	☒Yes ☐No ☐N/A	9.	
Containers intact:	☒Yes ☐No ☐N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.	
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.	
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☒Yes ☐No ☐N/A	13.	
All containers needing preservation have been checked.	☒Yes ☐No ☐N/A	14.	Added HNO3 to 316-302 BP3N 5.0/4.0 Added H2SO4 to 316-302 BP3S 4.0/1.5
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☒No ☐N/A		
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☒Yes ☐No	Initial when completed: S	Lot # of added preservative: 125113 12522
Trip Blank present: Pace Trip Blank lot # (if purchased): May 09	☒Yes ☐No ☐N/A	15.	
Headspace in VOA vials (>6mm):	☐Yes ☒No ☐N/A	16.	
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State: MO	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

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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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: BARR ENGINEERING	Report To: ED GALBRAITH/BARR	Attention: AMY HARGROVE/BRIAN POWER
Address:	Copy To: SCOTT FEDAK/FEEZOR	Company Name: REPUBLIC SERVICES
	DANA BAKER/MARGARET TREANOR -BARR	Address: BRIDGETON, MO 63044
Email To:	Purchase Order No.	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 #: 7585 LINE 2

Regulatory Agency	
State / Location	
	Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	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	BOD SM 5210B		Residual Chlorine (Y/N)	60164528
1	316-302 3(AG3S) 2(AG4U)	OT	G	05/17/14	0930				14	10	4	1	0	5(DG4U)					X	X	X	X	X	X	X	X	X	X	X	2(BP3U)	BP3U, BP3N, BP3S	
2	TRIP BLANK								2	2																X					2(DG4U) 2(DG4U) TB & 5/19/14	
3																																
4																																
5																																
6																															METALS LIST total & LF Dis:	
7																															Al,Sb,As,Be,Cd,Cr,	
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn	
9																															and Mercury	
10																																
11																																
12																																

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-19-14	8:55a	410	5-19-14	8:55a				
SITE ADDRESS: BRIDGETON LF					5/19	1315	2.6	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:	Paul Linnstaedt					
SIGNATURE of SAMPLER:	Paul Linnstaedt	DATE Signed: 05/17/14				

Pace Analytical Services, Inc.
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May 28, 2014

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

RE: Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 19, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

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 316-303
Pace Project No.: 60169529

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169529001	**316-303**	Water	05/18/14 14:30	05/19/14 13:15
60169529002	**TRIP BLANK**	Water	05/18/14 14:30	05/19/14 13:15

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169529001	**316-303**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60169529002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

Sample: 316-303 **Lab ID: 60169529001** Collected: 05/18/14 14:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**21000**	ug/L	750	2	05/27/14 18:00	05/28/14 11:15	7429-90-5	
Antimony	**51.0**	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:13	7440-36-0	
Arsenic	**1160**	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:13	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/27/14 18:00	05/28/14 11:13	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:13	7440-43-9	
Chromium	**252**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:13	7440-47-3	
Cobalt	**49.0**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:13	7440-48-4	
Copper	**60.6**	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:13	7440-50-8	
Iron	**850000**	ug/L	250	1	05/27/14 18:00	05/28/14 11:13	7439-89-6	
Lead	**150**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:13	7439-92-1	
Nickel	**129**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:13	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/27/14 18:00	05/28/14 11:13	7782-49-2	
Silver	ND	ug/L	35.0	1	05/27/14 18:00	05/28/14 11:13	7440-22-4	
Thallium	ND	ug/L	100	1	05/27/14 18:00	05/28/14 11:13	7440-28-0	
Zinc	**4820**	ug/L	500	2	05/27/14 18:00	05/28/14 11:15	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1920**	ug/L	750	2	05/27/14 18:00	05/28/14 11:48	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:46	7440-36-0	
Arsenic, Dissolved	**990**	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:46	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/27/14 18:00	05/28/14 11:46	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:46	7440-43-9	
Chromium, Dissolved	**155**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:46	7440-47-3	
Cobalt, Dissolved	**25.8**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:46	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:46	7440-50-8	
Iron, Dissolved	**381000**	ug/L	250	1	05/27/14 18:00	05/28/14 11:46	7439-89-6	
Lead, Dissolved	**32.3**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:46	7439-92-1	
Nickel, Dissolved	**82.6**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:46	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/27/14 18:00	05/28/14 11:46	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/27/14 18:00	05/28/14 11:46	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/27/14 18:00	05/28/14 11:46	7440-28-0	
Zinc, Dissolved	**4170**	ug/L	500	2	05/27/14 18:00	05/28/14 11:48	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/22/14 13:45	05/23/14 10:24	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/22/14 13:45	05/23/14 09:33	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/20/14 00:00	05/24/14 19:33	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:33	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:33	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:33	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/20/14 00:00	05/24/14 19:33	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7290**	ug/L	4000	2	05/20/14 00:00	05/24/14 19:33		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

Sample: 316-303 **Lab ID: 60169529001** Collected: 05/18/14 14:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1220**	ug/L	1000	2	05/20/14 00:00	05/24/14 19:33	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:33	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:33	87-86-5	
Phenol	**9660**	ug/L	1000	2	05/20/14 00:00	05/24/14 19:33	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:33	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:33	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	172	%	33-120	2	05/20/14 00:00	05/24/14 19:33	4165-60-0	S0
2-Fluorobiphenyl (S)	92	%	39-120	2	05/20/14 00:00	05/24/14 19:33	321-60-8	
Terphenyl-d14 (S)	88	%	45-120	2	05/20/14 00:00	05/24/14 19:33	1718-51-0	
Phenol-d6 (S)	33	%	11-120	2	05/20/14 00:00	05/24/14 19:33	13127-88-3	
2-Fluorophenol (S)	47	%	17-120	2	05/20/14 00:00	05/24/14 19:33	367-12-4	
2,4,6-Tribromophenol (S)	101	%	39-120	2	05/20/14 00:00	05/24/14 19:33	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**108000**	ug/L	2500	250		05/22/14 19:28	67-64-1	N2
Benzene	ND	ug/L	250	250		05/22/14 19:28	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/22/14 19:28	75-27-4	
Bromoform	ND	ug/L	250	250		05/22/14 19:28	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/22/14 19:28	74-83-9	
2-Butanone (MEK)	**41700**	ug/L	2500	250		05/22/14 19:28	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/22/14 19:28	56-23-5	
Chloroethane	ND	ug/L	250	250		05/22/14 19:28	75-00-3	
Chloroform	ND	ug/L	250	250		05/22/14 19:28	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	250	250		05/22/14 19:28	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/22/14 19:28	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/22/14 19:28	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/22/14 19:28	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/22/14 19:28	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/22/14 19:28	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/22/14 19:28	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/22/14 19:28	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/22/14 19:28	127-18-4	
Toluene	ND	ug/L	250	250		05/22/14 19:28	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/22/14 19:28	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/22/14 19:28	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/22/14 19:28	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/22/14 19:28	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/22/14 19:28	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	102	%	80-120	250		05/22/14 19:28	460-00-4	
Toluene-d8 (S)	101	%	80-120	250		05/22/14 19:28	2037-26-5	
1,2-Dichloroethane-d4 (S)	98	%	80-120	250		05/22/14 19:28	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/22/14 19:28		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1070**	mg/L	5.0	1		05/22/14 15:43		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

Sample: 316-303 **Lab ID: 60169529001** Collected: 05/18/14 14:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	ND	mg/L	5.0	1		05/27/14 08:54		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4540**	mg/L	5.0	1		05/22/14 11:03		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/21/14 15:30		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**33000**	mg/L	2.0	1	05/19/14 15:58	05/24/14 09:30		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**625**	mg/L	20.0	200		05/22/14 16:45	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**48500**	mg/L	5000	500		05/27/14 08:35		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

Sample: TRIP BLANK **Lab ID: 60169529002** Collected: 05/18/14 14:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/22/14 18:11	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/22/14 18:11	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/22/14 18:11	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/22/14 18:11	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/22/14 18:11	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/22/14 18:11	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/22/14 18:11	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/22/14 18:11	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/22/14 18:11	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/22/14 18:11	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/22/14 18:11	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/22/14 18:11	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/22/14 18:11	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/22/14 18:11	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/22/14 18:11	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/22/14 18:11	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/22/14 18:11	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/22/14 18:11	127-18-4	
Toluene	ND	ug/L	1.0	1		05/22/14 18:11	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/22/14 18:11	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/22/14 18:11	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/22/14 18:11	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/22/14 18:11	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/22/14 18:11	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	1		05/22/14 18:11	460-00-4	
Toluene-d8 (S)	101	%	80-120	1		05/22/14 18:11	2037-26-5	
1,2-Dichloroethane-d4 (S)	97	%	80-120	1		05/22/14 18:11	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/22/14 18:11		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: MERP/8424 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169529001

METHOD BLANK: 1382565 | Matrix: Water
Associated Lab Samples: 60169529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/23/14 09:43	

LABORATORY CONTROL SAMPLE: 1382566

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE SAMPLE: 1382567

Parameter	Units	60169041002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	.13J	3	70-130	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382568 1382569

Parameter	Units	60169150001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.5	4.6	90	93	70-130	4	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: MERP/8423
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169529001

METHOD BLANK: 1382557
Matrix: Water
Associated Lab Samples: 60169529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/23/14 09:15	

LABORATORY CONTROL SAMPLE: 1382558

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.8	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382559 1382560

Parameter	Units	60169395001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	83.7	119	56	80	70-130	35	20	M1,R1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: MPRP/27399
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169529001

METHOD BLANK: 1384645
Matrix: Water
Associated Lab Samples: 60169529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/28/14 11:03	
Antimony	ug/L	ND	10.0	05/28/14 11:03	
Arsenic	ug/L	ND	10.0	05/28/14 11:03	
Beryllium	ug/L	ND	1.0	05/28/14 11:03	
Cadmium	ug/L	ND	5.0	05/28/14 11:03	
Chromium	ug/L	ND	5.0	05/28/14 11:03	
Cobalt	ug/L	ND	5.0	05/28/14 11:03	
Copper	ug/L	ND	10.0	05/28/14 11:03	
Iron	ug/L	ND	50.0	05/28/14 11:03	
Lead	ug/L	ND	5.0	05/28/14 11:03	
Nickel	ug/L	ND	5.0	05/28/14 11:03	
Selenium	ug/L	ND	15.0	05/28/14 11:03	
Silver	ug/L	ND	7.0	05/28/14 11:03	
Thallium	ug/L	ND	20.0	05/28/14 11:03	
Zinc	ug/L	ND	50.0	05/28/14 11:03	

LABORATORY CONTROL SAMPLE: 1384646

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9960	100	85-115	
Antimony	ug/L	1000	1020	102	85-115	
Arsenic	ug/L	1000	990	99	85-115	
Beryllium	ug/L	1000	1000	100	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	992	99	85-115	
Cobalt	ug/L	1000	1040	104	85-115	
Copper	ug/L	1000	1000	100	85-115	
Iron	ug/L	10000	10200	102	85-115	
Lead	ug/L	1000	1030	103	85-115	
Nickel	ug/L	1000	1050	105	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	493	99	85-115	
Thallium	ug/L	1000	1040	104	85-115	
Zinc	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384647 1384648

Parameter	Units	60169530001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	14300	50000	50000	73500	74300	118	120	70-130	1	8	
Antimony	ug/L	63.4	5000	5000	5460	5460	108	108	70-130	0	7	
Arsenic	ug/L	1160	5000	5000	6860	6850	114	114	70-130	0	10	
Beryllium	ug/L	ND	5000	5000	4780	4800	96	96	70-130	0	7	
Cadmium	ug/L	ND	5000	5000	5360	5340	107	107	70-130	0	10	
Chromium	ug/L	233	5000	5000	4910	4920	94	94	70-130	0	10	
Cobalt	ug/L	38.3	5000	5000	4890	4870	97	97	70-130	0	6	
Copper	ug/L	ND	5000	5000	5500	5480	109	109	70-130	1	11	
Iron	ug/L	792000	50000	50000	851000	853000	117	121	70-130	0	10	
Lead	ug/L	116	5000	5000	4660	4670	91	91	70-130	0	10	
Nickel	ug/L	116	5000	5000	4940	4950	97	97	70-130	0	10	
Selenium	ug/L	ND	5000	5000	6160	6210	123	124	70-130	1	10	
Silver	ug/L	ND	2500	2500	2640	2640	106	105	70-130	0	10	
Thallium	ug/L	ND	5000	5000	4220	4230	84	85	70-130	0	6	
Zinc	ug/L	4810	5000	5000	9410	9480	92	93	70-130	1	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: MPRP/27401
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169529001

METHOD BLANK: 1384649
Matrix: Water
Associated Lab Samples: 60169529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/28/14 11:38	
Antimony, Dissolved	ug/L	ND	10.0	05/28/14 11:38	
Arsenic, Dissolved	ug/L	ND	10.0	05/28/14 11:38	
Beryllium, Dissolved	ug/L	ND	1.0	05/28/14 11:38	
Cadmium, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Chromium, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Cobalt, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Copper, Dissolved	ug/L	ND	10.0	05/28/14 11:38	
Iron, Dissolved	ug/L	ND	50.0	05/28/14 11:38	
Lead, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Nickel, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Selenium, Dissolved	ug/L	ND	15.0	05/28/14 11:38	
Silver, Dissolved	ug/L	ND	7.0	05/28/14 11:38	
Thallium, Dissolved	ug/L	ND	20.0	05/28/14 11:38	
Zinc, Dissolved	ug/L	ND	50.0	05/28/14 11:38	

LABORATORY CONTROL SAMPLE: 1384650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10000	100	85-115	
Antimony, Dissolved	ug/L	1000	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	981	98	85-115	
Beryllium, Dissolved	ug/L	1000	998	100	85-115	
Cadmium, Dissolved	ug/L	1000	1000	100	85-115	
Chromium, Dissolved	ug/L	1000	968	97	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9970	100	85-115	
Lead, Dissolved	ug/L	1000	1020	102	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	489	98	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	965	97	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384651 1384652

Parameter	Units	60169530001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1920	50000	50000	53100	54000	102	104	70-130	2	8	
Antimony, Dissolved	ug/L	ND	5000	5000	5540	5720	110	114	70-130	3	7	
Arsenic, Dissolved	ug/L	958	5000	5000	6640	6800	114	117	70-130	2	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4790	4830	96	97	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5340	5460	107	109	70-130	2	10	
Chromium, Dissolved	ug/L	156	5000	5000	4770	4780	92	93	70-130	0	10	
Cobalt, Dissolved	ug/L	25.2	5000	5000	4850	4950	97	98	70-130	2	6	
Copper, Dissolved	ug/L	ND	5000	5000	5560	5710	111	114	70-130	3	11	
Iron, Dissolved	ug/L	366000	50000	50000	421000	428000	112	126	70-130	2	10	
Lead, Dissolved	ug/L	43.3	5000	5000	4590	4690	91	93	70-130	2	10	
Nickel, Dissolved	ug/L	84.6	5000	5000	4910	5010	96	99	70-130	2	10	
Selenium, Dissolved	ug/L	ND	5000	5000	6280	6450	125	129	70-130	3	10	
Silver, Dissolved	ug/L	ND	2500	2500	2630	2670	105	107	70-130	2	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4290	4370	86	87	70-130	2	6	
Zinc, Dissolved	ug/L	4150	5000	5000	8720	8910	91	95	70-130	2	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: MSV/61717 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169529001, 60169529002

METHOD BLANK: 1381134 | Matrix: Water
Associated Lab Samples: 60169529001, 60169529002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/22/14 17:40	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,2-Dichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/22/14 17:40	
2-Butanone (MEK)	ug/L	ND	10.0	05/22/14 17:40	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/22/14 17:40	N2
Acetone	ug/L	ND	10.0	05/22/14 17:40	N2
Benzene	ug/L	ND	1.0	05/22/14 17:40	
Bromodichloromethane	ug/L	ND	1.0	05/22/14 17:40	
Bromoform	ug/L	ND	1.0	05/22/14 17:40	
Bromomethane	ug/L	ND	5.0	05/22/14 17:40	
Carbon tetrachloride	ug/L	ND	1.0	05/22/14 17:40	
Chloroethane	ug/L	ND	1.0	05/22/14 17:40	
Chloroform	ug/L	ND	1.0	05/22/14 17:40	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/22/14 17:40	N2
Ethylbenzene	ug/L	ND	1.0	05/22/14 17:40	
Methylene chloride	ug/L	ND	1.0	05/22/14 17:40	
Tetrachloroethene	ug/L	ND	1.0	05/22/14 17:40	
Toluene	ug/L	ND	1.0	05/22/14 17:40	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/22/14 17:40	
Trichloroethene	ug/L	ND	1.0	05/22/14 17:40	
Vinyl chloride	ug/L	ND	1.0	05/22/14 17:40	
Xylene (Total)	ug/L	ND	3.0	05/22/14 17:40	N2
1,2-Dichloroethane-d4 (S)	%	100	80-120	05/22/14 17:40	
4-Bromofluorobenzene (S)	%	99	80-120	05/22/14 17:40	
Toluene-d8 (S)	%	102	80-120	05/22/14 17:40	

LABORATORY CONTROL SAMPLE: 1381135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.4	92	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	18.8	94	67-127	N2
1,1,2-Trichloroethane	ug/L	20	18.2	91	67-124	
1,2-Dichloroethane	ug/L	20	19.9	99	70-126	
1,4-Dichlorobenzene	ug/L	20	19.6	98	74-120	
2-Butanone (MEK)	ug/L	100	88.1	88	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.8	97	59-131	N2
Acetone	ug/L	100	93.9	94	38-134	N2
Benzene	ug/L	20	18.8	94	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

LABORATORY CONTROL SAMPLE: 1381135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	19.3	96	68-125	
Bromoform	ug/L	20	19.9	100	65-127	
Bromomethane	ug/L	20	25.8	129	13-157	
Carbon tetrachloride	ug/L	20	19.2	96	70-131	
Chloroethane	ug/L	20	21.4	107	47-133	
Chloroform	ug/L	20	18.7	94	65-127	
cis-1,2-Dichloroethene	ug/L	20	18.7	94	68-127	N2
Ethylbenzene	ug/L	20	18.6	93	74-122	
Methylene chloride	ug/L	20	16.4	82	64-129	
Tetrachloroethene	ug/L	20	18.8	94	73-125	
Toluene	ug/L	20	18.3	91	69-126	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	66-129	
Trichloroethene	ug/L	20	18.5	92	71-123	
Vinyl chloride	ug/L	20	23.2	116	43-129	
Xylene (Total)	ug/L	60	56.8	95	75-121	N2
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1381136

Parameter	Units	60169528001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4730	95	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4680	94	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4480	90	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4520	90	49-144	
1,4-Dichlorobenzene	ug/L	512	5000	5280	95	33-140	
2-Butanone (MEK)	ug/L	46400	25000	62600	65	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	22400	86	40-160	N2
Acetone	ug/L	116000	25000	125000	35	10-160	N2
Benzene	ug/L	ND	5000	4460	89	37-151	
Bromodichloromethane	ug/L	ND	5000	4440	89	35-142	
Bromoform	ug/L	ND	5000	4670	93	45-142	
Bromomethane	ug/L	ND	5000	5870	117	10-158	
Carbon tetrachloride	ug/L	ND	5000	5040	101	70-140	
Chloroethane	ug/L	ND	5000	5200	104	19-152	
Chloroform	ug/L	ND	5000	4500	90	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4430	89	34-147	N2
Ethylbenzene	ug/L	ND	5000	4930	98	40-142	
Methylene chloride	ug/L	ND	5000	3920	77	31-144	
Tetrachloroethene	ug/L	ND	5000	5060	101	64-148	
Toluene	ug/L	ND	5000	4410	87	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4350	87	54-151	
Trichloroethene	ug/L	ND	5000	4520	90	71-149	
Vinyl chloride	ug/L	ND	5000	5830	117	22-146	

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(913)599-5665

QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

MATRIX SPIKE SAMPLE: 1381136

Parameter	Units	60169528001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	14700	98	37-144	N2
1,2-Dichloroethane-d4 (S)	%				95	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	
Toluene-d8 (S)	%				97	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: OEXT/44262
QC Batch Method: EPA 625
Analysis Method: EPA 625
Analysis Description: 625 MSS
Associated Lab Samples: 60169529001

METHOD BLANK: 1380823
Matrix: Water
Associated Lab Samples: 60169529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	500	05/21/14 10:41	
2,4,6-Trichlorophenol	ug/L	ND	500	05/21/14 10:41	
2-Methylphenol(o-Cresol)	ug/L	ND	1000	05/21/14 10:41	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	2000	05/21/14 10:41	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	2500	05/21/14 10:41	
Hexachloro-1,3-butadiene	ug/L	ND	500	05/21/14 10:41	
Hexachlorocyclopentadiene	ug/L	ND	500	05/21/14 10:41	
Hexachloroethane	ug/L	ND	500	05/21/14 10:41	
Naphthalene	ug/L	ND	500	05/21/14 10:41	
Nitrobenzene	ug/L	ND	500	05/21/14 10:41	
Pentachlorophenol	ug/L	ND	500	05/21/14 10:41	
Phenol	ug/L	ND	500	05/21/14 10:41	
2,4,6-Tribromophenol (S)	%	89	39-120	05/21/14 10:41	
2-Fluorobiphenyl (S)	%	81	39-120	05/21/14 10:41	
2-Fluorophenol (S)	%	34	17-120	05/21/14 10:41	
Nitrobenzene-d5 (S)	%	83	33-120	05/21/14 10:41	
Phenol-d6 (S)	%	20	11-120	05/21/14 10:41	
Terphenyl-d14 (S)	%	79	45-120	05/21/14 10:41	

LABORATORY CONTROL SAMPLE: 1380824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	5000	4030	81	46-120	
2,4,6-Trichlorophenol	ug/L	5000	4370	87	49-120	
2-Methylphenol(o-Cresol)	ug/L	5000	3420	68	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	5000	3050	61	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	5000	4670	93	40-133	
Hexachloro-1,3-butadiene	ug/L	5000	3790	76	44-116	
Hexachlorocyclopentadiene	ug/L	10000	6880	69	24-120	
Hexachloroethane	ug/L	5000	3710	74	43-113	
Naphthalene	ug/L	5000	4270	85	48-120	
Nitrobenzene	ug/L	5000	4130	83	48-120	
Pentachlorophenol	ug/L	5000	4280	86	47-120	
Phenol	ug/L	5000	1670	33	16-112	
2,4,6-Tribromophenol (S)	%			98	39-120	
2-Fluorobiphenyl (S)	%			81	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			30	11-120	
Terphenyl-d14 (S)	%			86	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

MATRIX SPIKE SAMPLE: 1380825

Parameter	Units	60169171001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3740	75	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4480	90	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3980	80	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7740	5000	10500	54	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4670J	93	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3500	70	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	8200	82	11-120	
Hexachloroethane	ug/L	ND	5000	3970	79	40-113	
Naphthalene	ug/L	1130	5000	5290	83	45-120	
Nitrobenzene	ug/L	ND	5000	4370	87	38-120	
Pentachlorophenol	ug/L	ND	5000	5450	109	43-135	
Phenol	ug/L	10500	5000	11100	11	13-112	M1
2,4,6-Tribromophenol (S)	%				93	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				47	17-120	
Nitrobenzene-d5 (S)	%				149	33-120	S0
Phenol-d6 (S)	%				45	11-120	
Terphenyl-d14 (S)	%				88	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: WET/48019 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169529001

METHOD BLANK: 1382709 | Matrix: Water
Associated Lab Samples: 60169529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/22/14 15:38	

LABORATORY CONTROL SAMPLE: 1382710

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	35.9	90	78-114	

MATRIX SPIKE SAMPLE: 1382711

Parameter	Units	60169233002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.7	36.4	79	78-114	

SAMPLE DUPLICATE: 1382712

Parameter	Units	60169233003 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	9.2	10.1	10	18	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: WET/48062 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169529001

METHOD BLANK: 1384218 | Matrix: Water
Associated Lab Samples: 60169529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/27/14 08:51	

LABORATORY CONTROL SAMPLE: 1384219

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: 1384221

Parameter	Units	60169251001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	22.5	33.4	140	64-132	M0

SAMPLE DUPLICATE: 1384220

Parameter	Units	60169173002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	1.6J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: WET/48015
QC Batch Method: SM 2540D
Analysis Method: SM 2540D
Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169529001

METHOD BLANK: 1382452
Matrix: Water
Associated Lab Samples: 60169529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/22/14 11:02	

SAMPLE DUPLICATE: 1382453

Parameter	Units	60169528001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	3700	3880	5	10	

SAMPLE DUPLICATE: 1382454

Parameter	Units	60169461003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	2200	2140	3	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: WET/47993
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169529001

SAMPLE DUPLICATE: 1382047

Parameter	Units	60169528001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.4	5.4	0	5	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: WET/47942 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169529001

METHOD BLANK: 1380745 | Matrix: Water
Associated Lab Samples: 60169529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/24/14 09:15	

LABORATORY CONTROL SAMPLE: 1380746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	192	97	85-115	

SAMPLE DUPLICATE: 1380747

Parameter	Units	60169523002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	9.2	8.7	5	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: WETA/29524 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169529001

METHOD BLANK: 1382070 | Matrix: Water
Associated Lab Samples: 60169529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/22/14 16:14	

LABORATORY CONTROL SAMPLE: 1382071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.2	109	90-110	

MATRIX SPIKE SAMPLE: 1382072

Parameter	Units	60169261002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 1382073

Parameter	Units	60169262002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5.4	4	8.7	83	90-110	M1

SAMPLE DUPLICATE: 1382074

Parameter	Units	60169266001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.95	0.95	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

QC Batch: WETA/29571 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169529001

METHOD BLANK: 1384136 | Matrix: Water
Associated Lab Samples: 60169529001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/27/14 08:26	

LABORATORY CONTROL SAMPLE: 1384137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	49.0	98	90-110	

MATRIX SPIKE SAMPLE: 1384138

Parameter	Units	60169175006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	5.0J	50	55.5	101	90-110	

SAMPLE DUPLICATE: 1384139

Parameter	Units	60169330001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	587	583	1	25	

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QUALIFIERS

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

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

H6	Analysis initiated outside of the 15 minute EPA recommended holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-303
Pace Project No.: 60169529

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169529001	**316-303**	EPA 200.7	MPRP/27399	EPA 200.7	ICP/20731
60169529001	**316-303**	EPA 200.7	MPRP/27401	EPA 200.7	ICP/20730
60169529001	**316-303**	EPA 245.1	MERP/8424	EPA 245.1	MERC/8379
60169529001	**316-303**	EPA 245.1	MERP/8423	EPA 245.1	MERC/8378
60169529001	**316-303**	EPA 625	OEXT/44262	EPA 625	MSSV/14155
60169529001	**316-303**	EPA 624 Low	MSV/61717		
60169529002	**TRIP BLANK**	EPA 624 Low	MSV/61717		
60169529001	**316-303**	EPA 1664A	WET/48019		
60169529001	**316-303**	EPA 1664A	WET/48062		
60169529001	**316-303**	SM 2540D	WET/48015		
60169529001	**316-303**	SM 4500-H+B	WET/47993		
60169529001	**316-303**	SM 5210B	WET/47942	SM 5210B	WET/48063
60169529001	**316-303**	EPA 350.1	WETA/29524		
60169529001	**316-303**	EPA 410.4	WETA/29571		

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Sample Condition Upon Receipt

WO#: 60169529

60169529

Optional
Proj Due Date:
Proj Name:

Client Name: Barr

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☒ VR

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 ☒ ziplock

Thermometer Used: T-239 / 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

Date and initials of person examining contents: S 5/19/14

Chain of Custody present:	☒Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	6. BOD, pH
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.
Sufficient volume:	☒Yes ☐No ☐N/A	8.
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	9.
Containers intact:	☒Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☒Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☒Yes ☐No ☐N/A	Added hno3 to 316-303 BP3N 5.0/4.0
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☒No ☐N/A	14. Added h2so4 to 316-303 BP3S 5.0/1.5
Exceptions: VOA coliform, TOC, O&G, WI-DRO (water), Phenolics	☒Yes ☐No	Initial when completed: S Lot # of added preservative: 12522 12513
Trip Blank present: Pace Trip Blank lot # (if purchased): May 09	☒Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☒Yes ☐No ☐N/A	2 of 5 VOA 16.
Project sampled in USDA Regulated Area:	☐Yes ☒No ☐N/A	17. List State: MO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical

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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: BARR ENGINEERING	Report To: ED GALBRAITH/BARR	Attention: AMY HARGROVE/BRIAN POWER
Address:	Copy To: SCOTT FEDAK/FEEZOR	Company Name: REPUBLIC SERVICES
	DANA BAKER/MARGARET TREANOR -BARR	Address: BRIDGETON, MO 63044
Email To:	Purchase Order No.	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 #: 7585 LINE 2

Regulatory Agency
State / Location
Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B	Residual Chlorine (Y/N)	60169529
1	316-303 2(AG4U) 5(DG4U)	OT	G			5/18/14	1430		14	10	4	1	0						X	X	X	X	X	X	X	X	X	X	X	BP4N, 5.0	BP3S2(BP2U), BP3U, 2(AG3S) 5.0 2(DG4U) 4B 02
2	TRIP BLANK								2	2																X					
3																															
4																															
5																															
6																															METALS LIST total & LF Dis:
7																															Al,Sb,As,Be,Cd,Cr,
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																															and Mercury
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-19-14	8:55am	Bill Stone 410	5-19-14	8:55am				
SITE ADDRESS: BRIDGETON LF				Shandella Wicks/PASI	5/19	1315	3.0	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: Hunter King					
SIGNATURE of SAMPLER: Hunter King	DATE Signed: 5/18/14				

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(913)599-5665

May 28, 2014

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

RE: Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 19, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

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 316-304
Pace Project No.: 60169530

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169530001	**316-304**	Water	05/19/14 07:30	05/19/14 13:15
60169530002	**TRIP BLANK**	Water	05/19/14 07:30	05/19/14 13:15

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169530001	**316-304**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JML	1
60169530002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

Sample: 316-304 **Lab ID: 60169530001** Collected: 05/19/14 07:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**14300**	ug/L	750	2	05/27/14 18:00	05/28/14 11:20	7429-90-5	
Antimony	**63.4**	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:17	7440-36-0	
Arsenic	**1160**	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:17	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/27/14 18:00	05/28/14 11:17	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:17	7440-43-9	
Chromium	**233**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:17	7440-47-3	
Cobalt	**38.3**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:17	7440-48-4	
Copper	ND	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:17	7440-50-8	
Iron	**792000**	ug/L	250	1	05/27/14 18:00	05/28/14 11:17	7439-89-6	
Lead	**116**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:17	7439-92-1	
Nickel	**116**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:17	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/27/14 18:00	05/28/14 11:17	7782-49-2	
Silver	ND	ug/L	35.0	1	05/27/14 18:00	05/28/14 11:17	7440-22-4	
Thallium	ND	ug/L	200	2	05/27/14 18:00	05/28/14 11:20	7440-28-0	D3
Zinc	**4810**	ug/L	500	2	05/27/14 18:00	05/28/14 11:20	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1920**	ug/L	750	2	05/27/14 18:00	05/28/14 11:53	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:51	7440-36-0	
Arsenic, Dissolved	**958**	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:51	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/27/14 18:00	05/28/14 11:51	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:51	7440-43-9	
Chromium, Dissolved	**156**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:51	7440-47-3	
Cobalt, Dissolved	**25.2**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:51	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/27/14 18:00	05/28/14 11:51	7440-50-8	
Iron, Dissolved	**366000**	ug/L	250	1	05/27/14 18:00	05/28/14 11:51	7439-89-6	
Lead, Dissolved	**43.3**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:51	7439-92-1	
Nickel, Dissolved	**84.6**	ug/L	25.0	1	05/27/14 18:00	05/28/14 11:51	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/27/14 18:00	05/28/14 11:51	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/27/14 18:00	05/28/14 11:51	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/27/14 18:00	05/28/14 11:51	7440-28-0	
Zinc, Dissolved	**4150**	ug/L	500	2	05/27/14 18:00	05/28/14 11:53	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/22/14 13:45	05/23/14 10:27	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/22/14 13:45	05/23/14 09:35	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/20/14 00:00	05/24/14 19:54	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:54	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:54	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:54	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/20/14 00:00	05/24/14 19:54	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7990**	ug/L	4000	2	05/20/14 00:00	05/24/14 19:54		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

Sample: 316-304 **Lab ID: 60169530001** Collected: 05/19/14 07:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1400**	ug/L	1000	2	05/20/14 00:00	05/24/14 19:54	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:54	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:54	87-86-5	
Phenol	**11000**	ug/L	1000	2	05/20/14 00:00	05/24/14 19:54	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:54	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/20/14 00:00	05/24/14 19:54	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	169	%	33-120	2	05/20/14 00:00	05/24/14 19:54	4165-60-0	S0
2-Fluorobiphenyl (S)	81	%	39-120	2	05/20/14 00:00	05/24/14 19:54	321-60-8	
Terphenyl-d14 (S)	81	%	45-120	2	05/20/14 00:00	05/24/14 19:54	1718-51-0	
Phenol-d6 (S)	28	%	11-120	2	05/20/14 00:00	05/24/14 19:54	13127-88-3	
2-Fluorophenol (S)	45	%	17-120	2	05/20/14 00:00	05/24/14 19:54	367-12-4	
2,4,6-Tribromophenol (S)	91	%	39-120	2	05/20/14 00:00	05/24/14 19:54	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**115000**	ug/L	2500	250		05/22/14 19:43	67-64-1	N2
Benzene	ND	ug/L	250	250		05/22/14 19:43	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/22/14 19:43	75-27-4	
Bromoform	ND	ug/L	250	250		05/22/14 19:43	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/22/14 19:43	74-83-9	
2-Butanone (MEK)	**44800**	ug/L	2500	250		05/22/14 19:43	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/22/14 19:43	56-23-5	
Chloroethane	ND	ug/L	250	250		05/22/14 19:43	75-00-3	
Chloroform	ND	ug/L	250	250		05/22/14 19:43	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	250	250		05/22/14 19:43	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/22/14 19:43	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/22/14 19:43	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/22/14 19:43	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/22/14 19:43	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/22/14 19:43	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/22/14 19:43	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/22/14 19:43	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/22/14 19:43	127-18-4	
Toluene	ND	ug/L	250	250		05/22/14 19:43	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/22/14 19:43	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/22/14 19:43	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/22/14 19:43	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/22/14 19:43	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/22/14 19:43	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	97	%	80-120	250		05/22/14 19:43	460-00-4	
Toluene-d8 (S)	98	%	80-120	250		05/22/14 19:43	2037-26-5	
1,2-Dichloroethane-d4 (S)	94	%	80-120	250		05/22/14 19:43	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/22/14 19:43		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1080**	mg/L	5.0	1		05/22/14 15:43		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

Sample: 316-304 **Lab ID: 60169530001** Collected: 05/19/14 07:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**7.9**	mg/L	5.0	1		05/27/14 08:55		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**3860**	mg/L	5.0	1		05/22/14 11:03		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/21/14 15:30		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**33100**	mg/L	2.0	1	05/19/14 16:09	05/24/14 09:34		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**591**	mg/L	20.0	200		05/22/14 16:46	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**47600**	mg/L	5000	500		05/27/14 08:37		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

Sample: TRIP BLANK **Lab ID: 60169530002** Collected: 05/19/14 07:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/22/14 18:26	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/22/14 18:26	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/22/14 18:26	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/22/14 18:26	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/22/14 18:26	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/22/14 18:26	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/22/14 18:26	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/22/14 18:26	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/22/14 18:26	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/22/14 18:26	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/22/14 18:26	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/22/14 18:26	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/22/14 18:26	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/22/14 18:26	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/22/14 18:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/22/14 18:26	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/22/14 18:26	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/22/14 18:26	127-18-4	
Toluene	ND	ug/L	1.0	1		05/22/14 18:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/22/14 18:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/22/14 18:26	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/22/14 18:26	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/22/14 18:26	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/22/14 18:26	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	1		05/22/14 18:26	460-00-4	
Toluene-d8 (S)	98	%	80-120	1		05/22/14 18:26	2037-26-5	
1,2-Dichloroethane-d4 (S)	95	%	80-120	1		05/22/14 18:26	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/22/14 18:26		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: MERP/8424 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169530001

METHOD BLANK: 1382565 | Matrix: Water
Associated Lab Samples: 60169530001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/23/14 09:43	

LABORATORY CONTROL SAMPLE: 1382566

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	102	85-115	

MATRIX SPIKE SAMPLE: 1382567

Parameter	Units	60169041002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	.13J	3	70-130	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382568 1382569

Parameter	Units	60169150001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.5	4.6	90	93	70-130	4	20	

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

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: MERP/8423
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169530001

METHOD BLANK: 1382557
Matrix: Water
Associated Lab Samples: 60169530001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/23/14 09:15	

LABORATORY CONTROL SAMPLE: 1382558

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.8	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382559 1382560

Parameter	Units	60169395001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	83.7	119	56	80	70-130	35	20	M1,R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: MPRP/27399 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169530001

METHOD BLANK: 1384645 | Matrix: Water
Associated Lab Samples: 60169530001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/28/14 11:03	
Antimony	ug/L	ND	10.0	05/28/14 11:03	
Arsenic	ug/L	ND	10.0	05/28/14 11:03	
Beryllium	ug/L	ND	1.0	05/28/14 11:03	
Cadmium	ug/L	ND	5.0	05/28/14 11:03	
Chromium	ug/L	ND	5.0	05/28/14 11:03	
Cobalt	ug/L	ND	5.0	05/28/14 11:03	
Copper	ug/L	ND	10.0	05/28/14 11:03	
Iron	ug/L	ND	50.0	05/28/14 11:03	
Lead	ug/L	ND	5.0	05/28/14 11:03	
Nickel	ug/L	ND	5.0	05/28/14 11:03	
Selenium	ug/L	ND	15.0	05/28/14 11:03	
Silver	ug/L	ND	7.0	05/28/14 11:03	
Thallium	ug/L	ND	20.0	05/28/14 11:03	
Zinc	ug/L	ND	50.0	05/28/14 11:03	

LABORATORY CONTROL SAMPLE: 1384646

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9960	100	85-115	
Antimony	ug/L	1000	1020	102	85-115	
Arsenic	ug/L	1000	990	99	85-115	
Beryllium	ug/L	1000	1000	100	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	992	99	85-115	
Cobalt	ug/L	1000	1040	104	85-115	
Copper	ug/L	1000	1000	100	85-115	
Iron	ug/L	10000	10200	102	85-115	
Lead	ug/L	1000	1030	103	85-115	
Nickel	ug/L	1000	1050	105	85-115	
Selenium	ug/L	1000	1010	101	85-115	
Silver	ug/L	500	493	99	85-115	
Thallium	ug/L	1000	1040	104	85-115	
Zinc	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384647 1384648

Parameter	Units	60169530001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	14300	50000	50000	73500	74300	118	120	70-130	1	8	
Antimony	ug/L	63.4	5000	5000	5460	5460	108	108	70-130	0	7	
Arsenic	ug/L	1160	5000	5000	6860	6850	114	114	70-130	0	10	
Beryllium	ug/L	ND	5000	5000	4780	4800	96	96	70-130	0	7	
Cadmium	ug/L	ND	5000	5000	5360	5340	107	107	70-130	0	10	
Chromium	ug/L	233	5000	5000	4910	4920	94	94	70-130	0	10	
Cobalt	ug/L	38.3	5000	5000	4890	4870	97	97	70-130	0	6	
Copper	ug/L	ND	5000	5000	5500	5480	109	109	70-130	1	11	
Iron	ug/L	792000	50000	50000	851000	853000	117	121	70-130	0	10	
Lead	ug/L	116	5000	5000	4660	4670	91	91	70-130	0	10	
Nickel	ug/L	116	5000	5000	4940	4950	97	97	70-130	0	10	
Selenium	ug/L	ND	5000	5000	6160	6210	123	124	70-130	1	10	
Silver	ug/L	ND	2500	2500	2640	2640	106	105	70-130	0	10	
Thallium	ug/L	ND	5000	5000	4220	4230	84	85	70-130	0	6	
Zinc	ug/L	4810	5000	5000	9410	9480	92	93	70-130	1	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: MPRP/27401
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169530001

METHOD BLANK: 1384649
Matrix: Water
Associated Lab Samples: 60169530001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/28/14 11:38	
Antimony, Dissolved	ug/L	ND	10.0	05/28/14 11:38	
Arsenic, Dissolved	ug/L	ND	10.0	05/28/14 11:38	
Beryllium, Dissolved	ug/L	ND	1.0	05/28/14 11:38	
Cadmium, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Chromium, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Cobalt, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Copper, Dissolved	ug/L	ND	10.0	05/28/14 11:38	
Iron, Dissolved	ug/L	ND	50.0	05/28/14 11:38	
Lead, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Nickel, Dissolved	ug/L	ND	5.0	05/28/14 11:38	
Selenium, Dissolved	ug/L	ND	15.0	05/28/14 11:38	
Silver, Dissolved	ug/L	ND	7.0	05/28/14 11:38	
Thallium, Dissolved	ug/L	ND	20.0	05/28/14 11:38	
Zinc, Dissolved	ug/L	ND	50.0	05/28/14 11:38	

LABORATORY CONTROL SAMPLE: 1384650

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10000	100	85-115	
Antimony, Dissolved	ug/L	1000	1030	103	85-115	
Arsenic, Dissolved	ug/L	1000	981	98	85-115	
Beryllium, Dissolved	ug/L	1000	998	100	85-115	
Cadmium, Dissolved	ug/L	1000	1000	100	85-115	
Chromium, Dissolved	ug/L	1000	968	97	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9970	100	85-115	
Lead, Dissolved	ug/L	1000	1020	102	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	489	98	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	965	97	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384651 1384652

Parameter	Units	60169530001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1920	50000	50000	53100	54000	102	104	70-130	2	8	
Antimony, Dissolved	ug/L	ND	5000	5000	5540	5720	110	114	70-130	3	7	
Arsenic, Dissolved	ug/L	958	5000	5000	6640	6800	114	117	70-130	2	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4790	4830	96	97	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5340	5460	107	109	70-130	2	10	
Chromium, Dissolved	ug/L	156	5000	5000	4770	4780	92	93	70-130	0	10	
Cobalt, Dissolved	ug/L	25.2	5000	5000	4850	4950	97	98	70-130	2	6	
Copper, Dissolved	ug/L	ND	5000	5000	5560	5710	111	114	70-130	3	11	
Iron, Dissolved	ug/L	366000	50000	50000	421000	428000	112	126	70-130	2	10	
Lead, Dissolved	ug/L	43.3	5000	5000	4590	4690	91	93	70-130	2	10	
Nickel, Dissolved	ug/L	84.6	5000	5000	4910	5010	96	99	70-130	2	10	
Selenium, Dissolved	ug/L	ND	5000	5000	6280	6450	125	129	70-130	3	10	
Silver, Dissolved	ug/L	ND	2500	2500	2630	2670	105	107	70-130	2	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4290	4370	86	87	70-130	2	6	
Zinc, Dissolved	ug/L	4150	5000	5000	8720	8910	91	95	70-130	2	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: MSV/61717 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169530001, 60169530002

METHOD BLANK: 1381134 | Matrix: Water
Associated Lab Samples: 60169530001, 60169530002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/22/14 17:40	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,2-Dichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/22/14 17:40	
2-Butanone (MEK)	ug/L	ND	10.0	05/22/14 17:40	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/22/14 17:40	N2
Acetone	ug/L	ND	10.0	05/22/14 17:40	N2
Benzene	ug/L	ND	1.0	05/22/14 17:40	
Bromodichloromethane	ug/L	ND	1.0	05/22/14 17:40	
Bromoform	ug/L	ND	1.0	05/22/14 17:40	
Bromomethane	ug/L	ND	5.0	05/22/14 17:40	
Carbon tetrachloride	ug/L	ND	1.0	05/22/14 17:40	
Chloroethane	ug/L	ND	1.0	05/22/14 17:40	
Chloroform	ug/L	ND	1.0	05/22/14 17:40	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/22/14 17:40	N2
Ethylbenzene	ug/L	ND	1.0	05/22/14 17:40	
Methylene chloride	ug/L	ND	1.0	05/22/14 17:40	
Tetrachloroethene	ug/L	ND	1.0	05/22/14 17:40	
Toluene	ug/L	ND	1.0	05/22/14 17:40	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/22/14 17:40	
Trichloroethene	ug/L	ND	1.0	05/22/14 17:40	
Vinyl chloride	ug/L	ND	1.0	05/22/14 17:40	
Xylene (Total)	ug/L	ND	3.0	05/22/14 17:40	N2
1,2-Dichloroethane-d4 (S)	%	100	80-120	05/22/14 17:40	
4-Bromofluorobenzene (S)	%	99	80-120	05/22/14 17:40	
Toluene-d8 (S)	%	102	80-120	05/22/14 17:40	

LABORATORY CONTROL SAMPLE: 1381135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.4	92	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	18.8	94	67-127	N2
1,1,2-Trichloroethane	ug/L	20	18.2	91	67-124	
1,2-Dichloroethane	ug/L	20	19.9	99	70-126	
1,4-Dichlorobenzene	ug/L	20	19.6	98	74-120	
2-Butanone (MEK)	ug/L	100	88.1	88	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.8	97	59-131	N2
Acetone	ug/L	100	93.9	94	38-134	N2
Benzene	ug/L	20	18.8	94	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

LABORATORY CONTROL SAMPLE: 1381135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	19.3	96	68-125	
Bromoform	ug/L	20	19.9	100	65-127	
Bromomethane	ug/L	20	25.8	129	13-157	
Carbon tetrachloride	ug/L	20	19.2	96	70-131	
Chloroethane	ug/L	20	21.4	107	47-133	
Chloroform	ug/L	20	18.7	94	65-127	
cis-1,2-Dichloroethene	ug/L	20	18.7	94	68-127	N2
Ethylbenzene	ug/L	20	18.6	93	74-122	
Methylene chloride	ug/L	20	16.4	82	64-129	
Tetrachloroethene	ug/L	20	18.8	94	73-125	
Toluene	ug/L	20	18.3	91	69-126	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	66-129	
Trichloroethene	ug/L	20	18.5	92	71-123	
Vinyl chloride	ug/L	20	23.2	116	43-129	
Xylene (Total)	ug/L	60	56.8	95	75-121	N2
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1381136

Parameter	Units	60169528001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4730	95	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4680	94	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4480	90	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4520	90	49-144	
1,4-Dichlorobenzene	ug/L	512	5000	5280	95	33-140	
2-Butanone (MEK)	ug/L	46400	25000	62600	65	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	22400	86	40-160	N2
Acetone	ug/L	116000	25000	125000	35	10-160	N2
Benzene	ug/L	ND	5000	4460	89	37-151	
Bromodichloromethane	ug/L	ND	5000	4440	89	35-142	
Bromoform	ug/L	ND	5000	4670	93	45-142	
Bromomethane	ug/L	ND	5000	5870	117	10-158	
Carbon tetrachloride	ug/L	ND	5000	5040	101	70-140	
Chloroethane	ug/L	ND	5000	5200	104	19-152	
Chloroform	ug/L	ND	5000	4500	90	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4430	89	34-147	N2
Ethylbenzene	ug/L	ND	5000	4930	98	40-142	
Methylene chloride	ug/L	ND	5000	3920	77	31-144	
Tetrachloroethene	ug/L	ND	5000	5060	101	64-148	
Toluene	ug/L	ND	5000	4410	87	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4350	87	54-151	
Trichloroethene	ug/L	ND	5000	4520	90	71-149	
Vinyl chloride	ug/L	ND	5000	5830	117	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

MATRIX SPIKE SAMPLE: 1381136

Parameter	Units	60169528001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	14700	98	37-144	N2
1,2-Dichloroethane-d4 (S)	%				95	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	
Toluene-d8 (S)	%				97	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: OEXT/44262 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169530001

METHOD BLANK: 1380823 | Matrix: Water
Associated Lab Samples: 60169530001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	500	05/21/14 10:41	
2,4,6-Trichlorophenol	ug/L	ND	500	05/21/14 10:41	
2-Methylphenol(o-Cresol)	ug/L	ND	1000	05/21/14 10:41	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	2000	05/21/14 10:41	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	2500	05/21/14 10:41	
Hexachloro-1,3-butadiene	ug/L	ND	500	05/21/14 10:41	
Hexachlorocyclopentadiene	ug/L	ND	500	05/21/14 10:41	
Hexachloroethane	ug/L	ND	500	05/21/14 10:41	
Naphthalene	ug/L	ND	500	05/21/14 10:41	
Nitrobenzene	ug/L	ND	500	05/21/14 10:41	
Pentachlorophenol	ug/L	ND	500	05/21/14 10:41	
Phenol	ug/L	ND	500	05/21/14 10:41	
2,4,6-Tribromophenol (S)	%	89	39-120	05/21/14 10:41	
2-Fluorobiphenyl (S)	%	81	39-120	05/21/14 10:41	
2-Fluorophenol (S)	%	34	17-120	05/21/14 10:41	
Nitrobenzene-d5 (S)	%	83	33-120	05/21/14 10:41	
Phenol-d6 (S)	%	20	11-120	05/21/14 10:41	
Terphenyl-d14 (S)	%	79	45-120	05/21/14 10:41	

LABORATORY CONTROL SAMPLE: 1380824

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	5000	4030	81	46-120	
2,4,6-Trichlorophenol	ug/L	5000	4370	87	49-120	
2-Methylphenol(o-Cresol)	ug/L	5000	3420	68	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	5000	3050	61	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	5000	4670	93	40-133	
Hexachloro-1,3-butadiene	ug/L	5000	3790	76	44-116	
Hexachlorocyclopentadiene	ug/L	10000	6880	69	24-120	
Hexachloroethane	ug/L	5000	3710	74	43-113	
Naphthalene	ug/L	5000	4270	85	48-120	
Nitrobenzene	ug/L	5000	4130	83	48-120	
Pentachlorophenol	ug/L	5000	4280	86	47-120	
Phenol	ug/L	5000	1670	33	16-112	
2,4,6-Tribromophenol (S)	%			98	39-120	
2-Fluorobiphenyl (S)	%			81	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			30	11-120	
Terphenyl-d14 (S)	%			86	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

MATRIX SPIKE SAMPLE: 1380825

Parameter	Units	60169171001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3740	75	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4480	90	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3980	80	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7740	5000	10500	54	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4670J	93	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3500	70	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	8200	82	11-120	
Hexachloroethane	ug/L	ND	5000	3970	79	40-113	
Naphthalene	ug/L	1130	5000	5290	83	45-120	
Nitrobenzene	ug/L	ND	5000	4370	87	38-120	
Pentachlorophenol	ug/L	ND	5000	5450	109	43-135	
Phenol	ug/L	10500	5000	11100	11	13-112	M1
2,4,6-Tribromophenol (S)	%				93	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				47	17-120	
Nitrobenzene-d5 (S)	%				149	33-120	S0
Phenol-d6 (S)	%				45	11-120	
Terphenyl-d14 (S)	%				88	45-120	

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: WET/48019 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169530001

METHOD BLANK: 1382709 | Matrix: Water
Associated Lab Samples: 60169530001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/22/14 15:38	

LABORATORY CONTROL SAMPLE: 1382710

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	35.9	90	78-114	

MATRIX SPIKE SAMPLE: 1382711

Parameter	Units	60169233002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.7	36.4	79	78-114	

SAMPLE DUPLICATE: 1382712

Parameter	Units	60169233003 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	9.2	10.1	10	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: WET/48062 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169530001

METHOD BLANK: 1384218 | Matrix: Water
Associated Lab Samples: 60169530001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/27/14 08:51	

LABORATORY CONTROL SAMPLE: 1384219

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: 1384221

Parameter	Units	60169251001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	22.5	33.4	140	64-132	M0

SAMPLE DUPLICATE: 1384220

Parameter	Units	60169173002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	1.6J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: WET/48015 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169530001

METHOD BLANK: 1382452 | Matrix: Water
Associated Lab Samples: 60169530001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/22/14 11:02	

SAMPLE DUPLICATE: 1382453

Parameter	Units	60169528001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	3700	3880	5	10	

SAMPLE DUPLICATE: 1382454

Parameter	Units	60169461003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	2200	2140	3	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: WET/47993
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169530001

SAMPLE DUPLICATE: 1382047

Parameter	Units	60169528001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.4	5.4	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: WET/47942 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169530001

METHOD BLANK: 1380745 | Matrix: Water
Associated Lab Samples: 60169530001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/24/14 09:15	

LABORATORY CONTROL SAMPLE: 1380746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	192	97	85-115	

SAMPLE DUPLICATE: 1380747

Parameter	Units	60169523002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	9.2	8.7	5	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: WETA/29524 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169530001

METHOD BLANK: 1382070 | Matrix: Water
Associated Lab Samples: 60169530001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/22/14 16:14	

LABORATORY CONTROL SAMPLE: 1382071

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.2	109	90-110	

MATRIX SPIKE SAMPLE: 1382072

Parameter	Units	60169261002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	105	90-110	

MATRIX SPIKE SAMPLE: 1382073

Parameter	Units	60169262002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	5.4	4	8.7	83	90-110	M1

SAMPLE DUPLICATE: 1382074

Parameter	Units	60169266001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	0.95	0.95	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

QC Batch: WETA/29571 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169530001

METHOD BLANK: 1384136 | Matrix: Water
Associated Lab Samples: 60169530001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/27/14 08:26	

LABORATORY CONTROL SAMPLE: 1384137

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	49.0	98	90-110	

MATRIX SPIKE SAMPLE: 1384138

Parameter	Units	60169175006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	5.0J	50	55.5	101	90-110	

SAMPLE DUPLICATE: 1384139

Parameter	Units	60169330001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	587	583	1	25	

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QUALIFIERS

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

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.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-304
Pace Project No.: 60169530

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169530001	**316-304**	EPA 200.7	MPRP/27399	EPA 200.7	ICP/20731
60169530001	**316-304**	EPA 200.7	MPRP/27401	EPA 200.7	ICP/20730
60169530001	**316-304**	EPA 245.1	MERP/8424	EPA 245.1	MERC/8379
60169530001	**316-304**	EPA 245.1	MERP/8423	EPA 245.1	MERC/8378
60169530001	**316-304**	EPA 625	OEXT/44262	EPA 625	MSSV/14155
60169530001	**316-304**	EPA 624 Low	MSV/61717		
60169530002	**TRIP BLANK**	EPA 624 Low	MSV/61717		
60169530001	**316-304**	EPA 1664A	WET/48019		
60169530001	**316-304**	EPA 1664A	WET/48062		
60169530001	**316-304**	SM 2540D	WET/48015		
60169530001	**316-304**	SM 4500-H+B	WET/47993		
60169530001	**316-304**	SM 5210B	WET/47942	SM 5210B	WET/48063
60169530001	**316-304**	EPA 350.1	WETA/29524		
60169530001	**316-304**	EPA 410.4	WETA/29571		

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Sample Condition Upon Receipt

WO#: 60169530

60169530

Optional
Proj Due Date:
Proj Name:

Client Name: Barr

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☒ XP

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: T-239 / T-194 **Type of Ice:** Wet Blue None ☒ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 9.8

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 8 5 / 19/14

Chain of Custody present:	☒Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	6. BOD, pH
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.
Sufficient volume:	☒Yes ☐No ☐N/A	8.
Correct containers used:	☒Yes ☐No ☐N/A	
Pace containers used:	☒Yes ☐No ☐N/A	9.
Containers intact:	☒Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☒Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☒Yes ☐No ☐N/A	14. Added hno3 to 316-304 BP3N 5.0/4.0 Added h2so4 to 316-304 BP3S 4.0/1.5
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☒No ☐N/A	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☒Yes ☐No	Initial when completed: S Lot # of added preservative: 12513 12522
Trip Blank present: Pace Trip Blank lot # (if purchased): May 09	☒Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☒No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State: NO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency
State / Location
Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B		Residual Chlorine (Y/N)	60169530
1	3/6-304 2(AG4U) 3(AG3S)	OT	G			5/19/14	730		14	10	4	1	0	5(DG9U)					X	X	X	X	X	X	X	X	X	X	X	2(BP2U) BP3N 3.0, BP3S 4.0, BP3U		a1
2	TRIP BLANK								2	2																X				2(DG9U) TB		a2
3																																
4																																
5																																
6																															METALS LIST total & LF Dis:	
7																															Al,Sb,As,Be,Cd,Cr,	
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn	
9																															and Mercury	
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-19-14	8:55AM	Bill Stec 4/2	5-19-14	8:55				
SITE ADDRESS: BRIDGETON LF				Shodell McCoy/PAST	5/19	1315	9.8	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:	Hunter King					
SIGNATURE of SAMPLER:	Hunter King	DATE Signed: 5/19/14				

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(913)599-5665

May 27, 2014

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

RE: Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 19, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

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CERTIFICATIONS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

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 UNTREATED COMMINGLED
Pace Project No.: 60169532

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169532001	**WEEKLY TCLP 5-17-14**	Water	05/17/14 16:30	05/19/14 13:15
60169532002	**TRIP BLANK**	Water	05/17/14 16:30	05/19/14 13:15

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SAMPLE ANALYTE COUNT

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169532001	**WEEKLY TCLP 5-17-14**	EPA 8260	JKL	13
		EPA 5030B/8260	PRG	28
		EPA 1664A	CRT	1
		SM 2540B	JML	1
60169532002	**TRIP BLANK**	EPA 5030B/8260	PRG	28

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

Sample: WEEKLY TCLP 5-17-14 **Lab ID: 60169532001** Collected: 05/17/14 16:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 05/21/14 00:00								
Benzene	**777**	ug/L	250	500	5		05/22/14 15:57	71-43-2	
2-Butanone (MEK)	**56300**	ug/L	5000	200000	5		05/22/14 15:57	78-93-3	
Carbon tetrachloride	ND	ug/L	250	500	5		05/22/14 15:57	56-23-5	
Chlorobenzene	ND	ug/L	250	100000	5		05/22/14 15:57	108-90-7	
Chloroform	ND	ug/L	1000	6000	5		05/22/14 15:57	67-66-3	
1,2-Dichloroethane	ND	ug/L	250	500	5		05/22/14 15:57	107-06-2	
1,1-Dichloroethene	ND	ug/L	250	700	5		05/22/14 15:57	75-35-4	
Tetrachloroethene	ND	ug/L	250	700	5		05/22/14 15:57	127-18-4	
Trichloroethene	ND	ug/L	250	500	5		05/22/14 15:57	79-01-6	
Vinyl chloride	ND	ug/L	100	200	5		05/22/14 15:57	75-01-4	
Surrogates									
1,2-Dichloroethane-d4 (S)	98	%	80-120		5		05/22/14 15:57	17060-07-0	
Toluene-d8 (S)	100	%	80-120		5		05/22/14 15:57	2037-26-5	
4-Bromofluorobenzene (S)	102	%	80-120		5		05/22/14 15:57	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**135000**	ug/L	2500		250		05/22/14 19:14	67-64-1	
Benzene	**1140**	ug/L	250		250		05/22/14 19:14	71-43-2	
Bromodichloromethane	ND	ug/L	250		250		05/22/14 19:14	75-27-4	
Bromoform	ND	ug/L	250		250		05/22/14 19:14	75-25-2	
Bromomethane	ND	ug/L	1250		250		05/22/14 19:14	74-83-9	
2-Butanone (MEK)	**58500**	ug/L	2500		250		05/22/14 19:14	78-93-3	
Carbon tetrachloride	ND	ug/L	250		250		05/22/14 19:14	56-23-5	
Chloroethane	ND	ug/L	250		250		05/22/14 19:14	75-00-3	
Chloroform	ND	ug/L	250		250		05/22/14 19:14	67-66-3	
1,4-Dichlorobenzene	**4050**	ug/L	250		250		05/22/14 19:14	106-46-7	
1,2-Dichloroethane	ND	ug/L	250		250		05/22/14 19:14	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250		250		05/22/14 19:14	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	250		250		05/22/14 19:14	156-60-5	
Ethylbenzene	**999**	ug/L	250		250		05/22/14 19:14	100-41-4	
Methylene chloride	ND	ug/L	250		250		05/22/14 19:14	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500		250		05/22/14 19:14	108-10-1	
1,1,2,2-Tetrachloroethane	**723**	ug/L	250		250		05/22/14 19:14	79-34-5	
Tetrachloroethene	ND	ug/L	250		250		05/22/14 19:14	127-18-4	
Toluene	**608**	ug/L	250		250		05/22/14 19:14	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250		250		05/22/14 19:14	71-55-6	
1,1,2-Trichloroethane	**322**	ug/L	250		250		05/22/14 19:14	79-00-5	
Trichloroethene	ND	ug/L	250		250		05/22/14 19:14	79-01-6	
Vinyl chloride	ND	ug/L	250		250		05/22/14 19:14	75-01-4	
Xylene (Total)	**3800**	ug/L	750		250		05/22/14 19:14	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	109	%	80-120		250		05/22/14 19:14	460-00-4	
1,2-Dichloroethane-d4 (S)	96	%	80-120		250		05/22/14 19:14	17060-07-0	
Toluene-d8 (S)	97	%	80-120		250		05/22/14 19:14	2037-26-5	
Preservation pH	**6.0**		0.10		250		05/22/14 19:14		pH

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

Sample: WEEKLY TCLP 5-17-14 **Lab ID: 60169532001** Collected: 05/17/14 16:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
HEM, Oil and Grease	Analytical Method: EPA 1664A								
Oil and Grease	**998**	mg/L	5.0		1		05/22/14 15:43		
2540B Total Solids	Analytical Method: SM 2540B								
Total Solids	**41200**	mg/L	5.0		1		05/20/14 17:45		

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

Sample: TRIP BLANK **Lab ID: 60169532002** Collected: 05/17/14 16:30 Received: 05/19/14 13:15 Matrix: Water

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0		1		05/22/14 14:59	67-64-1	
Benzene	ND	ug/L	1.0		1		05/22/14 14:59	71-43-2	
Bromodichloromethane	ND	ug/L	1.0		1		05/22/14 14:59	75-27-4	
Bromoform	ND	ug/L	1.0		1		05/22/14 14:59	75-25-2	
Bromomethane	ND	ug/L	5.0		1		05/22/14 14:59	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0		1		05/22/14 14:59	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0		1		05/22/14 14:59	56-23-5	
Chloroethane	ND	ug/L	1.0		1		05/22/14 14:59	75-00-3	
Chloroform	ND	ug/L	1.0		1		05/22/14 14:59	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0		1		05/22/14 14:59	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0		1		05/22/14 14:59	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0		1		05/22/14 14:59	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0		1		05/22/14 14:59	156-60-5	
Ethylbenzene	ND	ug/L	1.0		1		05/22/14 14:59	100-41-4	
Methylene chloride	ND	ug/L	1.0		1		05/22/14 14:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0		1		05/22/14 14:59	108-10-1	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0		1		05/22/14 14:59	79-34-5	
Tetrachloroethene	ND	ug/L	1.0		1		05/22/14 14:59	127-18-4	
Toluene	ND	ug/L	1.0		1		05/22/14 14:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0		1		05/22/14 14:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0		1		05/22/14 14:59	79-00-5	
Trichloroethene	ND	ug/L	1.0		1		05/22/14 14:59	79-01-6	
Vinyl chloride	ND	ug/L	1.0		1		05/22/14 14:59	75-01-4	
Xylene (Total)	ND	ug/L	3.0		1		05/22/14 14:59	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	102	%	80-120		1		05/22/14 14:59	460-00-4	
1,2-Dichloroethane-d4 (S)	97	%	80-120		1		05/22/14 14:59	17060-07-0	
Toluene-d8 (S)	97	%	80-120		1		05/22/14 14:59	2037-26-5	
Preservation pH	**1.0**		0.10		1		05/22/14 14:59		

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

QC Batch: MSV/61786 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 60169532001

METHOD BLANK: 1382590 | Matrix: Water
Associated Lab Samples: 60169532001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	50.0	05/22/14 15:41	
1,2-Dichloroethane	ug/L	ND	50.0	05/22/14 15:41	
2-Butanone (MEK)	ug/L	ND	1000	05/22/14 15:41	
Benzene	ug/L	ND	50.0	05/22/14 15:41	
Carbon tetrachloride	ug/L	ND	50.0	05/22/14 15:41	
Chlorobenzene	ug/L	ND	50.0	05/22/14 15:41	
Chloroform	ug/L	1330	200	05/22/14 15:41	
Tetrachloroethene	ug/L	ND	50.0	05/22/14 15:41	
Trichloroethene	ug/L	ND	50.0	05/22/14 15:41	
Vinyl chloride	ug/L	ND	20.0	05/22/14 15:41	
1,2-Dichloroethane-d4 (S)	%	98	80-120	05/22/14 15:41	
4-Bromofluorobenzene (S)	%	99	80-120	05/22/14 15:41	
Toluene-d8 (S)	%	101	80-120	05/22/14 15:41	

LABORATORY CONTROL SAMPLE: 1382591

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	1000	951	95	78-126	
1,2-Dichloroethane	ug/L	1000	984	98	77-123	
2-Butanone (MEK)	ug/L	5000	4990	100	52-145	
Benzene	ug/L	1000	956	96	80-120	
Carbon tetrachloride	ug/L	1000	1010	101	78-128	
Chlorobenzene	ug/L	1000	972	97	80-120	
Chloroform	ug/L	1000	995	100	79-120	
Tetrachloroethene	ug/L	1000	946	95	80-121	
Trichloroethene	ug/L	1000	956	96	80-120	
Vinyl chloride	ug/L	1000	1110	111	59-120	
1,2-Dichloroethane-d4 (S)	%			102	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			104	80-120	

MATRIX SPIKE SAMPLE: 1382592

Parameter	Units	60169532001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	ND	5000	4670	93	60-144	
1,2-Dichloroethane	ug/L	ND	5000	4920	98	49-148	
2-Butanone (MEK)	ug/L	56300	25000	83500	109	36-145	
Benzene	ug/L	777	5000	5350	91	37-157	
Carbon tetrachloride	ug/L	ND	5000	4900	98	68-142	
Chlorobenzene	ug/L	ND	5000	4860	96	66-133	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

MATRIX SPIKE SAMPLE: 1382592

Parameter	Units	60169532001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chloroform	ug/L	ND	5000	5070	98	66-127	
Tetrachloroethene	ug/L	ND	5000	4730	95	69-133	
Trichloroethene	ug/L	ND	5000	4690	94	61-135	
Vinyl chloride	ug/L	ND	5000	5240	105	44-128	
1,2-Dichloroethane-d4 (S)	%				99	80-120	
4-Bromofluorobenzene (S)	%				101	80-120	
Toluene-d8 (S)	%				104	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

QC Batch: MSV/61739 | Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 | Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60169532001, 60169532002

METHOD BLANK: 1381606 | Matrix: Water
Associated Lab Samples: 60169532001, 60169532002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/22/14 14:30	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/22/14 14:30	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/22/14 14:30	
1,2-Dichloroethane	ug/L	ND	1.0	05/22/14 14:30	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/22/14 14:30	
2-Butanone (MEK)	ug/L	ND	10.0	05/22/14 14:30	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/22/14 14:30	
Acetone	ug/L	ND	10.0	05/22/14 14:30	
Benzene	ug/L	ND	1.0	05/22/14 14:30	
Bromodichloromethane	ug/L	ND	1.0	05/22/14 14:30	
Bromoform	ug/L	ND	1.0	05/22/14 14:30	
Bromomethane	ug/L	ND	5.0	05/22/14 14:30	
Carbon tetrachloride	ug/L	ND	1.0	05/22/14 14:30	
Chloroethane	ug/L	ND	1.0	05/22/14 14:30	
Chloroform	ug/L	ND	1.0	05/22/14 14:30	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/22/14 14:30	
Ethylbenzene	ug/L	ND	1.0	05/22/14 14:30	
Methylene chloride	ug/L	ND	1.0	05/22/14 14:30	
Tetrachloroethene	ug/L	ND	1.0	05/22/14 14:30	
Toluene	ug/L	ND	1.0	05/22/14 14:30	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/22/14 14:30	
Trichloroethene	ug/L	ND	1.0	05/22/14 14:30	
Vinyl chloride	ug/L	ND	1.0	05/22/14 14:30	
Xylene (Total)	ug/L	ND	3.0	05/22/14 14:30	
1,2-Dichloroethane-d4 (S)	%	96	80-120	05/22/14 14:30	
4-Bromofluorobenzene (S)	%	105	80-120	05/22/14 14:30	
Toluene-d8 (S)	%	97	80-120	05/22/14 14:30	

LABORATORY CONTROL SAMPLE: 1381607

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	20.1	101	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	20.0	100	73-124	
1,1,2-Trichloroethane	ug/L	20	18.9	94	80-120	
1,2-Dichloroethane	ug/L	20	20.3	101	77-123	
1,4-Dichlorobenzene	ug/L	20	19.7	98	80-120	
2-Butanone (MEK)	ug/L	100	100	100	52-145	
4-Methyl-2-pentanone (MIBK)	ug/L	100	114	114	71-131	
Acetone	ug/L	100	112	112	32-155	
Benzene	ug/L	20	20.7	104	80-120	
Bromodichloromethane	ug/L	20	19.8	99	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

LABORATORY CONTROL SAMPLE: 1381607

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	20	18.0	90	73-124	
Bromomethane	ug/L	20	19.1	95	31-144	
Carbon tetrachloride	ug/L	20	19.6	98	78-128	
Chloroethane	ug/L	20	20.2	101	55-137	
Chloroform	ug/L	20	18.9	94	79-120	
cis-1,2-Dichloroethene	ug/L	20	20.3	102	80-120	
Ethylbenzene	ug/L	20	18.8	94	80-121	
Methylene chloride	ug/L	20	20.1	101	73-126	
Tetrachloroethene	ug/L	20	18.1	91	80-121	
Toluene	ug/L	20	19.4	97	80-122	
trans-1,2-Dichloroethene	ug/L	20	18.3	91	79-121	
Trichloroethene	ug/L	20	20.0	100	80-120	
Vinyl chloride	ug/L	20	17.4	87	59-120	
Xylene (Total)	ug/L	60	59.4	99	80-121	
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			105	80-120	
Toluene-d8 (S)	%			96	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

QC Batch: WET/48019 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169532001

METHOD BLANK: 1382709 | Matrix: Water
Associated Lab Samples: 60169532001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/22/14 15:38	

LABORATORY CONTROL SAMPLE: 1382710

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	35.9	90	78-114	

MATRIX SPIKE SAMPLE: 1382711

Parameter	Units	60169233002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	41.7	36.4	79	78-114	

SAMPLE DUPLICATE: 1382712

Parameter	Units	60169233003 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	9.2	10.1	10	18	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

QC Batch: WET/47967 | Analysis Method: SM 2540B
QC Batch Method: SM 2540B | Analysis Description: 2540B Total Solids
Associated Lab Samples: 60169532001

METHOD BLANK: 1381479 | Matrix: Water
Associated Lab Samples: 60169532001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	05/20/14 17:44	

LABORATORY CONTROL SAMPLE: 1381480

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	1000	996	100	80-120	

SAMPLE DUPLICATE: 1381481

Parameter	Units	60169113001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	18100	18400	2	10	

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QUALIFIERS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

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.

SAMPLE QUALIFIERS

Sample: 60169532001

[1] The samples were received outside of required temperature range. Analysis was completed upon client approval.

Sample: 60169532002

[1] The samples were received outside of required temperature range. Analysis was completed upon client approval.

BATCH QUALIFIERS

Batch: MSV/61739

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

ANALYTE QUALIFIERS

pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60169532

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169532001	**WEEKLY TCLP 5-17-14**	EPA 8260	MSV/61786		
60169532001	**WEEKLY TCLP 5-17-14**	EPA 5030B/8260	MSV/61739		
60169532002	**TRIP BLANK**	EPA 5030B/8260	MSV/61739		
60169532001	**WEEKLY TCLP 5-17-14**	EPA 1664A	WET/48019		
60169532001	**WEEKLY TCLP 5-17-14**	SM 2540B	WET/47967		

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Sample Condition Upon Receipt

WO#: 60169532
60169532

Client Name: Barr

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☒ YE

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: T-239 / T-194 Type of Ice: Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 7.0

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: 05/19/14

Chain of Custody present:	☒Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☒Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☒Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☒Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☒Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes	☒No	☐N/A	6.
Rush Turn Around Time requested:	☐Yes	☒No	☐N/A	7.
Sufficient volume:	☒Yes	☐No	☐N/A	8.
Correct containers used:	☒Yes	☐No	☐N/A	temp!! – ice melted
Pace containers used:	☒Yes	☐No	☐N/A	9. FOOTNOTE BASED
Containers intact:	☒Yes	☐No	☐N/A	10. ON HISTORICAL INSTRUCTIONS
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☒N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☒N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☒Yes	☐No	☐N/A	13.
All containers needing preservation have been checked.	☐Yes	☒No	☐N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☒No	☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☒Yes	☐No		Initial when completed / Lot # of added preservative
Trip Blank present: Pace Trip Blank lot # (if purchased): APR 114	☒Yes	☐No	☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes	☒No	☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☐N/A	17. List State: NO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/20

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A Required Client Information:

Company:	BARR ENGINEERING
Address:	
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	

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
Project Name:	BRIDGETON UNTREATED COMMINGLED
Project Number:	

Section C Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	
Pace Project Manager:	Angie Brown 913-563-1402
Pace Profile #:	PROFILE 6787-LINE 6

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: MO

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

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start DATE	COLLECTED Composite Start TIME	COLLECTED Composite End/Grab DATE	COLLECTED Composite End/Grab TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	8260 Volatiles **	TCLP Volatiles *	Total Solids/water matrix	Oil and Grease						Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	weekly TCLP 5-17-14					5/17/14	1630		9	4	2		3		3(DG9H)				X	X	X	X	2(AG3S)	2(AG1U)	BP3U				60169532
2	TRIP BLANK	WT	G						2				2						X					2(DG9H)					
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

** total VOCs Bridgeton List
* footnote %dry solids TCLP

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
	[signature] FOX	5-19-14	8:55am	Bell Stone 4/2	5-19-14	8:55am
				[signature] MCL/RAST	5/14	1315

SAMPLE CONDITIONS

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
20	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hunter King

SIGNATURE of SAMPLER: Hunter King

DATE Signed (MM/DD/YY): 05/17/14

*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.

F-ALL-Q-020rev.08, 12-Oct-2007

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TCLP/SPLP Determination of Percent Solids

(Only if sample is liquid or semi-liquid. Skip if sample is obviously 100% solid.)

Date: 5-20-14 Batch: 6351

Analyst: ZNB Balance ID: 600EXT Reviewed by: _____

Sample Number	A Weight of Beaker (g)	B Weight of Sample & Beaker (g)	C Weight of Filtrate Container (g)	D Weight of 142-mm TCLP Filter (g)	E Weight of Waste Beaker After Filtration (g)	F Weight of Filtrate & Container (g)	G Weight of Filter and Solid Phase After Filtration (g)	H Weight of Filtrate (g) (F - C)	I Weight of Waste Filtered (g) (E - B)	J Percent WET Solids $\left(\frac{(I - H)}{I \times 0.01}\right)$	K DRY Weight #1 of Solid Phase plus Filter (g)	L DRY Weight #2 of Solid Phase plus Filter (g) (1)	M Percent DRY Solids $\left(\frac{(L - D)}{I \times 0.01}\right)$	If Multiphase, Are Phases Compatible (2)
60169338-002	123.1	262.7	279.9	1.3	123.6	412.0	1.5	132.1	139.1	5.0 %	1.3	—	Ø	Yes / No / NA
60169532-001	120.2	280.1	278.2	1.3	120.9	433.2 ~~426.5~~ ~~2.05~~ 5-20	1.9	155.0	159.2	2.6 %	1.5	1.5	0.13 %	Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA

NOTE: If Wet Solids are ≥0.5 and <5% and a small amount of liquid is entrapped in the filter, then determine Percent Dry Solids. If the entrapped liquid is oily (non-aqueous) do not determine Percent Dry Solids. If Solids are <0.5%, tumbling is not required because the filtrate is considered to be the TCLP/SPLP extract.

(1) Dry Weight #1 and Dry Weight #2 must be within 1% of each other. If the weights are within 1% of each other, use Dry Weight #2 in further calculations. If not within 1%, continue drying and weighing until two successive weighings are within 1%.

(2) If compatible, combine the filtered liquid resulting from extraction with the initial liquid phase of sample. If the initial liquid phase is not compatible with the filtered liquid resulting from extraction, do not combine. Analyze liquids separately and combine the results mathematically.

If solids are ≥5.0 and <100%	Weight of waste to charge the ZHE = $\frac{25}{\text{Percent solids}} \times 100$ Weight of waste to filter = $\frac{\text{mL of leachate required}}{20 \times \text{Percent solids}} \times 100$

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May 29, 2014

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

RE: Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 21, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

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 316-305
Pace Project No.: 60169645

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169645001	**316-305**	Water	05/20/14 12:15	05/21/14 02:15
60169645002	**TRIP BLANK**	Water	05/20/14 12:15	05/21/14 02:15

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169645001	**316-305**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60169645002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

Sample: 316-305 **Lab ID: 60169645001** Collected: 05/20/14 12:15 Received: 05/21/14 02:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**3680**	ug/L	750	2	05/22/14 15:45	05/27/14 12:08	7429-90-5	
Antimony	ND	ug/L	100	2	05/22/14 15:45	05/27/14 12:25	7440-36-0	D3
Arsenic	**1200**	ug/L	50.0	1	05/22/14 15:45	05/27/14 12:04	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/22/14 15:45	05/27/14 12:04	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/22/14 15:45	05/27/14 12:04	7440-43-9	
Chromium	**236**	ug/L	25.0	1	05/22/14 15:45	05/27/14 12:04	7440-47-3	
Cobalt	**37.5**	ug/L	25.0	1	05/22/14 15:45	05/27/14 12:04	7440-48-4	
Copper	ND	ug/L	50.0	1	05/22/14 15:45	05/27/14 12:04	7440-50-8	
Iron	**609000**	ug/L	250	1	05/22/14 15:45	05/27/14 12:04	7439-89-6	
Lead	**78.2**	ug/L	25.0	1	05/22/14 15:45	05/27/14 12:04	7439-92-1	
Nickel	**117**	ug/L	25.0	1	05/22/14 15:45	05/27/14 12:04	7440-02-0	
Selenium	**77.0**	ug/L	75.0	1	05/22/14 15:45	05/27/14 12:04	7782-49-2	
Silver	ND	ug/L	35.0	1	05/22/14 15:45	05/27/14 12:04	7440-22-4	
Thallium	ND	ug/L	100	1	05/22/14 15:45	05/27/14 12:04	7440-28-0	
Zinc	**5180**	ug/L	500	2	05/22/14 15:45	05/27/14 12:25	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1010**	ug/L	750	2	05/21/14 16:00	05/22/14 12:12	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/21/14 16:00	05/22/14 12:12	7440-36-0	D3
Arsenic, Dissolved	**888**	ug/L	50.0	1	05/21/14 16:00	05/22/14 12:08	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/21/14 16:00	05/22/14 12:08	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/21/14 16:00	05/22/14 12:08	7440-43-9	
Chromium, Dissolved	**174**	ug/L	25.0	1	05/21/14 16:00	05/22/14 12:08	7440-47-3	
Cobalt, Dissolved	**26.0**	ug/L	25.0	1	05/21/14 16:00	05/22/14 12:08	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/21/14 16:00	05/22/14 12:08	7440-50-8	
Iron, Dissolved	**422000**	ug/L	250	1	05/21/14 16:00	05/22/14 12:08	7439-89-6	
Lead, Dissolved	**33.4**	ug/L	25.0	1	05/21/14 16:00	05/22/14 12:08	7439-92-1	
Nickel, Dissolved	**85.0**	ug/L	25.0	1	05/21/14 16:00	05/22/14 12:08	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/21/14 16:00	05/22/14 12:08	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/21/14 16:00	05/22/14 12:08	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/21/14 16:00	05/22/14 12:08	7440-28-0	
Zinc, Dissolved	**4360**	ug/L	500	2	05/21/14 16:00	05/22/14 12:12	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**13.9**	ug/L	6.0	1	05/27/14 15:30	05/28/14 09:54	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/27/14 15:30	05/28/14 11:44	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/22/14 00:00	05/27/14 14:46	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/22/14 00:00	05/27/14 14:46	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/22/14 00:00	05/27/14 14:46	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/22/14 00:00	05/27/14 14:46	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/22/14 00:00	05/27/14 14:46	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**6680**	ug/L	4000	2	05/22/14 00:00	05/27/14 14:46		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

Sample: 316-305 **Lab ID: 60169645001** Collected: 05/20/14 12:15 Received: 05/21/14 02:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1640**	ug/L	1000	2	05/22/14 00:00	05/27/14 14:46	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/22/14 00:00	05/27/14 14:46	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/22/14 00:00	05/27/14 14:46	87-86-5	
Phenol	**9220**	ug/L	1000	2	05/22/14 00:00	05/27/14 14:46	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/22/14 00:00	05/27/14 14:46	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/22/14 00:00	05/27/14 14:46	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	169	%	33-120	2	05/22/14 00:00	05/27/14 14:46	4165-60-0	S0
2-Fluorobiphenyl (S)	89	%	39-120	2	05/22/14 00:00	05/27/14 14:46	321-60-8	
Terphenyl-d14 (S)	88	%	45-120	2	05/22/14 00:00	05/27/14 14:46	1718-51-0	
Phenol-d6 (S)	28	%	11-120	2	05/22/14 00:00	05/27/14 14:46	13127-88-3	
2-Fluorophenol (S)	46	%	17-120	2	05/22/14 00:00	05/27/14 14:46	367-12-4	
2,4,6-Tribromophenol (S)	100	%	39-120	2	05/22/14 00:00	05/27/14 14:46	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**117000**	ug/L	2500	250		05/22/14 19:59	67-64-1	N2
Benzene	ND	ug/L	250	250		05/22/14 19:59	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/22/14 19:59	75-27-4	
Bromoform	ND	ug/L	250	250		05/22/14 19:59	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/22/14 19:59	74-83-9	
2-Butanone (MEK)	**43900**	ug/L	2500	250		05/22/14 19:59	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/22/14 19:59	56-23-5	
Chloroethane	ND	ug/L	250	250		05/22/14 19:59	75-00-3	
Chloroform	ND	ug/L	250	250		05/22/14 19:59	67-66-3	
1,4-Dichlorobenzene	**392**	ug/L	250	250		05/22/14 19:59	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/22/14 19:59	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/22/14 19:59	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/22/14 19:59	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/22/14 19:59	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/22/14 19:59	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/22/14 19:59	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/22/14 19:59	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/22/14 19:59	127-18-4	
Toluene	ND	ug/L	250	250		05/22/14 19:59	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/22/14 19:59	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/22/14 19:59	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/22/14 19:59	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/22/14 19:59	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/22/14 19:59	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	97	%	80-120	250		05/22/14 19:59	460-00-4	
Toluene-d8 (S)	98	%	80-120	250		05/22/14 19:59	2037-26-5	
1,2-Dichloroethane-d4 (S)	95	%	80-120	250		05/22/14 19:59	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/22/14 19:59		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**888**	mg/L	5.0	1		05/28/14 16:19		M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

Sample: 316-305 **Lab ID: 60169645001** Collected: 05/20/14 12:15 Received: 05/21/14 02:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**10.8**	mg/L	5.0	1		05/29/14 11:52		M1
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4780**	mg/L	5.0	1		05/27/14 14:24		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/21/14 15:30		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**36900**	mg/L	2.0	1	05/21/14 13:23	05/26/14 11:28		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**589**	mg/L	20.0	200		05/25/14 13:00	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**59400**	mg/L	5000	500		05/29/14 08:02		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

Sample: TRIP BLANK **Lab ID: 60169645002** Collected: 05/20/14 12:15 Received: 05/21/14 02:15 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/22/14 18:42	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/22/14 18:42	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/22/14 18:42	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/22/14 18:42	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/22/14 18:42	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/22/14 18:42	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/22/14 18:42	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/22/14 18:42	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/22/14 18:42	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/22/14 18:42	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/22/14 18:42	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/22/14 18:42	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/22/14 18:42	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/22/14 18:42	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/22/14 18:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/22/14 18:42	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/22/14 18:42	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/22/14 18:42	127-18-4	
Toluene	ND	ug/L	1.0	1		05/22/14 18:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/22/14 18:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/22/14 18:42	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/22/14 18:42	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/22/14 18:42	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/22/14 18:42	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	1		05/22/14 18:42	460-00-4	
Toluene-d8 (S)	101	%	80-120	1		05/22/14 18:42	2037-26-5	
1,2-Dichloroethane-d4 (S)	93	%	80-120	1		05/22/14 18:42	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/22/14 18:42		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: MERP/8434 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169645001

METHOD BLANK: 1384540 | Matrix: Water
Associated Lab Samples: 60169645001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/28/14 09:18	

LABORATORY CONTROL SAMPLE: 1384541

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.3	86	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384542 1384543

Parameter	Units	60169183002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.9	4.2	97	84	70-130	14	20	

MATRIX SPIKE SAMPLE: 1384545

Parameter	Units	60169311001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	5	4.6	92	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: MERP/8436
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169645001

METHOD BLANK: 1384552
Matrix: Water
Associated Lab Samples: 60169645001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/28/14 11:35	

LABORATORY CONTROL SAMPLE: 1384553

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384554 1384555

Parameter	Units	60169645001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	154	144	102	95	70-130	7	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: MPRP/27361 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169645001

METHOD BLANK: 1382829 | Matrix: Water
Associated Lab Samples: 60169645001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/27/14 10:33	
Antimony	ug/L	ND	10.0	05/27/14 10:33	
Arsenic	ug/L	ND	10.0	05/27/14 10:33	
Beryllium	ug/L	ND	1.0	05/27/14 10:33	
Cadmium	ug/L	ND	5.0	05/27/14 10:33	
Chromium	ug/L	ND	5.0	05/27/14 11:13	
Cobalt	ug/L	ND	5.0	05/27/14 10:33	
Copper	ug/L	ND	10.0	05/27/14 11:13	
Iron	ug/L	ND	50.0	05/27/14 10:33	
Lead	ug/L	ND	5.0	05/27/14 10:33	
Nickel	ug/L	ND	5.0	05/27/14 10:33	
Selenium	ug/L	ND	15.0	05/27/14 10:33	
Silver	ug/L	ND	7.0	05/27/14 11:13	
Thallium	ug/L	ND	20.0	05/27/14 10:33	
Zinc	ug/L	ND	50.0	05/27/14 10:33	

LABORATORY CONTROL SAMPLE: 1382830

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9910	99	85-115	
Antimony	ug/L	1000	1010	101	85-115	
Arsenic	ug/L	1000	965	97	85-115	
Beryllium	ug/L	1000	978	98	85-115	
Cadmium	ug/L	1000	986	99	85-115	
Chromium	ug/L	1000	999	100	85-115	
Cobalt	ug/L	1000	997	100	85-115	
Copper	ug/L	1000	963	96	85-115	
Iron	ug/L	10000	9870	99	85-115	
Lead	ug/L	1000	1000	100	85-115	
Nickel	ug/L	1000	1010	101	85-115	
Selenium	ug/L	1000	986	99	85-115	
Silver	ug/L	500	487	97	85-115	
Thallium	ug/L	1000	989	99	85-115	
Zinc	ug/L	1000	1000	100	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382831 1382832

Parameter	Units	60169464001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	12800	50000	50000	75100	71000	125	116	70-130	6	8	
Antimony	ug/L	ND	5000	5000	5080	5020	101	100	70-130	1	7	
Arsenic	ug/L	1150	5000	5000	6180	5960	101	96	70-130	4	10	
Beryllium	ug/L	ND	5000	5000	4790	4700	96	94	70-130	2	7	
Cadmium	ug/L	ND	5000	5000	5110	5010	102	100	70-130	2	10	
Chromium	ug/L	231	5000	5000	5120	5010	98	96	70-130	2	10	
Cobalt	ug/L	45.4	5000	5000	4830	4740	96	94	70-130	2	6	
Copper	ug/L	85.4	5000	5000	5120	4970	101	98	70-130	3	11	
Iron	ug/L	630000	50000	50000	658000	584000	57	-91	70-130	12	10	M1,R1
Lead	ug/L	138	5000	5000	4740	4670	92	91	70-130	1	10	
Nickel	ug/L	135	5000	5000	4910	4830	96	94	70-130	2	10	
Selenium	ug/L	91.6	5000	5000	5620	5460	110	107	70-130	3	10	
Silver	ug/L	ND	2500	2500	2610	2530	104	101	70-130	3	10	
Thallium	ug/L	ND	5000	5000	4400	4380	88	88	70-130	0	6	
Zinc	ug/L	3960	5000	5000	8480	8070	90	82	70-130	5	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: MPRP/27332
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169645001

METHOD BLANK: 1381931
Matrix: Water
Associated Lab Samples: 60169645001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/22/14 11:52	
Antimony, Dissolved	ug/L	ND	10.0	05/22/14 11:52	
Arsenic, Dissolved	ug/L	ND	10.0	05/22/14 11:52	
Beryllium, Dissolved	ug/L	ND	1.0	05/22/14 11:52	
Cadmium, Dissolved	ug/L	ND	5.0	05/22/14 11:52	
Chromium, Dissolved	ug/L	ND	5.0	05/22/14 13:43	
Cobalt, Dissolved	ug/L	ND	5.0	05/22/14 11:52	
Copper, Dissolved	ug/L	ND	10.0	05/22/14 13:43	
Iron, Dissolved	ug/L	ND	50.0	05/22/14 11:52	
Lead, Dissolved	ug/L	ND	5.0	05/22/14 11:52	
Nickel, Dissolved	ug/L	ND	5.0	05/22/14 11:52	
Selenium, Dissolved	ug/L	ND	15.0	05/22/14 11:52	
Silver, Dissolved	ug/L	ND	7.0	05/22/14 13:43	
Thallium, Dissolved	ug/L	ND	20.0	05/22/14 11:52	
Zinc, Dissolved	ug/L	ND	50.0	05/22/14 11:52	

LABORATORY CONTROL SAMPLE: 1381932

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	965	97	85-115	
Arsenic, Dissolved	ug/L	1000	927	93	85-115	
Beryllium, Dissolved	ug/L	1000	986	99	85-115	
Cadmium, Dissolved	ug/L	1000	961	96	85-115	
Chromium, Dissolved	ug/L	1000	994	99	85-115	
Cobalt, Dissolved	ug/L	1000	988	99	85-115	
Copper, Dissolved	ug/L	1000	950	95	85-115	
Iron, Dissolved	ug/L	10000	10000	100	85-115	
Lead, Dissolved	ug/L	1000	991	99	85-115	
Nickel, Dissolved	ug/L	1000	994	99	85-115	
Selenium, Dissolved	ug/L	1000	956	96	85-115	
Silver, Dissolved	ug/L	500	485	97	85-115	
Thallium, Dissolved	ug/L	1000	962	96	85-115	
Zinc, Dissolved	ug/L	1000	999	100	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1381933 1381934

Parameter	Units	4096544002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	10000	10000	10100	9980	101	100	70-130	1	8	
Antimony, Dissolved	ug/L	ND	1000	1000	1010	970	101	97	70-130	4	7	
Arsenic, Dissolved	ug/L	ND	1000	1000	988	944	98	94	70-130	5	10	
Beryllium, Dissolved	ug/L	ND	1000	1000	989	972	99	97	70-130	2	7	
Cadmium, Dissolved	ug/L	ND	1000	1000	1000	957	100	96	70-130	5	10	
Chromium, Dissolved	ug/L	ND	1000	1000	970	969	97	97	70-130	0	10	
Cobalt, Dissolved	ug/L	5.3	1000	1000	998	971	99	97	70-130	3	6	
Copper, Dissolved	ug/L	ND	1000	1000	968	950	97	95	70-130	2	11	
Iron, Dissolved	ug/L	68.3	10000	10000	10000	9750	100	97	70-130	3	10	
Lead, Dissolved	ug/L	ND	1000	1000	986	955	98	95	70-130	3	10	
Nickel, Dissolved	ug/L	24.1	1000	1000	1020	978	99	95	70-130	4	10	
Selenium, Dissolved	ug/L	ND	1000	1000	996	959	99	96	70-130	4	10	
Silver, Dissolved	ug/L	ND	500	500	498	488	99	98	70-130	2	10	
Thallium, Dissolved	ug/L	ND	1000	1000	948	907	95	91	70-130	4	6	
Zinc, Dissolved	ug/L	ND	1000	1000	997	957	100	96	70-130	4	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: MSV/61717 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169645001, 60169645002

METHOD BLANK: 1381134 | Matrix: Water
Associated Lab Samples: 60169645001, 60169645002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/22/14 17:40	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,2-Dichloroethane	ug/L	ND	1.0	05/22/14 17:40	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/22/14 17:40	
2-Butanone (MEK)	ug/L	ND	10.0	05/22/14 17:40	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/22/14 17:40	N2
Acetone	ug/L	ND	10.0	05/22/14 17:40	N2
Benzene	ug/L	ND	1.0	05/22/14 17:40	
Bromodichloromethane	ug/L	ND	1.0	05/22/14 17:40	
Bromoform	ug/L	ND	1.0	05/22/14 17:40	
Bromomethane	ug/L	ND	5.0	05/22/14 17:40	
Carbon tetrachloride	ug/L	ND	1.0	05/22/14 17:40	
Chloroethane	ug/L	ND	1.0	05/22/14 17:40	
Chloroform	ug/L	ND	1.0	05/22/14 17:40	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/22/14 17:40	N2
Ethylbenzene	ug/L	ND	1.0	05/22/14 17:40	
Methylene chloride	ug/L	ND	1.0	05/22/14 17:40	
Tetrachloroethene	ug/L	ND	1.0	05/22/14 17:40	
Toluene	ug/L	ND	1.0	05/22/14 17:40	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/22/14 17:40	
Trichloroethene	ug/L	ND	1.0	05/22/14 17:40	
Vinyl chloride	ug/L	ND	1.0	05/22/14 17:40	
Xylene (Total)	ug/L	ND	3.0	05/22/14 17:40	N2
1,2-Dichloroethane-d4 (S)	%	100	80-120	05/22/14 17:40	
4-Bromofluorobenzene (S)	%	99	80-120	05/22/14 17:40	
Toluene-d8 (S)	%	102	80-120	05/22/14 17:40	

LABORATORY CONTROL SAMPLE: 1381135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.4	92	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	18.8	94	67-127	N2
1,1,2-Trichloroethane	ug/L	20	18.2	91	67-124	
1,2-Dichloroethane	ug/L	20	19.9	99	70-126	
1,4-Dichlorobenzene	ug/L	20	19.6	98	74-120	
2-Butanone (MEK)	ug/L	100	88.1	88	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	96.8	97	59-131	N2
Acetone	ug/L	100	93.9	94	38-134	N2
Benzene	ug/L	20	18.8	94	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

LABORATORY CONTROL SAMPLE: 1381135

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	19.3	96	68-125	
Bromoform	ug/L	20	19.9	100	65-127	
Bromomethane	ug/L	20	25.8	129	13-157	
Carbon tetrachloride	ug/L	20	19.2	96	70-131	
Chloroethane	ug/L	20	21.4	107	47-133	
Chloroform	ug/L	20	18.7	94	65-127	
cis-1,2-Dichloroethene	ug/L	20	18.7	94	68-127	N2
Ethylbenzene	ug/L	20	18.6	93	74-122	
Methylene chloride	ug/L	20	16.4	82	64-129	
Tetrachloroethene	ug/L	20	18.8	94	73-125	
Toluene	ug/L	20	18.3	91	69-126	
trans-1,2-Dichloroethene	ug/L	20	17.6	88	66-129	
Trichloroethene	ug/L	20	18.5	92	71-123	
Vinyl chloride	ug/L	20	23.2	116	43-129	
Xylene (Total)	ug/L	60	56.8	95	75-121	N2
1,2-Dichloroethane-d4 (S)	%			101	80-120	
4-Bromofluorobenzene (S)	%			100	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1381136

Parameter	Units	60169528001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4730	95	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4680	94	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4480	90	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4520	90	49-144	
1,4-Dichlorobenzene	ug/L	512	5000	5280	95	33-140	
2-Butanone (MEK)	ug/L	46400	25000	62600	65	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	22400	86	40-160	N2
Acetone	ug/L	116000	25000	125000	35	10-160	N2
Benzene	ug/L	ND	5000	4460	89	37-151	
Bromodichloromethane	ug/L	ND	5000	4440	89	35-142	
Bromoform	ug/L	ND	5000	4670	93	45-142	
Bromomethane	ug/L	ND	5000	5870	117	10-158	
Carbon tetrachloride	ug/L	ND	5000	5040	101	70-140	
Chloroethane	ug/L	ND	5000	5200	104	19-152	
Chloroform	ug/L	ND	5000	4500	90	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4430	89	34-147	N2
Ethylbenzene	ug/L	ND	5000	4930	98	40-142	
Methylene chloride	ug/L	ND	5000	3920	77	31-144	
Tetrachloroethene	ug/L	ND	5000	5060	101	64-148	
Toluene	ug/L	ND	5000	4410	87	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4350	87	54-151	
Trichloroethene	ug/L	ND	5000	4520	90	71-149	
Vinyl chloride	ug/L	ND	5000	5830	117	22-146	

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(913)599-5665

QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

MATRIX SPIKE SAMPLE: 1381136

Parameter	Units	60169528001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	14700	98	37-144	N2
1,2-Dichloroethane-d4 (S)	%				95	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	
Toluene-d8 (S)	%				97	80-120	
Preservation pH		6.0		6.0			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: OEXT/44309 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169645001

METHOD BLANK: 1382205 | Matrix: Water
Associated Lab Samples: 60169645001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/27/14 14:04	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/27/14 14:04	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/27/14 14:04	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/27/14 14:04	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/27/14 14:04	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/27/14 14:04	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/27/14 14:04	
Hexachloroethane	ug/L	ND	5.0	05/27/14 14:04	
Naphthalene	ug/L	ND	5.0	05/27/14 14:04	
Nitrobenzene	ug/L	ND	5.0	05/27/14 14:04	
Pentachlorophenol	ug/L	ND	5.0	05/27/14 14:04	
Phenol	ug/L	ND	5.0	05/27/14 14:04	
2,4,6-Tribromophenol (S)	%	85	39-120	05/27/14 14:04	
2-Fluorobiphenyl (S)	%	80	39-120	05/27/14 14:04	
2-Fluorophenol (S)	%	45	17-120	05/27/14 14:04	
Nitrobenzene-d5 (S)	%	78	33-120	05/27/14 14:04	
Phenol-d6 (S)	%	28	11-120	05/27/14 14:04	
Terphenyl-d14 (S)	%	80	45-120	05/27/14 14:04	

LABORATORY CONTROL SAMPLE: 1382206

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	41.9	84	46-120	
2,4,6-Trichlorophenol	ug/L	50	47.5	95	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	36.1	72	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	30.1	60	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	49.6	99	40-133	
Hexachloro-1,3-butadiene	ug/L	50	38.1	76	44-116	
Hexachlorocyclopentadiene	ug/L	100	70.9	71	24-120	
Hexachloroethane	ug/L	50	39.9	80	43-113	
Naphthalene	ug/L	50	43.2	86	48-120	
Nitrobenzene	ug/L	50	43.5	87	48-120	
Pentachlorophenol	ug/L	50	49.0	98	47-120	
Phenol	ug/L	50	15.5	31	16-112	
2,4,6-Tribromophenol (S)	%			98	39-120	
2-Fluorobiphenyl (S)	%			88	39-120	
2-Fluorophenol (S)	%			46	17-120	
Nitrobenzene-d5 (S)	%			88	33-120	
Phenol-d6 (S)	%			28	11-120	
Terphenyl-d14 (S)	%			91	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

MATRIX SPIKE SAMPLE: 1382207

Parameter	Units	60169691001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	35.8	72	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	42.2	84	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	29.2	58	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	25.4	51	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	48.2	96	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	34.9	70	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	66.2	66	11-120	
Hexachloroethane	ug/L	ND	50	35.1	70	40-113	
Naphthalene	ug/L	ND	50	35.8	72	45-120	
Nitrobenzene	ug/L	ND	50	37.9	76	38-120	
Pentachlorophenol	ug/L	ND	50	51.5	103	43-135	
Phenol	ug/L	ND	50	12.9	26	13-112	
2,4,6-Tribromophenol (S)	%				96	39-120	
2-Fluorobiphenyl (S)	%				81	39-120	
2-Fluorophenol (S)	%				33	17-120	
Nitrobenzene-d5 (S)	%				74	33-120	
Phenol-d6 (S)	%				23	11-120	
Terphenyl-d14 (S)	%				87	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: WET/48111 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169645001

METHOD BLANK: 1385175 | Matrix: Water
Associated Lab Samples: 60169645001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/28/14 16:18	

LABORATORY CONTROL SAMPLE: 1385176

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: 1385177

Parameter	Units	60169645001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	888	160	1190	190	78-114	M1

SAMPLE DUPLICATE: 1385178

Parameter	Units	60169745001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	976	659	39	18	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: WET/48132 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169645001

METHOD BLANK: 1385563 | Matrix: Water
Associated Lab Samples: 60169645001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/29/14 11:52	

LABORATORY CONTROL SAMPLE: 1385564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	24.7	124	64-132	

MATRIX SPIKE SAMPLE: 1385565

Parameter	Units	60169645001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	10.8	80	45.6	43	64-132	M1

SAMPLE DUPLICATE: 1385566

Parameter	Units	60169745001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	4.8J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: WET/48078 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169645001

METHOD BLANK: 1384560 | Matrix: Water
Associated Lab Samples: 60169645001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/27/14 14:21	

SAMPLE DUPLICATE: 1384561

Parameter	Units	60169955002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	397	440	10	10	

SAMPLE DUPLICATE: 1384562

Parameter	Units	60169657001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	17.0	19.0	11	10	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: WET/47993
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169645001

SAMPLE DUPLICATE: 1382047

Parameter	Units	60169528001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	5.4	5.4	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: WET/47980 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169645001

METHOD BLANK: 1381685 | Matrix: Water
Associated Lab Samples: 60169645001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/26/14 10:44	

LABORATORY CONTROL SAMPLE: 1381686

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	202	102	85-115	

SAMPLE DUPLICATE: 1381687

Parameter	Units	60169658001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	14.9	14.5	3	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: WETA/29562 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169645001

METHOD BLANK: 1383471 | Matrix: Water
Associated Lab Samples: 60169645001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/25/14 12:47	

LABORATORY CONTROL SAMPLE: 1383472

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

MATRIX SPIKE SAMPLE: 1383473

Parameter	Units	60169612001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	6.4	10	15.9	95	90-110	

MATRIX SPIKE SAMPLE: 1383476

Parameter	Units	60169644002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.28	2	2.3	103	90-110	

SAMPLE DUPLICATE: 1383477

Parameter	Units	60169755001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	3.7	3.7	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

QC Batch: WETA/29602 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169645001

METHOD BLANK: 1384794 | Matrix: Water
Associated Lab Samples: 60169645001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/29/14 07:57	

LABORATORY CONTROL SAMPLE: 1384795

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: 1384796

Parameter	Units	60169372009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	303	250	544	96	90-110	

MATRIX SPIKE SAMPLE: 1384798

Parameter	Units	60169670001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	24.2	50	79.4	110	90-110	

SAMPLE DUPLICATE: 1384800

Parameter	Units	60169756001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	52.4	47.0	11	25	

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QUALIFIERS

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-305
Pace Project No.: 60169645

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169645001	**316-305**	EPA 200.7	MPRP/27361	EPA 200.7	ICP/20710
60169645001	**316-305**	EPA 200.7	MPRP/27332	EPA 200.7	ICP/20695
60169645001	**316-305**	EPA 245.1	MERP/8434	EPA 245.1	MERC/8389
60169645001	**316-305**	EPA 245.1	MERP/8436	EPA 245.1	MERC/8391
60169645001	**316-305**	EPA 625	OEXT/44309	EPA 625	MSSV/14190
60169645001	**316-305**	EPA 624 Low	MSV/61717		
60169645002	**TRIP BLANK**	EPA 624 Low	MSV/61717		
60169645001	**316-305**	EPA 1664A	WET/48111		
60169645001	**316-305**	EPA 1664A	WET/48132		
60169645001	**316-305**	SM 2540D	WET/48078		
60169645001	**316-305**	SM 4500-H+B	WET/47993		
60169645001	**316-305**	SM 5210B	WET/47980	SM 5210B	WET/48071
60169645001	**316-305**	EPA 350.1	WETA/29562		
60169645001	**316-305**	EPA 410.4	WETA/29602		

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Sample Condition Upon Receipt

WO#: 60169645

60169645

Client Name: Barr Engineering

Optional
Proj Due Date:
Proj Name:

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 ☑ Lple

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 5.2

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/21/14

Chain of Custody present:	☑Yes ☐No ☐N/A	1.	
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.	
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.	
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6.	BOD, pH
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.	
Sufficient volume:	☑Yes ☐No ☐N/A	8.	
Correct containers used:	☑Yes ☐No ☐N/A		
Pace containers used:	☑Yes ☐No ☐N/A	9.	
Containers intact:	☑Yes ☐No ☐N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.	
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	13.	
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	14.	initial pH BOD3N 4.5, added 2.5mL final 3.0 initial pH BOD5S 4.0, added 2.5mL final 2.5
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A		
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed	Lot # of added preservative HNO3-12513-23-2 H2SO4-12522-2-7
Trip Blank present: Pace Trip Blank lot # (if purchased): 0324141-3BE2	☑Yes ☐No ☐N/A	15.	
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.	
Project sampled in USDA Regulated Area:	☐Yes ☑No ☐N/A	17. List State: MO	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/22/14

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

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.	
Client Project ID:	BRIDGETON LF
Container Order Number:	

Section C — Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	130426_7588
Pace Project Manager:	Brown, Angie
Pace Profile #:	7585 LINE 2

Regulatory Agency
State / Location
Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N)	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	BOD SM 5210B		Residual Chlorine (Y/N)	60169695
1	516-305 2BP3U, BP3U	OT	G	3A63S		5/20/14	1215		14	10	4	1	0	2	AG4U				X	X	X	X	X	X	X	X	X	X	5	DH	9U BP3N 3.0, BP3S 2.5
2	TRIP BLANK								2	2																X			2	DG	9U (TB)
3																																
4																																
5																																
6																																METALS LIST total & LF Dis:
7																																Al,Sb,As,Be,Cd,Cr,
8																																Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																																and Mercury
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-20-14	2:15pm	Kenneth Hatch	5-20-14	2:15pm				
SITE ADDRESS: BRIDGETON LF				E Brackett / Pace	5/21/14	0215	5.2	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:	Hunter King					
SIGNATURE of SAMPLER:	Hunter King	DATE Signed: 5/20/14				

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May 30, 2014

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

RE: Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 22, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

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 316-306
Pace Project No.: 60169745

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169745001	**316-306**	Water	05/21/14 12:00	05/22/14 00:45
60169745002	**TRIP BLANK**	Water	05/21/14 12:00	05/22/14 00:45

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169745001	**316-306**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	JML	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60169745002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

Sample: 316-306 **Lab ID: 60169745001** Collected: 05/21/14 12:00 Received: 05/22/14 00:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**10500**	ug/L	750	2	05/28/14 17:50	05/29/14 14:01	7429-90-5	M1
Antimony	ND	ug/L	100	2	05/28/14 17:50	05/29/14 14:01	7440-36-0	D3
Arsenic	**1270**	ug/L	50.0	1	05/28/14 17:50	05/29/14 13:57	7440-38-2	M1
Beryllium	ND	ug/L	5.0	1	05/28/14 17:50	05/29/14 13:57	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/28/14 17:50	05/29/14 13:57	7440-43-9	
Chromium	**280**	ug/L	25.0	1	05/28/14 17:50	05/29/14 13:57	7440-47-3	
Cobalt	**47.9**	ug/L	25.0	1	05/28/14 17:50	05/29/14 13:57	7440-48-4	
Copper	ND	ug/L	50.0	1	05/28/14 17:50	05/29/14 13:57	7440-50-8	
Iron	**786000**	ug/L	250	1	05/28/14 17:50	05/29/14 13:57	7439-89-6	M1
Lead	**108**	ug/L	25.0	1	05/28/14 17:50	05/29/14 13:57	7439-92-1	
Nickel	**143**	ug/L	25.0	1	05/28/14 17:50	05/29/14 13:57	7440-02-0	
Selenium	**87.7**	ug/L	75.0	1	05/28/14 17:50	05/29/14 13:57	7782-49-2	
Silver	ND	ug/L	35.0	1	05/28/14 17:50	05/29/14 13:57	7440-22-4	
Thallium	ND	ug/L	100	1	05/28/14 17:50	05/29/14 13:57	7440-28-0	
Zinc	**5350**	ug/L	500	2	05/28/14 17:50	05/29/14 14:01	7440-66-6	M1
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1280**	ug/L	750	2	05/28/14 10:45	05/29/14 12:17	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/28/14 10:45	05/29/14 12:17	7440-36-0	D3
Arsenic, Dissolved	**969**	ug/L	50.0	1	05/28/14 10:45	05/29/14 12:14	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/28/14 10:45	05/29/14 12:14	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:14	7440-43-9	
Chromium, Dissolved	**179**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:14	7440-47-3	
Cobalt, Dissolved	**27.2**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:14	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/28/14 10:45	05/29/14 12:14	7440-50-8	
Iron, Dissolved	**413000**	ug/L	250	1	05/28/14 10:45	05/29/14 12:14	7439-89-6	
Lead, Dissolved	**36.3**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:14	7439-92-1	
Nickel, Dissolved	**96.1**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:14	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/28/14 10:45	05/29/14 12:14	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/28/14 10:45	05/29/14 12:14	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/28/14 10:45	05/29/14 12:14	7440-28-0	
Zinc, Dissolved	**4220**	ug/L	500	2	05/28/14 10:45	05/29/14 12:17	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/27/14 15:30	05/28/14 11:00	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/29/14 09:40	05/29/14 15:48	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/23/14 00:00	05/27/14 13:43	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/23/14 00:00	05/27/14 13:43	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/23/14 00:00	05/27/14 13:43	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/23/14 00:00	05/27/14 13:43	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/23/14 00:00	05/27/14 13:43	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7820**	ug/L	4000	2	05/23/14 00:00	05/27/14 13:43		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

Sample: 316-306 **Lab ID: 60169745001** Collected: 05/21/14 12:00 Received: 05/22/14 00:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1580**	ug/L	1000	2	05/23/14 00:00	05/27/14 13:43	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/23/14 00:00	05/27/14 13:43	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/23/14 00:00	05/27/14 13:43	87-86-5	
Phenol	**11300**	ug/L	1000	2	05/23/14 00:00	05/27/14 13:43	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/23/14 00:00	05/27/14 13:43	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/23/14 00:00	05/27/14 13:43	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	159	%	33-120	2	05/23/14 00:00	05/27/14 13:43	4165-60-0	S0
2-Fluorobiphenyl (S)	76	%	39-120	2	05/23/14 00:00	05/27/14 13:43	321-60-8	
Terphenyl-d14 (S)	75	%	45-120	2	05/23/14 00:00	05/27/14 13:43	1718-51-0	
Phenol-d6 (S)	29	%	11-120	2	05/23/14 00:00	05/27/14 13:43	13127-88-3	
2-Fluorophenol (S)	47	%	17-120	2	05/23/14 00:00	05/27/14 13:43	367-12-4	
2,4,6-Tribromophenol (S)	87	%	39-120	2	05/23/14 00:00	05/27/14 13:43	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**93700**	ug/L	2500	250		05/23/14 17:22	67-64-1	M1,N2
Benzene	ND	ug/L	250	250		05/23/14 17:22	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/23/14 17:22	75-27-4	
Bromoform	ND	ug/L	250	250		05/23/14 17:22	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/23/14 17:22	74-83-9	
2-Butanone (MEK)	**36800**	ug/L	2500	250		05/23/14 17:22	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/23/14 17:22	56-23-5	M1
Chloroethane	ND	ug/L	250	250		05/23/14 17:22	75-00-3	
Chloroform	ND	ug/L	250	250		05/23/14 17:22	67-66-3	
1,4-Dichlorobenzene	**382**	ug/L	250	250		05/23/14 17:22	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/23/14 17:22	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/23/14 17:22	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/23/14 17:22	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/23/14 17:22	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/23/14 17:22	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/23/14 17:22	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/23/14 17:22	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/23/14 17:22	127-18-4	
Toluene	ND	ug/L	250	250		05/23/14 17:22	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/23/14 17:22	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/23/14 17:22	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/23/14 17:22	79-01-6	M1
Vinyl chloride	ND	ug/L	250	250		05/23/14 17:22	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/23/14 17:22	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	96	%	80-120	250		05/23/14 17:22	460-00-4	
Toluene-d8 (S)	91	%	80-120	250		05/23/14 17:22	2037-26-5	
1,2-Dichloroethane-d4 (S)	93	%	80-120	250		05/23/14 17:22	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/23/14 17:22		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**976**	mg/L	5.0	1		05/28/14 16:20		D6

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

Sample: 316-306 **Lab ID: 60169745001** Collected: 05/21/14 12:00 Received: 05/22/14 00:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	ND	mg/L	5.0	1		05/29/14 11:53		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**5840**	mg/L	5.0	1		05/28/14 13:53		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/24/14 08:20		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**33400**	mg/L	2.0	1	05/23/14 10:38	05/28/14 10:59		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**592**	mg/L	20.0	200		05/25/14 13:16	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**55000**	mg/L	5000	500		05/29/14 08:10		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

Sample: TRIP BLANK **Lab ID: 60169745002** Collected: 05/21/14 12:00 Received: 05/22/14 00:45 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/23/14 17:06	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/23/14 17:06	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/23/14 17:06	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/23/14 17:06	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/23/14 17:06	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/23/14 17:06	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/23/14 17:06	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/23/14 17:06	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/23/14 17:06	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/23/14 17:06	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/23/14 17:06	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/23/14 17:06	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/23/14 17:06	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/23/14 17:06	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/23/14 17:06	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/23/14 17:06	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/23/14 17:06	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/23/14 17:06	127-18-4	
Toluene	ND	ug/L	1.0	1		05/23/14 17:06	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/23/14 17:06	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/23/14 17:06	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/23/14 17:06	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/23/14 17:06	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/23/14 17:06	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	1		05/23/14 17:06	460-00-4	
Toluene-d8 (S)	90	%	80-120	1		05/23/14 17:06	2037-26-5	
1,2-Dichloroethane-d4 (S)	92	%	80-120	1		05/23/14 17:06	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/23/14 17:06		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: MERP/8435 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169745001

METHOD BLANK: 1384547 | Matrix: Water
Associated Lab Samples: 60169745001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/28/14 10:23	

LABORATORY CONTROL SAMPLE: 1384548

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: 1384549 1384550

Parameter	Units	60169654001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	13.7	5	5	15.4	17.0	35	67	70-130	10	20	M1

MATRIX SPIKE SAMPLE: 1384551

Parameter	Units	60170001001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	150	142	92	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: MERP/8441
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169745001

METHOD BLANK: 1385408
Matrix: Water
Associated Lab Samples: 60169745001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/29/14 15:43	

LABORATORY CONTROL SAMPLE: 1385409

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: 1385410 1385411

Parameter	Units	60169745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	143	135	95	90	70-130	6	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: MPRP/27397 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169745001

METHOD BLANK: 1384596 | Matrix: Water
Associated Lab Samples: 60169745001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/29/14 13:51	
Antimony	ug/L	ND	10.0	05/29/14 13:51	
Arsenic	ug/L	ND	10.0	05/29/14 13:51	
Beryllium	ug/L	ND	1.0	05/29/14 13:51	
Cadmium	ug/L	ND	5.0	05/29/14 13:51	
Chromium	ug/L	ND	5.0	05/29/14 13:51	
Cobalt	ug/L	ND	5.0	05/29/14 13:51	
Copper	ug/L	ND	10.0	05/29/14 13:51	
Iron	ug/L	ND	50.0	05/29/14 13:51	
Lead	ug/L	ND	5.0	05/29/14 13:51	
Nickel	ug/L	ND	5.0	05/29/14 13:51	
Selenium	ug/L	ND	15.0	05/29/14 13:51	
Silver	ug/L	ND	7.0	05/29/14 13:51	
Thallium	ug/L	ND	20.0	05/29/14 13:51	
Zinc	ug/L	ND	50.0	05/29/14 13:51	

LABORATORY CONTROL SAMPLE: 1384597

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10200	102	85-115	
Antimony	ug/L	1000	1030	103	85-115	
Arsenic	ug/L	1000	986	99	85-115	
Beryllium	ug/L	1000	999	100	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	1010	101	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	1000	100	85-115	
Iron	ug/L	10000	9640	96	85-115	
Lead	ug/L	1000	1010	101	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1000	100	85-115	
Silver	ug/L	500	498	100	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384598 1384599

Parameter	Units	60169745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	10500	10000	10000	13600	13500	32	30	70-130	1	8	M1
Antimony	ug/L	ND	1000	1000	1040	1040	98	98	70-130	0	7	
Arsenic	ug/L	1270	1000	1000	1280	1290	1	2	70-130	1	10	M1
Beryllium	ug/L	ND	1000	1000	912	918	91	92	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1020	1020	102	102	70-130	0	10	
Chromium	ug/L	280	1000	1000	1010	1010	73	73	70-130	0	10	
Cobalt	ug/L	47.9	1000	1000	956	963	91	92	70-130	1	6	
Copper	ug/L	ND	1000	1000	1030	1030	99	100	70-130	0	11	
Iron	ug/L	786000	10000	10000	159000	163000	-6271	-6235	70-130	2	10	M1
Lead	ug/L	108	1000	1000	919	923	81	82	70-130	0	10	
Nickel	ug/L	143	1000	1000	972	976	83	83	70-130	0	10	
Selenium	ug/L	87.7	1000	1000	1120	1130	104	105	70-130	1	10	
Silver	ug/L	ND	500	500	523	524	103	103	70-130	0	10	
Thallium	ug/L	ND	1000	1000	855	860	86	86	70-130	1	6	
Zinc	ug/L	5350	1000	1000	1960	1970	-338	-338	70-130	0	11	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: MPRP/27404
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169745001

METHOD BLANK: 1384826
Matrix: Water
Associated Lab Samples: 60169745001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/29/14 12:07	
Antimony, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Arsenic, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Beryllium, Dissolved	ug/L	ND	1.0	05/29/14 12:07	
Cadmium, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Chromium, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Cobalt, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Copper, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Iron, Dissolved	ug/L	ND	50.0	05/29/14 12:07	
Lead, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Nickel, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Selenium, Dissolved	ug/L	ND	15.0	05/29/14 12:07	
Silver, Dissolved	ug/L	ND	7.0	05/29/14 12:07	
Thallium, Dissolved	ug/L	ND	20.0	05/29/14 12:07	
Zinc, Dissolved	ug/L	ND	50.0	05/29/14 12:07	

LABORATORY CONTROL SAMPLE: 1384827

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10000	100	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	975	98	85-115	
Beryllium, Dissolved	ug/L	1000	988	99	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	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9900	99	85-115	
Lead, Dissolved	ug/L	1000	1010	101	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	497	99	85-115	
Thallium, Dissolved	ug/L	1000	996	100	85-115	
Zinc, Dissolved	ug/L	1000	1000	100	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384828 1384829

Parameter	Units	60169832001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	10000	10000	9720	9850	97	99	70-130	1	8	
Antimony, Dissolved	ug/L	ND	1000	1000	1030	1020	103	102	70-130	1	7	
Arsenic, Dissolved	ug/L	ND	1000	1000	984	987	98	98	70-130	0	10	
Beryllium, Dissolved	ug/L	ND	1000	1000	967	981	97	98	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	10	
Chromium, Dissolved	ug/L	ND	1000	1000	982	995	98	99	70-130	1	10	
Cobalt, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	6	
Copper, Dissolved	ug/L	ND	1000	1000	977	988	97	99	70-130	1	11	
Iron, Dissolved	ug/L	ND	10000	10000	9470	9570	95	96	70-130	1	10	
Lead, Dissolved	ug/L	ND	1000	1000	989	991	99	99	70-130	0	10	
Nickel, Dissolved	ug/L	ND	1000	1000	1010	1010	101	101	70-130	0	10	
Selenium, Dissolved	ug/L	ND	1000	1000	991	993	99	99	70-130	0	10	
Silver, Dissolved	ug/L	ND	500	500	484	490	97	98	70-130	1	10	
Thallium, Dissolved	ug/L	ND	1000	1000	992	993	99	99	70-130	0	6	
Zinc, Dissolved	ug/L	ND	1000	1000	993	993	99	99	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: MSV/61798 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169745001, 60169745002

METHOD BLANK: 1382813 | Matrix: Water
Associated Lab Samples: 60169745001, 60169745002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/23/14 15:03	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/23/14 15:03	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/23/14 15:03	
1,2-Dichloroethane	ug/L	ND	1.0	05/23/14 15:03	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/23/14 15:03	
2-Butanone (MEK)	ug/L	ND	10.0	05/23/14 15:03	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/23/14 15:03	N2
Acetone	ug/L	ND	10.0	05/23/14 15:03	N2
Benzene	ug/L	ND	1.0	05/23/14 15:03	
Bromodichloromethane	ug/L	ND	1.0	05/23/14 15:03	
Bromoform	ug/L	ND	1.0	05/23/14 15:03	
Bromomethane	ug/L	ND	5.0	05/23/14 15:03	
Carbon tetrachloride	ug/L	ND	1.0	05/23/14 15:03	
Chloroethane	ug/L	ND	1.0	05/23/14 15:03	
Chloroform	ug/L	ND	1.0	05/23/14 15:03	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/23/14 15:03	N2
Ethylbenzene	ug/L	ND	1.0	05/23/14 15:03	
Methylene chloride	ug/L	ND	1.0	05/23/14 15:03	
Tetrachloroethene	ug/L	ND	1.0	05/23/14 15:03	
Toluene	ug/L	ND	1.0	05/23/14 15:03	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/23/14 15:03	
Trichloroethene	ug/L	ND	1.0	05/23/14 15:03	
Vinyl chloride	ug/L	ND	1.0	05/23/14 15:03	
Xylene (Total)	ug/L	ND	3.0	05/23/14 15:03	N2
1,2-Dichloroethane-d4 (S)	%	94	80-120	05/23/14 15:03	
4-Bromofluorobenzene (S)	%	97	80-120	05/23/14 15:03	
Toluene-d8 (S)	%	94	80-120	05/23/14 15:03	

LABORATORY CONTROL SAMPLE: 1382814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	16.9	85	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	18.9	95	67-127	N2
1,1,2-Trichloroethane	ug/L	20	17.9	90	67-124	
1,2-Dichloroethane	ug/L	20	17.9	89	70-126	
1,4-Dichlorobenzene	ug/L	20	20.2	101	74-120	
2-Butanone (MEK)	ug/L	100	72.0	72	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	81.8	82	59-131	N2
Acetone	ug/L	100	76.4	76	38-134	N2
Benzene	ug/L	20	17.1	86	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

LABORATORY CONTROL SAMPLE: 1382814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	16.6	83	68-125	
Bromoform	ug/L	20	19.1	95	65-127	
Bromomethane	ug/L	20	12.9	64	13-157	
Carbon tetrachloride	ug/L	20	16.8	84	70-131	
Chloroethane	ug/L	20	18.6	93	47-133	
Chloroform	ug/L	20	17.2	86	65-127	
cis-1,2-Dichloroethene	ug/L	20	17.3	87	68-127	N2
Ethylbenzene	ug/L	20	20.6	103	74-122	
Methylene chloride	ug/L	20	15.1	75	64-129	
Tetrachloroethene	ug/L	20	20.1	101	73-125	
Toluene	ug/L	20	17.3	87	69-126	
trans-1,2-Dichloroethene	ug/L	20	15.6	78	66-129	
Trichloroethene	ug/L	20	16.8	84	71-123	
Vinyl chloride	ug/L	20	19.9	99	43-129	
Xylene (Total)	ug/L	60	62.1	104	75-121	N2
1,2-Dichloroethane-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Toluene-d8 (S)	%			93	80-120	

MATRIX SPIKE SAMPLE: 1382820

Parameter	Units	60169745001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	3070	61	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	3430	67	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	3270	65	52-143	
1,2-Dichloroethane	ug/L	ND	5000	3130	63	49-144	
1,4-Dichlorobenzene	ug/L	382	5000	4160	76	33-140	
2-Butanone (MEK)	ug/L	36800	25000	65800	116	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	14500	55	40-160	N2
Acetone	ug/L	93700	25000	149000	222	10-160	M1,N2
Benzene	ug/L	ND	5000	2970	59	37-151	
Bromodichloromethane	ug/L	ND	5000	2860	57	35-142	
Bromoform	ug/L	ND	5000	3350	67	45-142	
Bromomethane	ug/L	ND	5000	2530	51	10-158	
Carbon tetrachloride	ug/L	ND	5000	3260	65	70-140	M1
Chloroethane	ug/L	ND	5000	3410	68	19-152	
Chloroform	ug/L	ND	5000	2980	60	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	3080	62	34-147	N2
Ethylbenzene	ug/L	ND	5000	3490	70	40-142	
Methylene chloride	ug/L	ND	5000	2630	52	31-144	
Tetrachloroethene	ug/L	ND	5000	3530	71	64-148	
Toluene	ug/L	ND	5000	2850	57	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	2970	59	54-151	
Trichloroethene	ug/L	ND	5000	2900	58	71-149	M1
Vinyl chloride	ug/L	ND	5000	3760	75	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

MATRIX SPIKE SAMPLE: 1382820

Parameter	Units	60169745001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	10600	70	37-144	N2
1,2-Dichloroethane-d4 (S)	%				91	80-120	
4-Bromofluorobenzene (S)	%				99	80-120	
Toluene-d8 (S)	%				91	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: OEXT/44331 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169745001

METHOD BLANK: 1382932 | Matrix: Water
Associated Lab Samples: 60169745001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/27/14 12:41	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/27/14 12:41	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/27/14 12:41	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/27/14 12:41	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/27/14 12:41	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/27/14 12:41	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/27/14 12:41	
Hexachloroethane	ug/L	ND	5.0	05/27/14 12:41	
Naphthalene	ug/L	ND	5.0	05/27/14 12:41	
Nitrobenzene	ug/L	ND	5.0	05/27/14 12:41	
Pentachlorophenol	ug/L	ND	5.0	05/27/14 12:41	
Phenol	ug/L	ND	5.0	05/27/14 12:41	
2,4,6-Tribromophenol (S)	%	83	39-120	05/27/14 12:41	
2-Fluorobiphenyl (S)	%	84	39-120	05/27/14 12:41	
2-Fluorophenol (S)	%	44	17-120	05/27/14 12:41	
Nitrobenzene-d5 (S)	%	77	33-120	05/27/14 12:41	
Phenol-d6 (S)	%	27	11-120	05/27/14 12:41	
Terphenyl-d14 (S)	%	81	45-120	05/27/14 12:41	

LABORATORY CONTROL SAMPLE: 1382933

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	38.5	77	46-120	
2,4,6-Trichlorophenol	ug/L	50	40.9	82	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	33.8	68	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	30.4	61	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	45.2	90	40-133	
Hexachloro-1,3-butadiene	ug/L	50	36.9	74	44-116	
Hexachlorocyclopentadiene	ug/L	100	70.9	71	24-120	
Hexachloroethane	ug/L	50	37.0	74	43-113	
Naphthalene	ug/L	50	40.8	82	48-120	
Nitrobenzene	ug/L	50	41.0	82	48-120	
Pentachlorophenol	ug/L	50	45.7	91	47-120	
Phenol	ug/L	50	16.0	32	16-112	
2,4,6-Tribromophenol (S)	%			86	39-120	
2-Fluorobiphenyl (S)	%			79	39-120	
2-Fluorophenol (S)	%			44	17-120	
Nitrobenzene-d5 (S)	%			82	33-120	
Phenol-d6 (S)	%			29	11-120	
Terphenyl-d14 (S)	%			81	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

MATRIX SPIKE SAMPLE: 1382934

Parameter	Units	60169745001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3850	77	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4450	89	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3690	74	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	7820	5000	10800	59	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4230J	85	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3470	69	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	7580	76	11-120	
Hexachloroethane	ug/L	ND	5000	3410	68	40-113	
Naphthalene	ug/L	1580	5000	5410	77	45-120	
Nitrobenzene	ug/L	ND	5000	4530	91	38-120	
Pentachlorophenol	ug/L	ND	5000	4930	99	43-135	
Phenol	ug/L	11300	5000	12700	28	13-112	
2,4,6-Tribromophenol (S)	%				90	39-120	
2-Fluorobiphenyl (S)	%				79	39-120	
2-Fluorophenol (S)	%				41	17-120	
Nitrobenzene-d5 (S)	%				164	33-120	S0
Phenol-d6 (S)	%				28	11-120	
Terphenyl-d14 (S)	%				79	45-120	

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: WET/48111 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169745001

METHOD BLANK: 1385175 | Matrix: Water
Associated Lab Samples: 60169745001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/28/14 16:18	

LABORATORY CONTROL SAMPLE: 1385176

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: 1385177

Parameter	Units	60169645001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	888	160	1190	190	78-114	M1

SAMPLE DUPLICATE: 1385178

Parameter	Units	60169745001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	976	659	39	18	D6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: WET/48132 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169745001

METHOD BLANK: 1385563 | Matrix: Water
Associated Lab Samples: 60169745001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/29/14 11:52	

LABORATORY CONTROL SAMPLE: 1385564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	24.7	124	64-132	

MATRIX SPIKE SAMPLE: 1385565

Parameter	Units	60169645001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	10.8	80	45.6	43	64-132	M1

SAMPLE DUPLICATE: 1385566

Parameter	Units	60169745001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	4.8J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: WET/48105 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169745001

METHOD BLANK: 1385040 | Matrix: Water
Associated Lab Samples: 60169745001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/28/14 13:48	

SAMPLE DUPLICATE: 1385041

Parameter	Units	60169667001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	607	653	7	10	

SAMPLE DUPLICATE: 1385042

Parameter	Units	60169741001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	133	165	21	10	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: WET/48048
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169745001

SAMPLE DUPLICATE: 1383867

Parameter	Units	60169650002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	7.0	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: WET/48031 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169745001

METHOD BLANK: 1382965 | Matrix: Water
Associated Lab Samples: 60169745001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/28/14 10:21	

LABORATORY CONTROL SAMPLE: 1382966

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	203	102	85-115	

SAMPLE DUPLICATE: 1382967

Parameter	Units	60169836001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	5.0	3.2	42	17	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: WETA/29562 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169745001

METHOD BLANK: 1383471 | Matrix: Water
Associated Lab Samples: 60169745001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/25/14 12:47	

LABORATORY CONTROL SAMPLE: 1383472

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

MATRIX SPIKE SAMPLE: 1383473

Parameter	Units	60169612001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	6.4	10	15.9	95	90-110	

MATRIX SPIKE SAMPLE: 1383476

Parameter	Units	60169644002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.28	2	2.3	103	90-110	

SAMPLE DUPLICATE: 1383477

Parameter	Units	60169755001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	3.7	3.7	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

QC Batch: WETA/29602 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169745001

METHOD BLANK: 1384794 | Matrix: Water
Associated Lab Samples: 60169745001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/29/14 07:57	

LABORATORY CONTROL SAMPLE: 1384795

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: 1384796

Parameter	Units	60169372009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	303	250	544	96	90-110	

MATRIX SPIKE SAMPLE: 1384798

Parameter	Units	60169670001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	24.2	50	79.4	110	90-110	

SAMPLE DUPLICATE: 1384800

Parameter	Units	60169756001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	52.4	47.0	11	25	

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QUALIFIERS

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-306
Pace Project No.: 60169745

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169745001	**316-306**	EPA 200.7	MPRP/27397	EPA 200.7	ICP/20732
60169745001	**316-306**	EPA 200.7	MPRP/27404	EPA 200.7	ICP/20744
60169745001	**316-306**	EPA 245.1	MERP/8435	EPA 245.1	MERC/8390
60169745001	**316-306**	EPA 245.1	MERP/8441	EPA 245.1	MERC/8396
60169745001	**316-306**	EPA 625	OEXT/44331	EPA 625	MSSV/14188
60169745001	**316-306**	EPA 624 Low	MSV/61798		
60169745002	**TRIP BLANK**	EPA 624 Low	MSV/61798		
60169745001	**316-306**	EPA 1664A	WET/48111		
60169745001	**316-306**	EPA 1664A	WET/48132		
60169745001	**316-306**	SM 2540D	WET/48105		
60169745001	**316-306**	SM 4500-H+B	WET/48048		
60169745001	**316-306**	SM 5210B	WET/48031	SM 5210B	WET/48102
60169745001	**316-306**	EPA 350.1	WETA/29562		
60169745001	**316-306**	EPA 410.4	WETA/29602		

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www.pacelabs.com

Sample Condition Upon Receipt

WO#: 60169745
60169745

Client Name: Barr Engineering

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☑ L-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-239 / T-194 **Type of Ice:** Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 3.6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/22/14

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. BOD, ph
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC:	☑Yes	☐No	☐N/A	
Includes date/time/ID/analyses Matrix: WT				13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	initial ph BP3N 6.0, added 2.5 mL Final 4.5
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☑No	☐N/A	initial ph BP3S 4.5, added 2.5 mL Final 3.0 14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed: Lot # of added preservative: HNO3 - 12513-23-2, H2SO4 - 12522-2-7
Trip Blank present:	☑Yes	☐No	☐N/A	
Pace Trip Blank lot # (if purchased): 040714-3BE2				15.
Headspace in VOA vials (>6mm):	☐Yes	☑No	☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☑N/A	17. List State: MO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/22

Pace Analytical

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

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.	
Client Project ID:	BRIDGETON LF
Container Order Number:	

Section C — Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	130426_7588
Pace Project Manager:	Brown, Angie
Pace Profile #:	7585 LINE 2

Regulatory Agency:

State / Location: Missouri

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

Requested Analysis Filtered (Y/N): 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; BOD SM 5210B

ITEM#	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B		Residual Chlorine (Y/N)	60169745
1	316-306 5DH4U, BP3U	OT	G	2 BP3U		5/21/14	1200		14	10	4	1	0	2 AG4U			3AG3S		X	X	X	X	X	X	X	X	X	X	X	BP3N	4.5, BP3S3	on
2	TRIP BLANK 2 DH4U								2	2																X						on
3																																
4																																
5																																
6																															METALS LIST total & LF Dis:	
7																															Al,Sb,As,Be,Cd,Cr,	
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn	
9																															and Mercury	
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-21-14	2:10pm	Nanette Hearth	5/21/14	2:10				
SITE ADDRESS: BRIDGETON LF				E Brackett / Pace	5/22	0045	3.6	Y	Y	Y
13570 ST. CHARLES ROCK RD										
BRIDGETON MO 63044										

	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hunter King

SIGNATURE of SAMPLER: Hunter King

DATE Signed: 5/21/14

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(913)599-5665

June 02, 2014

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

RE: Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 23, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

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CERTIFICATIONS

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

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 316-307
Pace Project No.: 60169851

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169851001	**316-307**	Water	05/22/14 11:45	05/23/14 01:50
60169851002	**TRIP BLANK**	Water	05/22/14 11:45	05/23/14 01:50

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169851001	**316-307**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	JML	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60169851002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

Sample: 316-307 **Lab ID: 60169851001** Collected: 05/22/14 11:45 Received: 05/23/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**9650**	ug/L	750	2	05/28/14 17:50	05/29/14 14:22	7429-90-5	
Antimony	ND	ug/L	100	2	05/28/14 17:50	05/29/14 14:22	7440-36-0	D3
Arsenic	**1200**	ug/L	50.0	1	05/28/14 17:50	05/29/14 14:18	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/28/14 17:50	05/29/14 14:18	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:18	7440-43-9	
Chromium	**260**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:18	7440-47-3	
Cobalt	**43.9**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:18	7440-48-4	
Copper	ND	ug/L	50.0	1	05/28/14 17:50	05/29/14 14:18	7440-50-8	
Iron	**700000**	ug/L	250	1	05/28/14 17:50	05/29/14 14:18	7439-89-6	
Lead	**99.6**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:18	7439-92-1	
Nickel	**139**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:18	7440-02-0	
Selenium	**92.4**	ug/L	75.0	1	05/28/14 17:50	05/29/14 14:18	7782-49-2	
Silver	ND	ug/L	35.0	1	05/28/14 17:50	05/29/14 14:18	7440-22-4	
Thallium	ND	ug/L	100	1	05/28/14 17:50	05/29/14 14:18	7440-28-0	
Zinc	**4770**	ug/L	500	2	05/28/14 17:50	05/29/14 14:22	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1300**	ug/L	750	2	05/28/14 10:45	05/29/14 12:44	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/28/14 10:45	05/29/14 12:44	7440-36-0	D3
Arsenic, Dissolved	**926**	ug/L	50.0	1	05/28/14 10:45	05/29/14 12:40	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/28/14 10:45	05/29/14 12:40	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:40	7440-43-9	
Chromium, Dissolved	**173**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:40	7440-47-3	
Cobalt, Dissolved	**26.0**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:40	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/28/14 10:45	05/29/14 12:40	7440-50-8	
Iron, Dissolved	**352000**	ug/L	250	1	05/28/14 10:45	05/29/14 12:40	7439-89-6	
Lead, Dissolved	**26.3**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:40	7439-92-1	
Nickel, Dissolved	**95.6**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:40	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/28/14 10:45	05/29/14 12:40	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/28/14 10:45	05/29/14 12:40	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/28/14 10:45	05/29/14 12:40	7440-28-0	
Zinc, Dissolved	**3800**	ug/L	500	2	05/28/14 10:45	05/29/14 12:44	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**27.1**	ug/L	6.0	1	05/27/14 15:30	05/28/14 11:08	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/29/14 09:40	05/29/14 15:54	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/28/14 00:00	05/29/14 10:00	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:00	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:00	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:00	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/28/14 00:00	05/29/14 10:00	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**8000**	ug/L	4000	2	05/28/14 00:00	05/29/14 10:00		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

Sample: 316-307 **Lab ID: 60169851001** Collected: 05/22/14 11:45 Received: 05/23/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1360**	ug/L	1000	2	05/28/14 00:00	05/29/14 10:00	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:00	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:00	87-86-5	
Phenol	**10700**	ug/L	1000	2	05/28/14 00:00	05/29/14 10:00	108-95-2	M1
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:00	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:00	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	161	%	33-120	2	05/28/14 00:00	05/29/14 10:00	4165-60-0	S0
2-Fluorobiphenyl (S)	78	%	39-120	2	05/28/14 00:00	05/29/14 10:00	321-60-8	
Terphenyl-d14 (S)	78	%	45-120	2	05/28/14 00:00	05/29/14 10:00	1718-51-0	
Phenol-d6 (S)	26	%	11-120	2	05/28/14 00:00	05/29/14 10:00	13127-88-3	
2-Fluorophenol (S)	43	%	17-120	2	05/28/14 00:00	05/29/14 10:00	367-12-4	
2,4,6-Tribromophenol (S)	86	%	39-120	2	05/28/14 00:00	05/29/14 10:00	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**106000**	ug/L	2500	250		05/27/14 16:45	67-64-1	N2
Benzene	ND	ug/L	250	250		05/27/14 16:45	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/27/14 16:45	75-27-4	
Bromoform	ND	ug/L	250	250		05/27/14 16:45	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/27/14 16:45	74-83-9	
2-Butanone (MEK)	**47900**	ug/L	2500	250		05/27/14 16:45	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/27/14 16:45	56-23-5	
Chloroethane	ND	ug/L	250	250		05/27/14 16:45	75-00-3	
Chloroform	ND	ug/L	250	250		05/27/14 16:45	67-66-3	
1,4-Dichlorobenzene	**425**	ug/L	250	250		05/27/14 16:45	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/27/14 16:45	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/27/14 16:45	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/27/14 16:45	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/27/14 16:45	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/27/14 16:45	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/27/14 16:45	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/27/14 16:45	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/27/14 16:45	127-18-4	
Toluene	**681**	ug/L	250	250		05/27/14 16:45	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/27/14 16:45	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/27/14 16:45	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/27/14 16:45	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/27/14 16:45	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/27/14 16:45	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	250		05/27/14 16:45	460-00-4	HS
Toluene-d8 (S)	100	%	80-120	250		05/27/14 16:45	2037-26-5	
1,2-Dichloroethane-d4 (S)	98	%	80-120	250		05/27/14 16:45	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/27/14 16:45		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**815**	mg/L	5.0	1		05/28/14 16:20		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

Sample: 316-307 **Lab ID: 60169851001** Collected: 05/22/14 11:45 Received: 05/23/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**5.6**	mg/L	5.0	1		05/29/14 11:53		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**5460**	mg/L	5.0	1		05/29/14 10:48		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.5**	Std. Units	0.10	1		05/24/14 08:20		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**29400**	mg/L	2.0	1	05/23/14 15:57	05/28/14 16:17		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**592**	mg/L	20.0	200		05/25/14 13:21	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**54400**	mg/L	5000	500		05/29/14 08:15		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

Sample: TRIP BLANK **Lab ID: 60169851002** Collected: 05/22/14 11:45 Received: 05/23/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/27/14 16:30	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/27/14 16:30	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/27/14 16:30	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/27/14 16:30	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/27/14 16:30	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/27/14 16:30	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/27/14 16:30	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/27/14 16:30	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/27/14 16:30	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/27/14 16:30	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/27/14 16:30	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/27/14 16:30	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/27/14 16:30	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/27/14 16:30	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/27/14 16:30	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/27/14 16:30	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/27/14 16:30	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/27/14 16:30	127-18-4	
Toluene	ND	ug/L	1.0	1		05/27/14 16:30	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/27/14 16:30	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/27/14 16:30	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/27/14 16:30	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/27/14 16:30	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/27/14 16:30	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	101	%	80-120	1		05/27/14 16:30	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		05/27/14 16:30	2037-26-5	
1,2-Dichloroethane-d4 (S)	97	%	80-120	1		05/27/14 16:30	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/27/14 16:30		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: MERP/8435 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169851001

METHOD BLANK: 1384547 | Matrix: Water
Associated Lab Samples: 60169851001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/28/14 10:23	

LABORATORY CONTROL SAMPLE: 1384548

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: 1384549 1384550

Parameter	Units	60169654001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	13.7	5	5	15.4	17.0	35	67	70-130	10	20	M1

MATRIX SPIKE SAMPLE: 1384551

Parameter	Units	60170001001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	150	142	92	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: MERP/8441
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169851001

METHOD BLANK: 1385408
Matrix: Water
Associated Lab Samples: 60169851001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/29/14 15:43	

LABORATORY CONTROL SAMPLE: 1385409

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: 1385410 1385411

Parameter	Units	60169745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	143	135	95	90	70-130	6	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: MPRP/27397
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169851001

METHOD BLANK: 1384596
Matrix: Water
Associated Lab Samples: 60169851001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/29/14 13:51	
Antimony	ug/L	ND	10.0	05/29/14 13:51	
Arsenic	ug/L	ND	10.0	05/29/14 13:51	
Beryllium	ug/L	ND	1.0	05/29/14 13:51	
Cadmium	ug/L	ND	5.0	05/29/14 13:51	
Chromium	ug/L	ND	5.0	05/29/14 13:51	
Cobalt	ug/L	ND	5.0	05/29/14 13:51	
Copper	ug/L	ND	10.0	05/29/14 13:51	
Iron	ug/L	ND	50.0	05/29/14 13:51	
Lead	ug/L	ND	5.0	05/29/14 13:51	
Nickel	ug/L	ND	5.0	05/29/14 13:51	
Selenium	ug/L	ND	15.0	05/29/14 13:51	
Silver	ug/L	ND	7.0	05/29/14 13:51	
Thallium	ug/L	ND	20.0	05/29/14 13:51	
Zinc	ug/L	ND	50.0	05/29/14 13:51	

LABORATORY CONTROL SAMPLE: 1384597

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10200	102	85-115	
Antimony	ug/L	1000	1030	103	85-115	
Arsenic	ug/L	1000	986	99	85-115	
Beryllium	ug/L	1000	999	100	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	1010	101	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	1000	100	85-115	
Iron	ug/L	10000	9640	96	85-115	
Lead	ug/L	1000	1010	101	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1000	100	85-115	
Silver	ug/L	500	498	100	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384598 1384599

Parameter	Units	60169745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	10500	10000	10000	13600	13500	32	30	70-130	1	8	M1
Antimony	ug/L	ND	1000	1000	1040	1040	98	98	70-130	0	7	
Arsenic	ug/L	1270	1000	1000	1280	1290	1	2	70-130	1	10	M1
Beryllium	ug/L	ND	1000	1000	912	918	91	92	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1020	1020	102	102	70-130	0	10	
Chromium	ug/L	280	1000	1000	1010	1010	73	73	70-130	0	10	
Cobalt	ug/L	47.9	1000	1000	956	963	91	92	70-130	1	6	
Copper	ug/L	ND	1000	1000	1030	1030	99	100	70-130	0	11	
Iron	ug/L	786000	10000	10000	159000	163000	-6271	-6235	70-130	2	10	M1
Lead	ug/L	108	1000	1000	919	923	81	82	70-130	0	10	
Nickel	ug/L	143	1000	1000	972	976	83	83	70-130	0	10	
Selenium	ug/L	87.7	1000	1000	1120	1130	104	105	70-130	1	10	
Silver	ug/L	ND	500	500	523	524	103	103	70-130	0	10	
Thallium	ug/L	ND	1000	1000	855	860	86	86	70-130	1	6	
Zinc	ug/L	5350	1000	1000	1960	1970	-338	-338	70-130	0	11	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: MPRP/27404
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169851001

METHOD BLANK: 1384826
Matrix: Water
Associated Lab Samples: 60169851001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/29/14 12:07	
Antimony, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Arsenic, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Beryllium, Dissolved	ug/L	ND	1.0	05/29/14 12:07	
Cadmium, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Chromium, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Cobalt, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Copper, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Iron, Dissolved	ug/L	ND	50.0	05/29/14 12:07	
Lead, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Nickel, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Selenium, Dissolved	ug/L	ND	15.0	05/29/14 12:07	
Silver, Dissolved	ug/L	ND	7.0	05/29/14 12:07	
Thallium, Dissolved	ug/L	ND	20.0	05/29/14 12:07	
Zinc, Dissolved	ug/L	ND	50.0	05/29/14 12:07	

LABORATORY CONTROL SAMPLE: 1384827

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10000	100	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	975	98	85-115	
Beryllium, Dissolved	ug/L	1000	988	99	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	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9900	99	85-115	
Lead, Dissolved	ug/L	1000	1010	101	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	497	99	85-115	
Thallium, Dissolved	ug/L	1000	996	100	85-115	
Zinc, Dissolved	ug/L	1000	1000	100	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384828 1384829

Parameter	Units	60169832001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	10000	10000	9720	9850	97	99	70-130	1	8	
Antimony, Dissolved	ug/L	ND	1000	1000	1030	1020	103	102	70-130	1	7	
Arsenic, Dissolved	ug/L	ND	1000	1000	984	987	98	98	70-130	0	10	
Beryllium, Dissolved	ug/L	ND	1000	1000	967	981	97	98	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	10	
Chromium, Dissolved	ug/L	ND	1000	1000	982	995	98	99	70-130	1	10	
Cobalt, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	6	
Copper, Dissolved	ug/L	ND	1000	1000	977	988	97	99	70-130	1	11	
Iron, Dissolved	ug/L	ND	10000	10000	9470	9570	95	96	70-130	1	10	
Lead, Dissolved	ug/L	ND	1000	1000	989	991	99	99	70-130	0	10	
Nickel, Dissolved	ug/L	ND	1000	1000	1010	1010	101	101	70-130	0	10	
Selenium, Dissolved	ug/L	ND	1000	1000	991	993	99	99	70-130	0	10	
Silver, Dissolved	ug/L	ND	500	500	484	490	97	98	70-130	1	10	
Thallium, Dissolved	ug/L	ND	1000	1000	992	993	99	99	70-130	0	6	
Zinc, Dissolved	ug/L	ND	1000	1000	993	993	99	99	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: MSV/61829 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169851001, 60169851002

METHOD BLANK: 1383508 | Matrix: Water
Associated Lab Samples: 60169851001, 60169851002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/27/14 15:59	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,2-Dichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/27/14 15:59	
2-Butanone (MEK)	ug/L	ND	10.0	05/27/14 15:59	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/27/14 15:59	N2
Acetone	ug/L	ND	10.0	05/27/14 15:59	N2
Benzene	ug/L	ND	1.0	05/27/14 15:59	
Bromodichloromethane	ug/L	ND	1.0	05/27/14 15:59	
Bromoform	ug/L	ND	1.0	05/27/14 15:59	
Bromomethane	ug/L	ND	5.0	05/27/14 15:59	
Carbon tetrachloride	ug/L	ND	1.0	05/27/14 15:59	
Chloroethane	ug/L	ND	1.0	05/27/14 15:59	
Chloroform	ug/L	ND	1.0	05/27/14 15:59	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/27/14 15:59	N2
Ethylbenzene	ug/L	ND	1.0	05/27/14 15:59	
Methylene chloride	ug/L	ND	1.0	05/27/14 15:59	
Tetrachloroethene	ug/L	ND	1.0	05/27/14 15:59	
Toluene	ug/L	ND	1.0	05/27/14 15:59	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/27/14 15:59	
Trichloroethene	ug/L	ND	1.0	05/27/14 15:59	
Vinyl chloride	ug/L	ND	1.0	05/27/14 15:59	
Xylene (Total)	ug/L	ND	3.0	05/27/14 15:59	N2
1,2-Dichloroethane-d4 (S)	%	101	80-120	05/27/14 15:59	
4-Bromofluorobenzene (S)	%	100	80-120	05/27/14 15:59	
Toluene-d8 (S)	%	100	80-120	05/27/14 15:59	

LABORATORY CONTROL SAMPLE: 1383509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.3	91	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	17.9	90	67-127	N2
1,1,2-Trichloroethane	ug/L	20	18.0	90	67-124	
1,2-Dichloroethane	ug/L	20	18.4	92	70-126	
1,4-Dichlorobenzene	ug/L	20	18.3	91	74-120	
2-Butanone (MEK)	ug/L	100	92.5	93	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	90.0	90	59-131	N2
Acetone	ug/L	100	82.0	82	38-134	N2
Benzene	ug/L	20	17.5	88	75-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

LABORATORY CONTROL SAMPLE: 1383509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	18.4	92	68-125	
Bromoform	ug/L	20	18.6	93	65-127	
Bromomethane	ug/L	20	20.8	104	13-157	
Carbon tetrachloride	ug/L	20	17.5	88	70-131	
Chloroethane	ug/L	20	19.7	99	47-133	
Chloroform	ug/L	20	18.0	90	65-127	
cis-1,2-Dichloroethene	ug/L	20	18.0	90	68-127	N2
Ethylbenzene	ug/L	20	18.4	92	74-122	
Methylene chloride	ug/L	20	19.5	98	64-129	
Tetrachloroethene	ug/L	20	18.1	90	73-125	
Toluene	ug/L	20	17.5	88	69-126	
trans-1,2-Dichloroethene	ug/L	20	16.6	83	66-129	
Trichloroethene	ug/L	20	17.4	87	71-123	
Vinyl chloride	ug/L	20	20.6	103	43-129	
Xylene (Total)	ug/L	60	56.0	93	75-121	N2
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1383510

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4410	88	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4490	90	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4180	84	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4170	83	49-144	
1,4-Dichlorobenzene	ug/L	425	5000	4690	85	33-140	
2-Butanone (MEK)	ug/L	47900	25000	66300	73	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	22200	86	40-160	N2
Acetone	ug/L	106000	25000	124000	71	10-160	N2
Benzene	ug/L	ND	5000	4160	81	37-151	
Bromodichloromethane	ug/L	ND	5000	4250	85	35-142	
Bromoform	ug/L	ND	5000	4410	88	45-142	
Bromomethane	ug/L	ND	5000	4280	86	10-158	
Carbon tetrachloride	ug/L	ND	5000	4490	90	70-140	
Chloroethane	ug/L	ND	5000	4500	90	19-152	
Chloroform	ug/L	ND	5000	4050	81	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4190	84	34-147	N2
Ethylbenzene	ug/L	ND	5000	4380	87	40-142	
Methylene chloride	ug/L	ND	5000	3570	71	31-144	
Tetrachloroethene	ug/L	ND	5000	4250	85	64-148	
Toluene	ug/L	681	5000	4680	80	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3950	79	54-151	
Trichloroethene	ug/L	ND	5000	4090	82	71-149	
Vinyl chloride	ug/L	ND	5000	4720	94	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

MATRIX SPIKE SAMPLE: 1383510

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	13000	87	37-144	N2
1,2-Dichloroethane-d4 (S)	%				98	80-120	
4-Bromofluorobenzene (S)	%				99	80-120	HS
Toluene-d8 (S)	%				100	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: OEXT/44386 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169851001

METHOD BLANK: 1384712 | Matrix: Water
Associated Lab Samples: 60169851001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/29/14 08:58	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/29/14 08:58	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/29/14 08:58	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/29/14 08:58	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachloroethane	ug/L	ND	5.0	05/29/14 08:58	
Naphthalene	ug/L	ND	5.0	05/29/14 08:58	
Nitrobenzene	ug/L	ND	5.0	05/29/14 08:58	
Pentachlorophenol	ug/L	ND	5.0	05/29/14 08:58	
Phenol	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Tribromophenol (S)	%	93	39-120	05/29/14 08:58	
2-Fluorobiphenyl (S)	%	86	39-120	05/29/14 08:58	
2-Fluorophenol (S)	%	45	17-120	05/29/14 08:58	
Nitrobenzene-d5 (S)	%	84	33-120	05/29/14 08:58	
Phenol-d6 (S)	%	29	11-120	05/29/14 08:58	
Terphenyl-d14 (S)	%	84	45-120	05/29/14 08:58	

LABORATORY CONTROL SAMPLE: 1384713

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	38.7	77	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.3	85	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.3	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	28.6	57	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	44.1	88	40-133	
Hexachloro-1,3-butadiene	ug/L	50	39.8	80	44-116	
Hexachlorocyclopentadiene	ug/L	100	66.1	66	24-120	
Hexachloroethane	ug/L	50	38.4	77	43-113	
Naphthalene	ug/L	50	39.7	79	48-120	
Nitrobenzene	ug/L	50	41.4	83	48-120	
Pentachlorophenol	ug/L	50	45.2	90	47-120	
Phenol	ug/L	50	15.2	30	16-112	
2,4,6-Tribromophenol (S)	%			90	39-120	
2-Fluorobiphenyl (S)	%			85	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			29	11-120	
Terphenyl-d14 (S)	%			85	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

MATRIX SPIKE SAMPLE: 1384714

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3530	71	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4450	89	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3660	73	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	8000	5000	9420	28	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4490J	90	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3400	68	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	6750	68	11-120	
Hexachloroethane	ug/L	ND	5000	3610	72	40-113	
Naphthalene	ug/L	1360	5000	4640	65	45-120	
Nitrobenzene	ug/L	ND	5000	4140	83	38-120	
Pentachlorophenol	ug/L	ND	5000	5000	100	43-135	
Phenol	ug/L	10700	5000	9770	-20	13-112	M1
2,4,6-Tribromophenol (S)	%				92	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				42	17-120	
Nitrobenzene-d5 (S)	%				144	33-120	S0
Phenol-d6 (S)	%				25	11-120	
Terphenyl-d14 (S)	%				80	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: WET/48111
QC Batch Method: EPA 1664A
Analysis Method: EPA 1664A
Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169851001

METHOD BLANK: 1385175
Matrix: Water
Associated Lab Samples: 60169851001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	05/28/14 16:18	

LABORATORY CONTROL SAMPLE: 1385176

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: 1385177

Parameter	Units	60169645001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	888	160	1190	190	78-114	M1

SAMPLE DUPLICATE: 1385178

Parameter	Units	60169745001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	976	659	39	18	D6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: WET/48132
QC Batch Method: EPA 1664A
Analysis Method: EPA 1664A
Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169851001

METHOD BLANK: 1385563
Matrix: Water
Associated Lab Samples: 60169851001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	05/29/14 11:52	

LABORATORY CONTROL SAMPLE: 1385564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	24.7	124	64-132	

MATRIX SPIKE SAMPLE: 1385565

Parameter	Units	60169645001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	10.8	80	45.6	43	64-132	M1

SAMPLE DUPLICATE: 1385566

Parameter	Units	60169745001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	4.8J		34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: WET/48126 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169851001

METHOD BLANK: 1385459 | Matrix: Water
Associated Lab Samples: 60169851001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/29/14 10:46	

SAMPLE DUPLICATE: 1385460

Parameter	Units	60169814002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	118	142	19	10	D6

SAMPLE DUPLICATE: 1385461

Parameter	Units	60169856001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	6.0		10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: WET/48048
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60169851001

SAMPLE DUPLICATE: 1383867

Parameter	Units	60169650002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	7.0	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: WET/48044 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169851001

METHOD BLANK: 1383678 | Matrix: Water
Associated Lab Samples: 60169851001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/28/14 16:03	

LABORATORY CONTROL SAMPLE: 1383679

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	176	89	85-115	

SAMPLE DUPLICATE: 1383680

Parameter	Units	60169871001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	319	312	2	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: WETA/29562 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169851001

METHOD BLANK: 1383471 | Matrix: Water
Associated Lab Samples: 60169851001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/25/14 12:47	

LABORATORY CONTROL SAMPLE: 1383472

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

MATRIX SPIKE SAMPLE: 1383473

Parameter	Units	60169612001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	6.4	10	15.9	95	90-110	

MATRIX SPIKE SAMPLE: 1383476

Parameter	Units	60169644002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.28	2	2.3	103	90-110	

SAMPLE DUPLICATE: 1383477

Parameter	Units	60169755001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	3.7	3.7	0	18	

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

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

QC Batch: WETA/29602 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169851001

METHOD BLANK: 1384794 | Matrix: Water
Associated Lab Samples: 60169851001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/29/14 07:57	

LABORATORY CONTROL SAMPLE: 1384795

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: 1384796

Parameter	Units	60169372009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	303	250	544	96	90-110	

MATRIX SPIKE SAMPLE: 1384798

Parameter	Units	60169670001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	24.2	50	79.4	110	90-110	

SAMPLE DUPLICATE: 1384800

Parameter	Units	60169756001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	52.4	47.0	11	25	

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QUALIFIERS

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-307
Pace Project No.: 60169851

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169851001	**316-307**	EPA 200.7	MPRP/27397	EPA 200.7	ICP/20732
60169851001	**316-307**	EPA 200.7	MPRP/27404	EPA 200.7	ICP/20744
60169851001	**316-307**	EPA 245.1	MERP/8435	EPA 245.1	MERC/8390
60169851001	**316-307**	EPA 245.1	MERP/8441	EPA 245.1	MERC/8396
60169851001	**316-307**	EPA 625	OEXT/44386	EPA 625	MSSV/14201
60169851001	**316-307**	EPA 624 Low	MSV/61829		
60169851002	**TRIP BLANK**	EPA 624 Low	MSV/61829		
60169851001	**316-307**	EPA 1664A	WET/48111		
60169851001	**316-307**	EPA 1664A	WET/48132		
60169851001	**316-307**	SM 2540D	WET/48126		
60169851001	**316-307**	SM 4500-H+B	WET/48048		
60169851001	**316-307**	SM 5210B	WET/48044	SM 5210B	WET/48110
60169851001	**316-307**	EPA 350.1	WETA/29562		
60169851001	**316-307**	EPA 410.4	WETA/29602		

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Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt

WO# : 60169851

60169851

Client Name: Barr Engineering

Optional
Proj Due Date:
Proj Name:

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-239 / T-194 **Type of Ice:** Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 5.2

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/23/14 [illegible]

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. BOD, ph
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes	☐No	☐N/A	13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	initial pH BP3N 4.5, added 2.5 mL final 4.0 initial pH BP3S 4.0, added 2.5 mL final 3.5
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☑No	☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed [illegible] Lot # of added preservative HNO3 - 12513-23-2 H2SO4 - 12522-2-7
Trip Blank present: Pace Trip Blank lot # (if purchased): 040714-3BE2	☑Yes	☐No	☐N/A	15.
Headspace in VOA vials (>6mm):	☑Yes	☐No	☐N/A	5 of 5 DAGW - FOOTNOTE BASED ON HISTORICAL INSTRUCTIONS 16.
Project sampled in USDA Regulated Area:	☐Yes	☐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: MW for AKB Date: 5/23/14

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

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.	
Client Project ID:	BRIDGETON LF
Container Order Number:	

Section C — Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	130426_7588
Pace Project Manager:	Brown, Angie
Pace Profile #:	7585 LINE 2

Regulatory Agency
State / Location
Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B		Residual Chlorine (Y/N)	6J69851
1	316-307 5DH9U, 3AG3S, BP3U	OT	G	5-22-14	11:45	2BP2U			14	10	4	1	0	DI3U	40				X	X	X	X	X	X	X	X	X	X	X	BP3S	3-5 2AG4U	
2	TRIP BLANK 2DH9U								2	2																X						
3																																
4																																
5																																
6																															METALS LIST total & LF Dis:	
7																															Al,Sb,As,Be,Cd,Cr,	
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn	
9																															and Mercury	
10																																
11																																
12																																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-22-14	2:10pm	Bernadette Martin	5-22-14	2:10pm				
SITE ADDRESS: BRIDGETON LF				E Brackett / Pace	5/23	0150	5.2	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:	Aaron Weber					
SIGNATURE of SAMPLER:	Aaron Weber	DATE Signed: 5-22-14				

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June 03, 2014

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

RE: Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 24, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

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 316-308
Pace Project No.: 60169950

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60169950001	**316-308**	Water	05/23/14 11:45	05/24/14 01:50
60169950002	**TRIP BLANK**	Water	05/23/14 00:00	05/24/14 01:50

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60169950001	**316-308**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	JML	1
		SM 5210B	DJR	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60169950002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

Sample: 316-308 **Lab ID: 60169950001** Collected: 05/23/14 11:45 Received: 05/24/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**5410**	ug/L	750	2	05/28/14 17:50	05/29/14 14:35	7429-90-5	
Antimony	ND	ug/L	100	2	05/28/14 17:50	05/29/14 14:35	7440-36-0	D3
Arsenic	**1190**	ug/L	50.0	1	05/28/14 17:50	05/29/14 14:32	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/28/14 17:50	05/29/14 14:32	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:32	7440-43-9	
Chromium	**253**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:32	7440-47-3	
Cobalt	**44.0**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:32	7440-48-4	
Copper	ND	ug/L	50.0	1	05/28/14 17:50	05/29/14 14:32	7440-50-8	
Iron	**679000**	ug/L	250	1	05/28/14 17:50	05/29/14 14:32	7439-89-6	
Lead	**91.4**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:32	7439-92-1	
Nickel	**134**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:32	7440-02-0	
Selenium	**90.0**	ug/L	75.0	1	05/28/14 17:50	05/29/14 14:32	7782-49-2	
Silver	ND	ug/L	35.0	1	05/28/14 17:50	05/29/14 14:32	7440-22-4	
Thallium	ND	ug/L	100	1	05/28/14 17:50	05/29/14 14:32	7440-28-0	
Zinc	**4920**	ug/L	500	2	05/28/14 17:50	05/29/14 14:35	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1380**	ug/L	750	2	05/28/14 10:45	05/29/14 12:50	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/28/14 10:45	05/29/14 12:50	7440-36-0	D3
Arsenic, Dissolved	**974**	ug/L	50.0	1	05/28/14 10:45	05/29/14 12:47	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/28/14 10:45	05/29/14 12:47	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:47	7440-43-9	
Chromium, Dissolved	**180**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:47	7440-47-3	
Cobalt, Dissolved	**27.7**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:47	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/28/14 10:45	05/29/14 12:47	7440-50-8	
Iron, Dissolved	**370000**	ug/L	250	1	05/28/14 10:45	05/29/14 12:47	7439-89-6	
Lead, Dissolved	**33.8**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:47	7439-92-1	
Nickel, Dissolved	**101**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:47	7440-02-0	
Selenium, Dissolved	**76.7**	ug/L	75.0	1	05/28/14 10:45	05/29/14 12:47	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/28/14 10:45	05/29/14 12:47	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/28/14 10:45	05/29/14 12:47	7440-28-0	
Zinc, Dissolved	**4040**	ug/L	500	2	05/28/14 10:45	05/29/14 12:50	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**9.1**	ug/L	6.0	1	05/27/14 15:30	05/28/14 11:22	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/29/14 09:40	05/29/14 15:57	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/28/14 00:00	05/29/14 10:21	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:21	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:21	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:21	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/28/14 00:00	05/29/14 10:21	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7310**	ug/L	4000	2	05/28/14 00:00	05/29/14 10:21		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

Sample: 316-308 **Lab ID: 60169950001** Collected: 05/23/14 11:45 Received: 05/24/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1250**	ug/L	1000	2	05/28/14 00:00	05/29/14 10:21	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:21	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:21	87-86-5	
Phenol	**9880**	ug/L	1000	2	05/28/14 00:00	05/29/14 10:21	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:21	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:21	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	164	%	33-120	2	05/28/14 00:00	05/29/14 10:21	4165-60-0	S0
2-Fluorobiphenyl (S)	77	%	39-120	2	05/28/14 00:00	05/29/14 10:21	321-60-8	
Terphenyl-d14 (S)	77	%	45-120	2	05/28/14 00:00	05/29/14 10:21	1718-51-0	
Phenol-d6 (S)	25	%	11-120	2	05/28/14 00:00	05/29/14 10:21	13127-88-3	
2-Fluorophenol (S)	38	%	17-120	2	05/28/14 00:00	05/29/14 10:21	367-12-4	
2,4,6-Tribromophenol (S)	94	%	39-120	2	05/28/14 00:00	05/29/14 10:21	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**106000**	ug/L	2500	250		05/27/14 17:16	67-64-1	N2
Benzene	ND	ug/L	250	250		05/27/14 17:16	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/27/14 17:16	75-27-4	
Bromoform	ND	ug/L	250	250		05/27/14 17:16	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/27/14 17:16	74-83-9	
2-Butanone (MEK)	**44700**	ug/L	2500	250		05/27/14 17:16	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/27/14 17:16	56-23-5	
Chloroethane	ND	ug/L	250	250		05/27/14 17:16	75-00-3	
Chloroform	ND	ug/L	250	250		05/27/14 17:16	67-66-3	
1,4-Dichlorobenzene	**334**	ug/L	250	250		05/27/14 17:16	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/27/14 17:16	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/27/14 17:16	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/27/14 17:16	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/27/14 17:16	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/27/14 17:16	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/27/14 17:16	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/27/14 17:16	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/27/14 17:16	127-18-4	
Toluene	ND	ug/L	250	250		05/27/14 17:16	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/27/14 17:16	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/27/14 17:16	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/27/14 17:16	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/27/14 17:16	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/27/14 17:16	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	250		05/27/14 17:16	460-00-4	HS
Toluene-d8 (S)	100	%	80-120	250		05/27/14 17:16	2037-26-5	
1,2-Dichloroethane-d4 (S)	97	%	80-120	250		05/27/14 17:16	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/27/14 17:16		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**883**	mg/L	5.0	1		06/02/14 08:06		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

Sample: 316-308 **Lab ID: 60169950001** Collected: 05/23/14 11:45 Received: 05/24/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**14.2**	mg/L	5.0	1		06/02/14 08:26		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4780**	mg/L	5.0	1		05/29/14 10:55		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/24/14 11:45		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**28000**	mg/L	2.0	1	05/24/14 10:53	05/29/14 08:29		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**616**	mg/L	20.0	200		05/27/14 16:10	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**50400**	mg/L	5000	500		05/29/14 08:17		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

Sample: TRIP BLANK **Lab ID: 60169950002** Collected: 05/23/14 00:00 Received: 05/24/14 01:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/27/14 18:02	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/27/14 18:02	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/27/14 18:02	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/27/14 18:02	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/27/14 18:02	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/27/14 18:02	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/27/14 18:02	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/27/14 18:02	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/27/14 18:02	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/27/14 18:02	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/27/14 18:02	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/27/14 18:02	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/27/14 18:02	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/27/14 18:02	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/27/14 18:02	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/27/14 18:02	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/27/14 18:02	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/27/14 18:02	127-18-4	
Toluene	ND	ug/L	1.0	1		05/27/14 18:02	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/27/14 18:02	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/27/14 18:02	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/27/14 18:02	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/27/14 18:02	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/27/14 18:02	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	1		05/27/14 18:02	460-00-4	
Toluene-d8 (S)	101	%	80-120	1		05/27/14 18:02	2037-26-5	
1,2-Dichloroethane-d4 (S)	95	%	80-120	1		05/27/14 18:02	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/27/14 18:02		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: MERP/8435 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60169950001

METHOD BLANK: 1384547 | Matrix: Water
Associated Lab Samples: 60169950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/28/14 10:23	

LABORATORY CONTROL SAMPLE: 1384548

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: 1384549 1384550

Parameter	Units	60169654001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	13.7	5	5	15.4	17.0	35	67	70-130	10	20	M1

MATRIX SPIKE SAMPLE: 1384551

Parameter	Units	60170001001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	150	142	92	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: MERP/8441
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60169950001

METHOD BLANK: 1385408
Matrix: Water
Associated Lab Samples: 60169950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/29/14 15:43	

LABORATORY CONTROL SAMPLE: 1385409

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: 1385410 1385411

Parameter	Units	60169745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	143	135	95	90	70-130	6	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: MPRP/27397
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60169950001

METHOD BLANK: 1384596
Matrix: Water
Associated Lab Samples: 60169950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/29/14 13:51	
Antimony	ug/L	ND	10.0	05/29/14 13:51	
Arsenic	ug/L	ND	10.0	05/29/14 13:51	
Beryllium	ug/L	ND	1.0	05/29/14 13:51	
Cadmium	ug/L	ND	5.0	05/29/14 13:51	
Chromium	ug/L	ND	5.0	05/29/14 13:51	
Cobalt	ug/L	ND	5.0	05/29/14 13:51	
Copper	ug/L	ND	10.0	05/29/14 13:51	
Iron	ug/L	ND	50.0	05/29/14 13:51	
Lead	ug/L	ND	5.0	05/29/14 13:51	
Nickel	ug/L	ND	5.0	05/29/14 13:51	
Selenium	ug/L	ND	15.0	05/29/14 13:51	
Silver	ug/L	ND	7.0	05/29/14 13:51	
Thallium	ug/L	ND	20.0	05/29/14 13:51	
Zinc	ug/L	ND	50.0	05/29/14 13:51	

LABORATORY CONTROL SAMPLE: 1384597

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10200	102	85-115	
Antimony	ug/L	1000	1030	103	85-115	
Arsenic	ug/L	1000	986	99	85-115	
Beryllium	ug/L	1000	999	100	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	1010	101	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	1000	100	85-115	
Iron	ug/L	10000	9640	96	85-115	
Lead	ug/L	1000	1010	101	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1000	100	85-115	
Silver	ug/L	500	498	100	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384598 1384599

Parameter	Units	60169745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	10500	10000	10000	13600	13500	32	30	70-130	1	8	M1
Antimony	ug/L	ND	1000	1000	1040	1040	98	98	70-130	0	7	
Arsenic	ug/L	1270	1000	1000	1280	1290	1	2	70-130	1	10	M1
Beryllium	ug/L	ND	1000	1000	912	918	91	92	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1020	1020	102	102	70-130	0	10	
Chromium	ug/L	280	1000	1000	1010	1010	73	73	70-130	0	10	
Cobalt	ug/L	47.9	1000	1000	956	963	91	92	70-130	1	6	
Copper	ug/L	ND	1000	1000	1030	1030	99	100	70-130	0	11	
Iron	ug/L	786000	10000	10000	159000	163000	-6271	-6235	70-130	2	10	M1
Lead	ug/L	108	1000	1000	919	923	81	82	70-130	0	10	
Nickel	ug/L	143	1000	1000	972	976	83	83	70-130	0	10	
Selenium	ug/L	87.7	1000	1000	1120	1130	104	105	70-130	1	10	
Silver	ug/L	ND	500	500	523	524	103	103	70-130	0	10	
Thallium	ug/L	ND	1000	1000	855	860	86	86	70-130	1	6	
Zinc	ug/L	5350	1000	1000	1960	1970	-338	-338	70-130	0	11	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: MPRP/27404
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60169950001

METHOD BLANK: 1384826
Matrix: Water
Associated Lab Samples: 60169950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/29/14 12:07	
Antimony, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Arsenic, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Beryllium, Dissolved	ug/L	ND	1.0	05/29/14 12:07	
Cadmium, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Chromium, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Cobalt, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Copper, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Iron, Dissolved	ug/L	ND	50.0	05/29/14 12:07	
Lead, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Nickel, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Selenium, Dissolved	ug/L	ND	15.0	05/29/14 12:07	
Silver, Dissolved	ug/L	ND	7.0	05/29/14 12:07	
Thallium, Dissolved	ug/L	ND	20.0	05/29/14 12:07	
Zinc, Dissolved	ug/L	ND	50.0	05/29/14 12:07	

LABORATORY CONTROL SAMPLE: 1384827

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10000	100	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	975	98	85-115	
Beryllium, Dissolved	ug/L	1000	988	99	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	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9900	99	85-115	
Lead, Dissolved	ug/L	1000	1010	101	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	497	99	85-115	
Thallium, Dissolved	ug/L	1000	996	100	85-115	
Zinc, Dissolved	ug/L	1000	1000	100	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384828 1384829

Parameter	Units	60169832001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	10000	10000	9720	9850	97	99	70-130	1	8	
Antimony, Dissolved	ug/L	ND	1000	1000	1030	1020	103	102	70-130	1	7	
Arsenic, Dissolved	ug/L	ND	1000	1000	984	987	98	98	70-130	0	10	
Beryllium, Dissolved	ug/L	ND	1000	1000	967	981	97	98	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	10	
Chromium, Dissolved	ug/L	ND	1000	1000	982	995	98	99	70-130	1	10	
Cobalt, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	6	
Copper, Dissolved	ug/L	ND	1000	1000	977	988	97	99	70-130	1	11	
Iron, Dissolved	ug/L	ND	10000	10000	9470	9570	95	96	70-130	1	10	
Lead, Dissolved	ug/L	ND	1000	1000	989	991	99	99	70-130	0	10	
Nickel, Dissolved	ug/L	ND	1000	1000	1010	1010	101	101	70-130	0	10	
Selenium, Dissolved	ug/L	ND	1000	1000	991	993	99	99	70-130	0	10	
Silver, Dissolved	ug/L	ND	500	500	484	490	97	98	70-130	1	10	
Thallium, Dissolved	ug/L	ND	1000	1000	992	993	99	99	70-130	0	6	
Zinc, Dissolved	ug/L	ND	1000	1000	993	993	99	99	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: MSV/61829 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60169950001, 60169950002

METHOD BLANK: 1383508 | Matrix: Water
Associated Lab Samples: 60169950001, 60169950002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/27/14 15:59	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,2-Dichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/27/14 15:59	
2-Butanone (MEK)	ug/L	ND	10.0	05/27/14 15:59	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/27/14 15:59	N2
Acetone	ug/L	ND	10.0	05/27/14 15:59	N2
Benzene	ug/L	ND	1.0	05/27/14 15:59	
Bromodichloromethane	ug/L	ND	1.0	05/27/14 15:59	
Bromoform	ug/L	ND	1.0	05/27/14 15:59	
Bromomethane	ug/L	ND	5.0	05/27/14 15:59	
Carbon tetrachloride	ug/L	ND	1.0	05/27/14 15:59	
Chloroethane	ug/L	ND	1.0	05/27/14 15:59	
Chloroform	ug/L	ND	1.0	05/27/14 15:59	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/27/14 15:59	N2
Ethylbenzene	ug/L	ND	1.0	05/27/14 15:59	
Methylene chloride	ug/L	ND	1.0	05/27/14 15:59	
Tetrachloroethene	ug/L	ND	1.0	05/27/14 15:59	
Toluene	ug/L	ND	1.0	05/27/14 15:59	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/27/14 15:59	
Trichloroethene	ug/L	ND	1.0	05/27/14 15:59	
Vinyl chloride	ug/L	ND	1.0	05/27/14 15:59	
Xylene (Total)	ug/L	ND	3.0	05/27/14 15:59	N2
1,2-Dichloroethane-d4 (S)	%	101	80-120	05/27/14 15:59	
4-Bromofluorobenzene (S)	%	100	80-120	05/27/14 15:59	
Toluene-d8 (S)	%	100	80-120	05/27/14 15:59	

LABORATORY CONTROL SAMPLE: 1383509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.3	91	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	17.9	90	67-127	N2
1,1,2-Trichloroethane	ug/L	20	18.0	90	67-124	
1,2-Dichloroethane	ug/L	20	18.4	92	70-126	
1,4-Dichlorobenzene	ug/L	20	18.3	91	74-120	
2-Butanone (MEK)	ug/L	100	92.5	93	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	90.0	90	59-131	N2
Acetone	ug/L	100	82.0	82	38-134	N2
Benzene	ug/L	20	17.5	88	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

LABORATORY CONTROL SAMPLE: 1383509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	18.4	92	68-125	
Bromoform	ug/L	20	18.6	93	65-127	
Bromomethane	ug/L	20	20.8	104	13-157	
Carbon tetrachloride	ug/L	20	17.5	88	70-131	
Chloroethane	ug/L	20	19.7	99	47-133	
Chloroform	ug/L	20	18.0	90	65-127	
cis-1,2-Dichloroethene	ug/L	20	18.0	90	68-127	N2
Ethylbenzene	ug/L	20	18.4	92	74-122	
Methylene chloride	ug/L	20	19.5	98	64-129	
Tetrachloroethene	ug/L	20	18.1	90	73-125	
Toluene	ug/L	20	17.5	88	69-126	
trans-1,2-Dichloroethene	ug/L	20	16.6	83	66-129	
Trichloroethene	ug/L	20	17.4	87	71-123	
Vinyl chloride	ug/L	20	20.6	103	43-129	
Xylene (Total)	ug/L	60	56.0	93	75-121	N2
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1383510

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4410	88	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4490	90	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4180	84	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4170	83	49-144	
1,4-Dichlorobenzene	ug/L	425	5000	4690	85	33-140	
2-Butanone (MEK)	ug/L	47900	25000	66300	73	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	22200	86	40-160	N2
Acetone	ug/L	106000	25000	124000	71	10-160	N2
Benzene	ug/L	ND	5000	4160	81	37-151	
Bromodichloromethane	ug/L	ND	5000	4250	85	35-142	
Bromoform	ug/L	ND	5000	4410	88	45-142	
Bromomethane	ug/L	ND	5000	4280	86	10-158	
Carbon tetrachloride	ug/L	ND	5000	4490	90	70-140	
Chloroethane	ug/L	ND	5000	4500	90	19-152	
Chloroform	ug/L	ND	5000	4050	81	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4190	84	34-147	N2
Ethylbenzene	ug/L	ND	5000	4380	87	40-142	
Methylene chloride	ug/L	ND	5000	3570	71	31-144	
Tetrachloroethene	ug/L	ND	5000	4250	85	64-148	
Toluene	ug/L	681	5000	4680	80	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3950	79	54-151	
Trichloroethene	ug/L	ND	5000	4090	82	71-149	
Vinyl chloride	ug/L	ND	5000	4720	94	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

MATRIX SPIKE SAMPLE: 1383510

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	13000	87	37-144	N2
1,2-Dichloroethane-d4 (S)	%				98	80-120	
4-Bromofluorobenzene (S)	%				99	80-120	HS
Toluene-d8 (S)	%				100	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: OEXT/44386 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60169950001

METHOD BLANK: 1384712 | Matrix: Water
Associated Lab Samples: 60169950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/29/14 08:58	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/29/14 08:58	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/29/14 08:58	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/29/14 08:58	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachloroethane	ug/L	ND	5.0	05/29/14 08:58	
Naphthalene	ug/L	ND	5.0	05/29/14 08:58	
Nitrobenzene	ug/L	ND	5.0	05/29/14 08:58	
Pentachlorophenol	ug/L	ND	5.0	05/29/14 08:58	
Phenol	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Tribromophenol (S)	%	93	39-120	05/29/14 08:58	
2-Fluorobiphenyl (S)	%	86	39-120	05/29/14 08:58	
2-Fluorophenol (S)	%	45	17-120	05/29/14 08:58	
Nitrobenzene-d5 (S)	%	84	33-120	05/29/14 08:58	
Phenol-d6 (S)	%	29	11-120	05/29/14 08:58	
Terphenyl-d14 (S)	%	84	45-120	05/29/14 08:58	

LABORATORY CONTROL SAMPLE: 1384713

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	38.7	77	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.3	85	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.3	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	28.6	57	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	44.1	88	40-133	
Hexachloro-1,3-butadiene	ug/L	50	39.8	80	44-116	
Hexachlorocyclopentadiene	ug/L	100	66.1	66	24-120	
Hexachloroethane	ug/L	50	38.4	77	43-113	
Naphthalene	ug/L	50	39.7	79	48-120	
Nitrobenzene	ug/L	50	41.4	83	48-120	
Pentachlorophenol	ug/L	50	45.2	90	47-120	
Phenol	ug/L	50	15.2	30	16-112	
2,4,6-Tribromophenol (S)	%			90	39-120	
2-Fluorobiphenyl (S)	%			85	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			29	11-120	
Terphenyl-d14 (S)	%			85	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

MATRIX SPIKE SAMPLE: 1384714

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3530	71	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4450	89	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3660	73	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	8000	5000	9420	28	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4490J	90	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3400	68	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	6750	68	11-120	
Hexachloroethane	ug/L	ND	5000	3610	72	40-113	
Naphthalene	ug/L	1360	5000	4640	65	45-120	
Nitrobenzene	ug/L	ND	5000	4140	83	38-120	
Pentachlorophenol	ug/L	ND	5000	5000	100	43-135	
Phenol	ug/L	10700	5000	9770	-20	13-112	M1
2,4,6-Tribromophenol (S)	%				92	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				42	17-120	
Nitrobenzene-d5 (S)	%				144	33-120	S0
Phenol-d6 (S)	%				25	11-120	
Terphenyl-d14 (S)	%				80	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: WET/48156 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60169950001

METHOD BLANK: 1386507 | Matrix: Water
Associated Lab Samples: 60169950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	06/02/14 08:01	

LABORATORY CONTROL SAMPLE: 1386508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.7	92	78-114	

MATRIX SPIKE SAMPLE: 1386554

Parameter	Units	60169767002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40	37.5	89	78-114	

SAMPLE DUPLICATE: 1386555

Parameter	Units	60169767004 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	431	413	4	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: WET/48158 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60169950001

METHOD BLANK: 1386542 | Matrix: Water
Associated Lab Samples: 60169950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	06/02/14 08:24	

LABORATORY CONTROL SAMPLE: 1386543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	22.3	112	64-132	

MATRIX SPIKE SAMPLE: 1386544

Parameter	Units	60169767002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20	13.4	60	64-132	M1

SAMPLE DUPLICATE: 1386545

Parameter	Units	60169767004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	62.0	57.4	8	34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: WET/48127 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60169950001

METHOD BLANK: 1385462 | Matrix: Water
Associated Lab Samples: 60169950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/29/14 10:52	

SAMPLE DUPLICATE: 1385463

Parameter	Units	60169994003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	63900	63700	0	10	

SAMPLE DUPLICATE: 1385464

Parameter	Units	60169967001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	17.0	17.0	0	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: WET/48051 | Analysis Method: SM 4500-H+B
QC Batch Method: SM 4500-H+B | Analysis Description: 4500H+B pH
Associated Lab Samples: 60169950001

SAMPLE DUPLICATE: 1384039

Parameter	Units	60169947014 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.0	7.0	0	5	H6

SAMPLE DUPLICATE: 1384041

Parameter	Units	60169756001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.7	7.7	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: WET/48049 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60169950001

METHOD BLANK: 1383985 | Matrix: Water
Associated Lab Samples: 60169950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/29/14 08:11	

LABORATORY CONTROL SAMPLE: 1383986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	188	95	85-115	

SAMPLE DUPLICATE: 1383987

Parameter	Units	60169951001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	436	460	5	17	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: WETA/29587 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60169950001

METHOD BLANK: 1384384 | Matrix: Water
Associated Lab Samples: 60169950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/27/14 15:54	

LABORATORY CONTROL SAMPLE: 1384385

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

MATRIX SPIKE SAMPLE: 1384386

Parameter	Units	60169839001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	3.4	2	4.8	68	90-110	M1

MATRIX SPIKE SAMPLE: 1384387

Parameter	Units	60169875006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	104	90-110	

SAMPLE DUPLICATE: 1384388

Parameter	Units	60169897001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	1.7	1.7	1	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

QC Batch: WETA/29602 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60169950001

METHOD BLANK: 1384794 | Matrix: Water
Associated Lab Samples: 60169950001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/29/14 07:57	

LABORATORY CONTROL SAMPLE: 1384795

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: 1384796

Parameter	Units	60169372009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	303	250	544	96	90-110	

MATRIX SPIKE SAMPLE: 1384798

Parameter	Units	60169670001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	24.2	50	79.4	110	90-110	

SAMPLE DUPLICATE: 1384800

Parameter	Units	60169756001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	52.4	47.0	11	25	

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QUALIFIERS

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

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.

SAMPLE QUALIFIERS

Sample: 60169950001

[1] The samples were received with headspace. Analysis was completed upon client approval.

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.

N2 The lab does not hold TNI accreditation for this parameter.

S0 Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-308
Pace Project No.: 60169950

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60169950001	**316-308**	EPA 200.7	MPRP/27397	EPA 200.7	ICP/20732
60169950001	**316-308**	EPA 200.7	MPRP/27404	EPA 200.7	ICP/20744
60169950001	**316-308**	EPA 245.1	MERP/8435	EPA 245.1	MERC/8390
60169950001	**316-308**	EPA 245.1	MERP/8441	EPA 245.1	MERC/8396
60169950001	**316-308**	EPA 625	OEXT/44386	EPA 625	MSSV/14201
60169950001	**316-308**	EPA 624 Low	MSV/61829		
60169950002	**TRIP BLANK**	EPA 624 Low	MSV/61829		
60169950001	**316-308**	EPA 1664A	WET/48156		
60169950001	**316-308**	EPA 1664A	WET/48158		
60169950001	**316-308**	SM 2540D	WET/48127		
60169950001	**316-308**	SM 4500-H+B	WET/48051		
60169950001	**316-308**	SM 5210B	WET/48049	SM 5210B	WET/48121
60169950001	**316-308**	EPA 350.1	WETA/29587		
60169950001	**316-308**	EPA 410.4	WETA/29602		

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Sample Condition Upon Receipt

WO#: 60169950

60169950

Client Name: Barr Eng /Republic

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☒ Pace ☐ Other ☐ X'Ronds

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-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 5.4

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/24/14 740

Chain of Custody present:	☒Yes ☐No ☐N/A	1.	
Chain of Custody filled out:	☒Yes ☐No ☐N/A	2.	
Chain of Custody relinquished:	☒Yes ☐No ☐N/A	3.	
Sampler name & signature on COC:	☒Yes ☐No ☐N/A	4.	
Samples arrived within holding time:	☒Yes ☐No ☐N/A	5.	
Short Hold Time analyses (<72hr):	☒Yes ☐No ☐N/A	6.	BOD
Rush Turn Around Time requested:	☐Yes ☒No ☐N/A	7.	
Sufficient volume:	☒Yes ☐No ☐N/A	8.	
Correct containers used:	☒Yes ☐No ☐N/A		
Pace containers used:	☒Yes ☐No ☐N/A	9.	
Containers intact:	☒Yes ☐No ☐N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☒N/A	11.	
Filtered volume received for dissolved tests?	☐Yes ☐No ☒N/A	12.	
Sample labels match COC: Includes date/time/ID/analyses Matrix: water	☒Yes ☐No ☐N/A	13.	
All containers needing preservation have been checked.	☒Yes ☐No ☐N/A		BOD BOD unable to be preserved
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☒No ☐N/A	14.	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☒Yes ☐No	Initial when completed JW	Lot # of added preservative 12522-2-7
Trip Blank present: Pace Trip Blank lot # (if purchased): 140714-3	☒Yes ☐No ☐N/A	15.	
Headspace in VOA vials (>6mm):	☒Yes ☐No ☐N/A	16.	Heads pace in 5+5 vials. FOOTNOTED BASED ON HISTORICAL INSTRUCTIONS -AG
Project sampled in USDA Regulated Area:	☐Yes ☐No ☒N/A	17. List State:	MN

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/27/14

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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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: BARR ENGINEERING	Report To: ED GALBRAITH/BARR	Attention: AMY HARGROVE/BRIAN POWER
Address:	Copy To: SCOTT FEDAK/FEEZOR	Company Name: REPUBLIC SERVICES
	DANA BAKER/MARGARET TREANOR -BARR	Address: BRIDGETON, MO 63044
Email To:	Purchase Order No.	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 #: 7585 LINE 2

Regulatory Agency	State / Location
	Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B	Residual Chlorine (Y/N)	60169950
1	316-308	OT	G	5-23-14	11:45				14	10	4	1	0						X	X	X	X	X	X	X	X	X	X	X		3(A,B,S) 2(P,G,A) 5(D,E,H) 2(B,P,Z) 1(B,P,Z) 1(B,P,Z) 1(B,P,Z) 1(B,P,Z)
2	TRIP BLANK								2	2																X					2(D,E,H)
3																															
4																															
5																															
6																															METALS LIST total & LF Dis:
7																															Al,Sb,As,Be,Cd,Cr,
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																															and Mercury
10																															
11																															
12																															

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-23-14	2:40pm	Bonnette Martin	5/23/14	2:40p				
SITE ADDRESS: BRIDGETON LF					5/24/14	150	5.4	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:	Arron Weber					
SIGNATURE of SAMPLER:	Arron Weber	DATE Signed: 5-23-14				

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(913)599-5665

June 02, 2014

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

RE: Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

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 316-309
Pace Project No.: 60170001

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60170001001	**316-309**	Water	05/24/14 16:45	05/26/14 12:50
60170001002	**TRIP BLANK**	Water	05/24/14 16:45	05/26/14 12:50

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60170001001	**316-309**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	NDL	1
		SM 5210B	DJR	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60170001002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

Sample: 316-309 **Lab ID: 60170001001** Collected: 05/24/14 16:45 Received: 05/26/14 12:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**4530**	ug/L	750	2	05/28/14 17:50	05/29/14 14:43	7429-90-5	
Antimony	ND	ug/L	100	2	05/28/14 17:50	05/29/14 14:43	7440-36-0	D3
Arsenic	**1110**	ug/L	50.0	1	05/28/14 17:50	05/29/14 14:39	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/28/14 17:50	05/29/14 14:39	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:39	7440-43-9	
Chromium	**239**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:39	7440-47-3	
Cobalt	**41.5**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:39	7440-48-4	
Copper	ND	ug/L	50.0	1	05/28/14 17:50	05/29/14 14:39	7440-50-8	
Iron	**647000**	ug/L	250	1	05/28/14 17:50	05/29/14 14:39	7439-89-6	
Lead	**83.8**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:39	7439-92-1	
Nickel	**127**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:39	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/28/14 17:50	05/29/14 14:39	7782-49-2	
Silver	ND	ug/L	35.0	1	05/28/14 17:50	05/29/14 14:39	7440-22-4	
Thallium	ND	ug/L	100	1	05/28/14 17:50	05/29/14 14:39	7440-28-0	
Zinc	**4810**	ug/L	500	2	05/28/14 17:50	05/29/14 14:43	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1380**	ug/L	750	2	05/28/14 10:45	05/29/14 12:57	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/28/14 10:45	05/29/14 12:57	7440-36-0	D3
Arsenic, Dissolved	**941**	ug/L	50.0	1	05/28/14 10:45	05/29/14 12:54	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/28/14 10:45	05/29/14 12:54	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:54	7440-43-9	
Chromium, Dissolved	**185**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:54	7440-47-3	
Cobalt, Dissolved	**29.2**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:54	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/28/14 10:45	05/29/14 12:54	7440-50-8	
Iron, Dissolved	**362000**	ug/L	250	1	05/28/14 10:45	05/29/14 12:54	7439-89-6	
Lead, Dissolved	**30.3**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:54	7439-92-1	
Nickel, Dissolved	**101**	ug/L	25.0	1	05/28/14 10:45	05/29/14 12:54	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/28/14 10:45	05/29/14 12:54	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/28/14 10:45	05/29/14 12:54	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/28/14 10:45	05/29/14 12:54	7440-28-0	
Zinc, Dissolved	**4280**	ug/L	500	2	05/28/14 10:45	05/29/14 12:57	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/27/14 15:30	05/28/14 11:24	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	05/29/14 09:40	05/29/14 15:59	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/28/14 00:00	05/29/14 10:42	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:42	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:42	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:42	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/28/14 00:00	05/29/14 10:42	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7470**	ug/L	4000	2	05/28/14 00:00	05/29/14 10:42		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

Sample: 316-309 **Lab ID: 60170001001** Collected: 05/24/14 16:45 Received: 05/26/14 12:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1270**	ug/L	1000	2	05/28/14 00:00	05/29/14 10:42	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:42	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:42	87-86-5	
Phenol	**10100**	ug/L	1000	2	05/28/14 00:00	05/29/14 10:42	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:42	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 10:42	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	161	%	33-120	2	05/28/14 00:00	05/29/14 10:42	4165-60-0	S0
2-Fluorobiphenyl (S)	83	%	39-120	2	05/28/14 00:00	05/29/14 10:42	321-60-8	
Terphenyl-d14 (S)	81	%	45-120	2	05/28/14 00:00	05/29/14 10:42	1718-51-0	
Phenol-d6 (S)	30	%	11-120	2	05/28/14 00:00	05/29/14 10:42	13127-88-3	
2-Fluorophenol (S)	51	%	17-120	2	05/28/14 00:00	05/29/14 10:42	367-12-4	
2,4,6-Tribromophenol (S)	96	%	39-120	2	05/28/14 00:00	05/29/14 10:42	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**106000**	ug/L	2500	250		05/27/14 17:31	67-64-1	N2
Benzene	ND	ug/L	250	250		05/27/14 17:31	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/27/14 17:31	75-27-4	
Bromoform	ND	ug/L	250	250		05/27/14 17:31	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/27/14 17:31	74-83-9	
2-Butanone (MEK)	**47400**	ug/L	2500	250		05/27/14 17:31	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/27/14 17:31	56-23-5	
Chloroethane	ND	ug/L	250	250		05/27/14 17:31	75-00-3	
Chloroform	ND	ug/L	250	250		05/27/14 17:31	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	250	250		05/27/14 17:31	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/27/14 17:31	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/27/14 17:31	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/27/14 17:31	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/27/14 17:31	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/27/14 17:31	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/27/14 17:31	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/27/14 17:31	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/27/14 17:31	127-18-4	
Toluene	ND	ug/L	250	250		05/27/14 17:31	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/27/14 17:31	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/27/14 17:31	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/27/14 17:31	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/27/14 17:31	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/27/14 17:31	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	250		05/27/14 17:31	460-00-4	HS
Toluene-d8 (S)	97	%	80-120	250		05/27/14 17:31	2037-26-5	
1,2-Dichloroethane-d4 (S)	97	%	80-120	250		05/27/14 17:31	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/27/14 17:31		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**926**	mg/L	5.0	1		06/02/14 08:06		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

Sample: 316-309 **Lab ID: 60170001001** Collected: 05/24/14 16:45 Received: 05/26/14 12:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**18.3**	mg/L	5.0	1		06/02/14 08:28		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**6060**	mg/L	5.0	1		05/29/14 10:57		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/28/14 15:00		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**31300**	mg/L	2.0	1	05/26/14 14:12	05/31/14 08:05		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**630**	mg/L	20.0	200		05/27/14 16:12	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**54700**	mg/L	5000	500		05/29/14 08:18		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

Sample: TRIP BLANK **Lab ID: 60170001002** Collected: 05/24/14 16:45 Received: 05/26/14 12:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/27/14 18:17	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/27/14 18:17	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/27/14 18:17	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/27/14 18:17	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/27/14 18:17	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/27/14 18:17	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/27/14 18:17	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/27/14 18:17	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/27/14 18:17	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/27/14 18:17	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/27/14 18:17	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/27/14 18:17	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/27/14 18:17	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/27/14 18:17	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/27/14 18:17	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/27/14 18:17	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/27/14 18:17	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/27/14 18:17	127-18-4	
Toluene	ND	ug/L	1.0	1		05/27/14 18:17	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/27/14 18:17	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/27/14 18:17	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/27/14 18:17	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/27/14 18:17	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/27/14 18:17	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	1		05/27/14 18:17	460-00-4	
Toluene-d8 (S)	101	%	80-120	1		05/27/14 18:17	2037-26-5	
1,2-Dichloroethane-d4 (S)	99	%	80-120	1		05/27/14 18:17	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/27/14 18:17		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: MERP/8435 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60170001001

METHOD BLANK: 1384547 | Matrix: Water
Associated Lab Samples: 60170001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/28/14 10:23	

LABORATORY CONTROL SAMPLE: 1384548

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: 1384549 1384550

Parameter	Units	60169654001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	13.7	5	5	15.4	17.0	35	67	70-130	10	20	M1

MATRIX SPIKE SAMPLE: 1384551

Parameter	Units	60170001001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	150	142	92	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: MERP/8441
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60170001001

METHOD BLANK: 1385408
Matrix: Water
Associated Lab Samples: 60170001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/29/14 15:43	

LABORATORY CONTROL SAMPLE: 1385409

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: 1385410 1385411

Parameter	Units	60169745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	143	135	95	90	70-130	6	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: MPRP/27397
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60170001001

METHOD BLANK: 1384596
Matrix: Water
Associated Lab Samples: 60170001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/29/14 13:51	
Antimony	ug/L	ND	10.0	05/29/14 13:51	
Arsenic	ug/L	ND	10.0	05/29/14 13:51	
Beryllium	ug/L	ND	1.0	05/29/14 13:51	
Cadmium	ug/L	ND	5.0	05/29/14 13:51	
Chromium	ug/L	ND	5.0	05/29/14 13:51	
Cobalt	ug/L	ND	5.0	05/29/14 13:51	
Copper	ug/L	ND	10.0	05/29/14 13:51	
Iron	ug/L	ND	50.0	05/29/14 13:51	
Lead	ug/L	ND	5.0	05/29/14 13:51	
Nickel	ug/L	ND	5.0	05/29/14 13:51	
Selenium	ug/L	ND	15.0	05/29/14 13:51	
Silver	ug/L	ND	7.0	05/29/14 13:51	
Thallium	ug/L	ND	20.0	05/29/14 13:51	
Zinc	ug/L	ND	50.0	05/29/14 13:51	

LABORATORY CONTROL SAMPLE: 1384597

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10200	102	85-115	
Antimony	ug/L	1000	1030	103	85-115	
Arsenic	ug/L	1000	986	99	85-115	
Beryllium	ug/L	1000	999	100	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	1010	101	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	1000	100	85-115	
Iron	ug/L	10000	9640	96	85-115	
Lead	ug/L	1000	1010	101	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1000	100	85-115	
Silver	ug/L	500	498	100	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384598 1384599

Parameter	Units	60169745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	10500	10000	10000	13600	13500	32	30	70-130	1	8	M1
Antimony	ug/L	ND	1000	1000	1040	1040	98	98	70-130	0	7	
Arsenic	ug/L	1270	1000	1000	1280	1290	1	2	70-130	1	10	M1
Beryllium	ug/L	ND	1000	1000	912	918	91	92	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1020	1020	102	102	70-130	0	10	
Chromium	ug/L	280	1000	1000	1010	1010	73	73	70-130	0	10	
Cobalt	ug/L	47.9	1000	1000	956	963	91	92	70-130	1	6	
Copper	ug/L	ND	1000	1000	1030	1030	99	100	70-130	0	11	
Iron	ug/L	786000	10000	10000	159000	163000	-6271	-6235	70-130	2	10	M1
Lead	ug/L	108	1000	1000	919	923	81	82	70-130	0	10	
Nickel	ug/L	143	1000	1000	972	976	83	83	70-130	0	10	
Selenium	ug/L	87.7	1000	1000	1120	1130	104	105	70-130	1	10	
Silver	ug/L	ND	500	500	523	524	103	103	70-130	0	10	
Thallium	ug/L	ND	1000	1000	855	860	86	86	70-130	1	6	
Zinc	ug/L	5350	1000	1000	1960	1970	-338	-338	70-130	0	11	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: MPRP/27404
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60170001001

METHOD BLANK: 1384826
Matrix: Water
Associated Lab Samples: 60170001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/29/14 12:07	
Antimony, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Arsenic, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Beryllium, Dissolved	ug/L	ND	1.0	05/29/14 12:07	
Cadmium, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Chromium, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Cobalt, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Copper, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Iron, Dissolved	ug/L	ND	50.0	05/29/14 12:07	
Lead, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Nickel, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Selenium, Dissolved	ug/L	ND	15.0	05/29/14 12:07	
Silver, Dissolved	ug/L	ND	7.0	05/29/14 12:07	
Thallium, Dissolved	ug/L	ND	20.0	05/29/14 12:07	
Zinc, Dissolved	ug/L	ND	50.0	05/29/14 12:07	

LABORATORY CONTROL SAMPLE: 1384827

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10000	100	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	975	98	85-115	
Beryllium, Dissolved	ug/L	1000	988	99	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	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9900	99	85-115	
Lead, Dissolved	ug/L	1000	1010	101	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	497	99	85-115	
Thallium, Dissolved	ug/L	1000	996	100	85-115	
Zinc, Dissolved	ug/L	1000	1000	100	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384828 1384829

Parameter	Units	60169832001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	10000	10000	9720	9850	97	99	70-130	1	8	
Antimony, Dissolved	ug/L	ND	1000	1000	1030	1020	103	102	70-130	1	7	
Arsenic, Dissolved	ug/L	ND	1000	1000	984	987	98	98	70-130	0	10	
Beryllium, Dissolved	ug/L	ND	1000	1000	967	981	97	98	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	10	
Chromium, Dissolved	ug/L	ND	1000	1000	982	995	98	99	70-130	1	10	
Cobalt, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	6	
Copper, Dissolved	ug/L	ND	1000	1000	977	988	97	99	70-130	1	11	
Iron, Dissolved	ug/L	ND	10000	10000	9470	9570	95	96	70-130	1	10	
Lead, Dissolved	ug/L	ND	1000	1000	989	991	99	99	70-130	0	10	
Nickel, Dissolved	ug/L	ND	1000	1000	1010	1010	101	101	70-130	0	10	
Selenium, Dissolved	ug/L	ND	1000	1000	991	993	99	99	70-130	0	10	
Silver, Dissolved	ug/L	ND	500	500	484	490	97	98	70-130	1	10	
Thallium, Dissolved	ug/L	ND	1000	1000	992	993	99	99	70-130	0	6	
Zinc, Dissolved	ug/L	ND	1000	1000	993	993	99	99	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: MSV/61829 Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low Analysis Description: 624 MSV
Associated Lab Samples: 60170001001, 60170001002

METHOD BLANK: 1383508 Matrix: Water
Associated Lab Samples: 60170001001, 60170001002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/27/14 15:59	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,2-Dichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/27/14 15:59	
2-Butanone (MEK)	ug/L	ND	10.0	05/27/14 15:59	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/27/14 15:59	N2
Acetone	ug/L	ND	10.0	05/27/14 15:59	N2
Benzene	ug/L	ND	1.0	05/27/14 15:59	
Bromodichloromethane	ug/L	ND	1.0	05/27/14 15:59	
Bromoform	ug/L	ND	1.0	05/27/14 15:59	
Bromomethane	ug/L	ND	5.0	05/27/14 15:59	
Carbon tetrachloride	ug/L	ND	1.0	05/27/14 15:59	
Chloroethane	ug/L	ND	1.0	05/27/14 15:59	
Chloroform	ug/L	ND	1.0	05/27/14 15:59	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/27/14 15:59	N2
Ethylbenzene	ug/L	ND	1.0	05/27/14 15:59	
Methylene chloride	ug/L	ND	1.0	05/27/14 15:59	
Tetrachloroethene	ug/L	ND	1.0	05/27/14 15:59	
Toluene	ug/L	ND	1.0	05/27/14 15:59	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/27/14 15:59	
Trichloroethene	ug/L	ND	1.0	05/27/14 15:59	
Vinyl chloride	ug/L	ND	1.0	05/27/14 15:59	
Xylene (Total)	ug/L	ND	3.0	05/27/14 15:59	N2
1,2-Dichloroethane-d4 (S)	%	101	80-120	05/27/14 15:59	
4-Bromofluorobenzene (S)	%	100	80-120	05/27/14 15:59	
Toluene-d8 (S)	%	100	80-120	05/27/14 15:59	

LABORATORY CONTROL SAMPLE: 1383509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.3	91	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	17.9	90	67-127	N2
1,1,2-Trichloroethane	ug/L	20	18.0	90	67-124	
1,2-Dichloroethane	ug/L	20	18.4	92	70-126	
1,4-Dichlorobenzene	ug/L	20	18.3	91	74-120	
2-Butanone (MEK)	ug/L	100	92.5	93	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	90.0	90	59-131	N2
Acetone	ug/L	100	82.0	82	38-134	N2
Benzene	ug/L	20	17.5	88	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

LABORATORY CONTROL SAMPLE: 1383509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	18.4	92	68-125	
Bromoform	ug/L	20	18.6	93	65-127	
Bromomethane	ug/L	20	20.8	104	13-157	
Carbon tetrachloride	ug/L	20	17.5	88	70-131	
Chloroethane	ug/L	20	19.7	99	47-133	
Chloroform	ug/L	20	18.0	90	65-127	
cis-1,2-Dichloroethene	ug/L	20	18.0	90	68-127	N2
Ethylbenzene	ug/L	20	18.4	92	74-122	
Methylene chloride	ug/L	20	19.5	98	64-129	
Tetrachloroethene	ug/L	20	18.1	90	73-125	
Toluene	ug/L	20	17.5	88	69-126	
trans-1,2-Dichloroethene	ug/L	20	16.6	83	66-129	
Trichloroethene	ug/L	20	17.4	87	71-123	
Vinyl chloride	ug/L	20	20.6	103	43-129	
Xylene (Total)	ug/L	60	56.0	93	75-121	N2
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1383510

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4410	88	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4490	90	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4180	84	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4170	83	49-144	
1,4-Dichlorobenzene	ug/L	425	5000	4690	85	33-140	
2-Butanone (MEK)	ug/L	47900	25000	66300	73	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	22200	86	40-160	N2
Acetone	ug/L	106000	25000	124000	71	10-160	N2
Benzene	ug/L	ND	5000	4160	81	37-151	
Bromodichloromethane	ug/L	ND	5000	4250	85	35-142	
Bromoform	ug/L	ND	5000	4410	88	45-142	
Bromomethane	ug/L	ND	5000	4280	86	10-158	
Carbon tetrachloride	ug/L	ND	5000	4490	90	70-140	
Chloroethane	ug/L	ND	5000	4500	90	19-152	
Chloroform	ug/L	ND	5000	4050	81	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4190	84	34-147	N2
Ethylbenzene	ug/L	ND	5000	4380	87	40-142	
Methylene chloride	ug/L	ND	5000	3570	71	31-144	
Tetrachloroethene	ug/L	ND	5000	4250	85	64-148	
Toluene	ug/L	681	5000	4680	80	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3950	79	54-151	
Trichloroethene	ug/L	ND	5000	4090	82	71-149	
Vinyl chloride	ug/L	ND	5000	4720	94	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

MATRIX SPIKE SAMPLE: 1383510

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	13000	87	37-144	N2
1,2-Dichloroethane-d4 (S)	%				98	80-120	
4-Bromofluorobenzene (S)	%				99	80-120	HS
Toluene-d8 (S)	%				100	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: OEXT/44386 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60170001001

METHOD BLANK: 1384712 | Matrix: Water
Associated Lab Samples: 60170001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/29/14 08:58	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/29/14 08:58	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/29/14 08:58	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/29/14 08:58	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachloroethane	ug/L	ND	5.0	05/29/14 08:58	
Naphthalene	ug/L	ND	5.0	05/29/14 08:58	
Nitrobenzene	ug/L	ND	5.0	05/29/14 08:58	
Pentachlorophenol	ug/L	ND	5.0	05/29/14 08:58	
Phenol	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Tribromophenol (S)	%	93	39-120	05/29/14 08:58	
2-Fluorobiphenyl (S)	%	86	39-120	05/29/14 08:58	
2-Fluorophenol (S)	%	45	17-120	05/29/14 08:58	
Nitrobenzene-d5 (S)	%	84	33-120	05/29/14 08:58	
Phenol-d6 (S)	%	29	11-120	05/29/14 08:58	
Terphenyl-d14 (S)	%	84	45-120	05/29/14 08:58	

LABORATORY CONTROL SAMPLE: 1384713

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	38.7	77	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.3	85	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.3	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	28.6	57	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	44.1	88	40-133	
Hexachloro-1,3-butadiene	ug/L	50	39.8	80	44-116	
Hexachlorocyclopentadiene	ug/L	100	66.1	66	24-120	
Hexachloroethane	ug/L	50	38.4	77	43-113	
Naphthalene	ug/L	50	39.7	79	48-120	
Nitrobenzene	ug/L	50	41.4	83	48-120	
Pentachlorophenol	ug/L	50	45.2	90	47-120	
Phenol	ug/L	50	15.2	30	16-112	
2,4,6-Tribromophenol (S)	%			90	39-120	
2-Fluorobiphenyl (S)	%			85	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			29	11-120	
Terphenyl-d14 (S)	%			85	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

MATRIX SPIKE SAMPLE: 1384714

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3530	71	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4450	89	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3660	73	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	8000	5000	9420	28	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4490J	90	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3400	68	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	6750	68	11-120	
Hexachloroethane	ug/L	ND	5000	3610	72	40-113	
Naphthalene	ug/L	1360	5000	4640	65	45-120	
Nitrobenzene	ug/L	ND	5000	4140	83	38-120	
Pentachlorophenol	ug/L	ND	5000	5000	100	43-135	
Phenol	ug/L	10700	5000	9770	-20	13-112	M1
2,4,6-Tribromophenol (S)	%				92	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				42	17-120	
Nitrobenzene-d5 (S)	%				144	33-120	S0
Phenol-d6 (S)	%				25	11-120	
Terphenyl-d14 (S)	%				80	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: WET/48156 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60170001001

METHOD BLANK: 1386507 | Matrix: Water
Associated Lab Samples: 60170001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	06/02/14 08:01	

LABORATORY CONTROL SAMPLE: 1386508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.7	92	78-114	

MATRIX SPIKE SAMPLE: 1386554

Parameter	Units	60169767002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40	37.5	89	78-114	

SAMPLE DUPLICATE: 1386555

Parameter	Units	60169767004 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	431	413	4	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: WET/48158 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60170001001

METHOD BLANK: 1386542 | Matrix: Water
Associated Lab Samples: 60170001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	06/02/14 08:24	

LABORATORY CONTROL SAMPLE: 1386543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	22.3	112	64-132	

MATRIX SPIKE SAMPLE: 1386544

Parameter	Units	60169767002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20	13.4	60	64-132	M1

SAMPLE DUPLICATE: 1386545

Parameter	Units	60169767004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	62.0	57.4	8	34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: WET/48127 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60170001001

METHOD BLANK: 1385462 | Matrix: Water
Associated Lab Samples: 60170001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/29/14 10:52	

SAMPLE DUPLICATE: 1385463

Parameter	Units	60169994003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	63900	63700	0	10	

SAMPLE DUPLICATE: 1385464

Parameter	Units	60169967001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	17.0	17.0	0	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: WET/48094
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60170001001

SAMPLE DUPLICATE: 1384760

Parameter	Units	60170005001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	6.9	1	5	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: WET/48056 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60170001001

METHOD BLANK: 1384144 | Matrix: Water
Associated Lab Samples: 60170001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/31/14 07:51	

LABORATORY CONTROL SAMPLE: 1384145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	194	98	85-115	

SAMPLE DUPLICATE: 1384146

Parameter	Units	60170001001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	31300	32300	3	17	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: WETA/29587 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60170001001

METHOD BLANK: 1384384 | Matrix: Water
Associated Lab Samples: 60170001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/27/14 15:54	

LABORATORY CONTROL SAMPLE: 1384385

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

MATRIX SPIKE SAMPLE: 1384386

Parameter	Units	60169839001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	3.4	2	4.8	68	90-110	M1

MATRIX SPIKE SAMPLE: 1384387

Parameter	Units	60169875006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	104	90-110	

SAMPLE DUPLICATE: 1384388

Parameter	Units	60169897001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	1.7	1.7	1	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

QC Batch: WETA/29602 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60170001001

METHOD BLANK: 1384794 | Matrix: Water
Associated Lab Samples: 60170001001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/29/14 07:57	

LABORATORY CONTROL SAMPLE: 1384795

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: 1384796

Parameter	Units	60169372009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	303	250	544	96	90-110	

MATRIX SPIKE SAMPLE: 1384798

Parameter	Units	60169670001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	24.2	50	79.4	110	90-110	

SAMPLE DUPLICATE: 1384800

Parameter	Units	60169756001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	52.4	47.0	11	25	

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QUALIFIERS

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-309
Pace Project No.: 60170001

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60170001001	**316-309**	EPA 200.7	MPRP/27397	EPA 200.7	ICP/20732
60170001001	**316-309**	EPA 200.7	MPRP/27404	EPA 200.7	ICP/20744
60170001001	**316-309**	EPA 245.1	MERP/8435	EPA 245.1	MERC/8390
60170001001	**316-309**	EPA 245.1	MERP/8441	EPA 245.1	MERC/8396
60170001001	**316-309**	EPA 625	OEXT/44386	EPA 625	MSSV/14201
60170001001	**316-309**	EPA 624 Low	MSV/61829		
60170001002	**TRIP BLANK**	EPA 624 Low	MSV/61829		
60170001001	**316-309**	EPA 1664A	WET/48156		
60170001001	**316-309**	EPA 1664A	WET/48158		
60170001001	**316-309**	SM 2540D	WET/48127		
60170001001	**316-309**	SM 4500-H+B	WET/48094		
60170001001	**316-309**	SM 5210B	WET/48056	SM 5210B	WET/48160
60170001001	**316-309**	EPA 350.1	WETA/29587		
60170001001	**316-309**	EPA 410.4	WETA/29602		

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Sample Condition Upon Receipt

WO#: 60170001
60170001

Client Name: Barr Eng

Optional
Proj Due Date:
Proj Name:

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 ☑ ZPL

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 4.0

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/26/14 BA

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. BOD pH
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC:	☑Yes ☐No ☐N/A	
Includes date/time/ID/analyses Matrix: WT		13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	HNO3 Added 2.5mL H2SO4 Added 2.0mL Initial 6.0 6.0 Final 4.0 3.5
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed BA / Lot # of added preservative 12522 H2SO4, 12513 HNO3
Trip Blank present:	☑Yes ☐No ☐N/A	
Pace Trip Blank lot # (if purchased): 040714-38EZ		15.
Headspace in VOA vials (>6mm):	☑Yes ☐No ☐N/A	16. 5 of 5 — pH NOT ADJ BASED on HISTORICAL INSTRUCTIONS for HS.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State: MO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 6/2/14

F-KS-C-003-Rev.7, 04December2012

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

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.	
Client Project ID:	BRIDGETON LF
Container Order Number:	

Section C — Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	130426_7588
Pace Project Manager:	Brown, Angie
Pace Profile #:	7585 LINE 2

Regulatory Agency	
State / Location	
	Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N): 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	BOD SM 5210B	Residual Chlorine (Y/N)	60170001
1	316-309 2BP2U 1BP3U 2AG4U	OT	G	1BP2U 40	1BP3U 35	5/24/14	1645		14	10	4	1	0	3AG3U				X	X	X	X	X	X	X	X	X	X	X		5DG4U 001
2	TRIP BLANK								2	2															X					2DG4U 002
3																														
4																														
5																														
6																														METALS LIST total & LF Dis:
7																														Al,Sb,As,Be,Cd,Cr,
8																														Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																														and Mercury
10																														
11																														
12																														

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	Paul Linsott/FRI	05/26/14	8:30AM	[illegible]	5-26-14	0830				
SITE ADDRESS: BRIDGETON LF				[illegible] /PASI KC	5/26/14	1250	4.0	Y	Y	Y
13570 ST. CHARLES ROCK RD										
BRIDGETON MO 63044										

SAMPLER NAME AND SIGNATURE		
PRINT Name of SAMPLER:	Paul Linsott	
SIGNATURE of SAMPLER:	Paul Linsott	DATE Signed: 05/24/14

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

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June 02, 2014

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

RE: Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

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 316-310
Pace Project No.: 60170002

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60170002001	**316-310**	Water	05/25/14 16:45	05/26/14 12:50
60170002002	**TRIP BLANK**	Water	05/25/14 16:45	05/26/14 12:50

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60170002001	**316-310**	EPA 200.7	SMW	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	NDJ	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	NDL	1
		SM 5210B	DJR	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60170002002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

Sample: 316-310 **Lab ID: 60170002001** Collected: 05/25/14 16:45 Received: 05/26/14 12:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**5950**	ug/L	750	2	05/28/14 17:50	05/29/14 14:49	7429-90-5	
Antimony	ND	ug/L	100	2	05/28/14 17:50	05/29/14 14:49	7440-36-0	D3
Arsenic	**1100**	ug/L	50.0	1	05/28/14 17:50	05/29/14 14:46	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/28/14 17:50	05/29/14 14:46	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:46	7440-43-9	
Chromium	**241**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:46	7440-47-3	
Cobalt	**41.5**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:46	7440-48-4	
Copper	ND	ug/L	50.0	1	05/28/14 17:50	05/29/14 14:46	7440-50-8	
Iron	**630000**	ug/L	250	1	05/28/14 17:50	05/29/14 14:46	7439-89-6	
Lead	**90.5**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:46	7439-92-1	
Nickel	**132**	ug/L	25.0	1	05/28/14 17:50	05/29/14 14:46	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/28/14 17:50	05/29/14 14:46	7782-49-2	
Silver	ND	ug/L	35.0	1	05/28/14 17:50	05/29/14 14:46	7440-22-4	
Thallium	ND	ug/L	100	1	05/28/14 17:50	05/29/14 14:46	7440-28-0	
Zinc	**5250**	ug/L	500	2	05/28/14 17:50	05/29/14 14:49	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**2440**	ug/L	750	2	05/28/14 10:45	05/29/14 13:11	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/28/14 10:45	05/29/14 13:11	7440-36-0	D3
Arsenic, Dissolved	**860**	ug/L	50.0	1	05/28/14 10:45	05/29/14 13:07	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/28/14 10:45	05/29/14 13:07	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/28/14 10:45	05/29/14 13:07	7440-43-9	
Chromium, Dissolved	**183**	ug/L	25.0	1	05/28/14 10:45	05/29/14 13:07	7440-47-3	
Cobalt, Dissolved	**29.3**	ug/L	25.0	1	05/28/14 10:45	05/29/14 13:07	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/28/14 10:45	05/29/14 13:07	7440-50-8	
Iron, Dissolved	**442000**	ug/L	250	1	05/28/14 10:45	05/29/14 13:07	7439-89-6	
Lead, Dissolved	**49.6**	ug/L	25.0	1	05/28/14 10:45	05/29/14 13:07	7439-92-1	
Nickel, Dissolved	**101**	ug/L	25.0	1	05/28/14 10:45	05/29/14 13:07	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/28/14 10:45	05/29/14 13:07	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/28/14 10:45	05/29/14 13:07	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/28/14 10:45	05/29/14 13:07	7440-28-0	
Zinc, Dissolved	**4200**	ug/L	500	2	05/28/14 10:45	05/29/14 13:11	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/27/14 15:30	05/28/14 11:28	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	**9.8**	ug/L	6.0	1	05/29/14 09:40	05/29/14 16:01	7439-97-6	D9
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/28/14 00:00	05/29/14 11:03	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:03	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:03	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:03	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/28/14 00:00	05/29/14 11:03	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**6470**	ug/L	4000	2	05/28/14 00:00	05/29/14 11:03		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

Sample: 316-310 **Lab ID: 60170002001** Collected: 05/25/14 16:45 Received: 05/26/14 12:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1320**	ug/L	1000	2	05/28/14 00:00	05/29/14 11:03	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:03	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:03	87-86-5	
Phenol	**8760**	ug/L	1000	2	05/28/14 00:00	05/29/14 11:03	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:03	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:03	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	150	%	33-120	2	05/28/14 00:00	05/29/14 11:03	4165-60-0	S0
2-Fluorobiphenyl (S)	79	%	39-120	2	05/28/14 00:00	05/29/14 11:03	321-60-8	
Terphenyl-d14 (S)	79	%	45-120	2	05/28/14 00:00	05/29/14 11:03	1718-51-0	
Phenol-d6 (S)	28	%	11-120	2	05/28/14 00:00	05/29/14 11:03	13127-88-3	
2-Fluorophenol (S)	43	%	17-120	2	05/28/14 00:00	05/29/14 11:03	367-12-4	
2,4,6-Tribromophenol (S)	89	%	39-120	2	05/28/14 00:00	05/29/14 11:03	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**89400**	ug/L	2500	250		05/27/14 17:46	67-64-1	N2
Benzene	ND	ug/L	250	250		05/27/14 17:46	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/27/14 17:46	75-27-4	
Bromoform	ND	ug/L	250	250		05/27/14 17:46	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/27/14 17:46	74-83-9	
2-Butanone (MEK)	**39300**	ug/L	2500	250		05/27/14 17:46	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/27/14 17:46	56-23-5	
Chloroethane	ND	ug/L	250	250		05/27/14 17:46	75-00-3	
Chloroform	ND	ug/L	250	250		05/27/14 17:46	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	250	250		05/27/14 17:46	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/27/14 17:46	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/27/14 17:46	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/27/14 17:46	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/27/14 17:46	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/27/14 17:46	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/27/14 17:46	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/27/14 17:46	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/27/14 17:46	127-18-4	
Toluene	ND	ug/L	250	250		05/27/14 17:46	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/27/14 17:46	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/27/14 17:46	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/27/14 17:46	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/27/14 17:46	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/27/14 17:46	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	250		05/27/14 17:46	460-00-4	
Toluene-d8 (S)	99	%	80-120	250		05/27/14 17:46	2037-26-5	
1,2-Dichloroethane-d4 (S)	96	%	80-120	250		05/27/14 17:46	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/27/14 17:46		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1040**	mg/L	5.0	1		06/02/14 08:06		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

Sample: 316-310 **Lab ID: 60170002001** Collected: 05/25/14 16:45 Received: 05/26/14 12:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**15.8**	mg/L	5.0	1		06/02/14 08:29		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**5460**	mg/L	5.0	1		05/29/14 10:58		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/28/14 15:00		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**29800**	mg/L	2.0	1	05/26/14 14:13	05/31/14 08:27		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**639**	mg/L	20.0	200		05/27/14 16:13	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**50700**	mg/L	5000	500		05/29/14 08:18		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

Sample: TRIP BLANK **Lab ID: 60170002002** Collected: 05/25/14 16:45 Received: 05/26/14 12:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/27/14 18:33	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/27/14 18:33	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/27/14 18:33	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/27/14 18:33	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/27/14 18:33	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/27/14 18:33	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/27/14 18:33	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/27/14 18:33	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/27/14 18:33	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/27/14 18:33	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/27/14 18:33	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/27/14 18:33	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/27/14 18:33	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/27/14 18:33	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/27/14 18:33	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/27/14 18:33	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/27/14 18:33	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/27/14 18:33	127-18-4	
Toluene	ND	ug/L	1.0	1		05/27/14 18:33	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/27/14 18:33	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/27/14 18:33	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/27/14 18:33	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/27/14 18:33	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/27/14 18:33	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	1		05/27/14 18:33	460-00-4	
Toluene-d8 (S)	99	%	80-120	1		05/27/14 18:33	2037-26-5	
1,2-Dichloroethane-d4 (S)	96	%	80-120	1		05/27/14 18:33	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/27/14 18:33		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: MERP/8435 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60170002001

METHOD BLANK: 1384547 | Matrix: Water
Associated Lab Samples: 60170002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/28/14 10:23	

LABORATORY CONTROL SAMPLE: 1384548

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: 1384549 1384550

Parameter	Units	60169654001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	13.7	5	5	15.4	17.0	35	67	70-130	10	20	M1

MATRIX SPIKE SAMPLE: 1384551

Parameter	Units	60170001001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	ND	150	142	92	70-130	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: MERP/8441
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60170002001

METHOD BLANK: 1385408
Matrix: Water
Associated Lab Samples: 60170002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	05/29/14 15:43	

LABORATORY CONTROL SAMPLE: 1385409

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: 1385410 1385411

Parameter	Units	60169745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	143	135	95	90	70-130	6	20	

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

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: MPRP/27397
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60170002001

METHOD BLANK: 1384596
Matrix: Water
Associated Lab Samples: 60170002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	05/29/14 13:51	
Antimony	ug/L	ND	10.0	05/29/14 13:51	
Arsenic	ug/L	ND	10.0	05/29/14 13:51	
Beryllium	ug/L	ND	1.0	05/29/14 13:51	
Cadmium	ug/L	ND	5.0	05/29/14 13:51	
Chromium	ug/L	ND	5.0	05/29/14 13:51	
Cobalt	ug/L	ND	5.0	05/29/14 13:51	
Copper	ug/L	ND	10.0	05/29/14 13:51	
Iron	ug/L	ND	50.0	05/29/14 13:51	
Lead	ug/L	ND	5.0	05/29/14 13:51	
Nickel	ug/L	ND	5.0	05/29/14 13:51	
Selenium	ug/L	ND	15.0	05/29/14 13:51	
Silver	ug/L	ND	7.0	05/29/14 13:51	
Thallium	ug/L	ND	20.0	05/29/14 13:51	
Zinc	ug/L	ND	50.0	05/29/14 13:51	

LABORATORY CONTROL SAMPLE: 1384597

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	10200	102	85-115	
Antimony	ug/L	1000	1030	103	85-115	
Arsenic	ug/L	1000	986	99	85-115	
Beryllium	ug/L	1000	999	100	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	1010	101	85-115	
Cobalt	ug/L	1000	1020	102	85-115	
Copper	ug/L	1000	1000	100	85-115	
Iron	ug/L	10000	9640	96	85-115	
Lead	ug/L	1000	1010	101	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	1000	100	85-115	
Silver	ug/L	500	498	100	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384598 1384599

Parameter	Units	60169745001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	10500	10000	10000	13600	13500	32	30	70-130	1	8	M1
Antimony	ug/L	ND	1000	1000	1040	1040	98	98	70-130	0	7	
Arsenic	ug/L	1270	1000	1000	1280	1290	1	2	70-130	1	10	M1
Beryllium	ug/L	ND	1000	1000	912	918	91	92	70-130	1	7	
Cadmium	ug/L	ND	1000	1000	1020	1020	102	102	70-130	0	10	
Chromium	ug/L	280	1000	1000	1010	1010	73	73	70-130	0	10	
Cobalt	ug/L	47.9	1000	1000	956	963	91	92	70-130	1	6	
Copper	ug/L	ND	1000	1000	1030	1030	99	100	70-130	0	11	
Iron	ug/L	786000	10000	10000	159000	163000	-6271	-6235	70-130	2	10	M1
Lead	ug/L	108	1000	1000	919	923	81	82	70-130	0	10	
Nickel	ug/L	143	1000	1000	972	976	83	83	70-130	0	10	
Selenium	ug/L	87.7	1000	1000	1120	1130	104	105	70-130	1	10	
Silver	ug/L	ND	500	500	523	524	103	103	70-130	0	10	
Thallium	ug/L	ND	1000	1000	855	860	86	86	70-130	1	6	
Zinc	ug/L	5350	1000	1000	1960	1970	-338	-338	70-130	0	11	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: MPRP/27404
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60170002001

METHOD BLANK: 1384826
Matrix: Water
Associated Lab Samples: 60170002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/29/14 12:07	
Antimony, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Arsenic, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Beryllium, Dissolved	ug/L	ND	1.0	05/29/14 12:07	
Cadmium, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Chromium, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Cobalt, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Copper, Dissolved	ug/L	ND	10.0	05/29/14 12:07	
Iron, Dissolved	ug/L	ND	50.0	05/29/14 12:07	
Lead, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Nickel, Dissolved	ug/L	ND	5.0	05/29/14 12:07	
Selenium, Dissolved	ug/L	ND	15.0	05/29/14 12:07	
Silver, Dissolved	ug/L	ND	7.0	05/29/14 12:07	
Thallium, Dissolved	ug/L	ND	20.0	05/29/14 12:07	
Zinc, Dissolved	ug/L	ND	50.0	05/29/14 12:07	

LABORATORY CONTROL SAMPLE: 1384827

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10000	100	85-115	
Antimony, Dissolved	ug/L	1000	1040	104	85-115	
Arsenic, Dissolved	ug/L	1000	975	98	85-115	
Beryllium, Dissolved	ug/L	1000	988	99	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	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1010	101	85-115	
Iron, Dissolved	ug/L	10000	9900	99	85-115	
Lead, Dissolved	ug/L	1000	1010	101	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	497	99	85-115	
Thallium, Dissolved	ug/L	1000	996	100	85-115	
Zinc, Dissolved	ug/L	1000	1000	100	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1384828 1384829

Parameter	Units	60169832001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	ND	10000	10000	9720	9850	97	99	70-130	1	8	
Antimony, Dissolved	ug/L	ND	1000	1000	1030	1020	103	102	70-130	1	7	
Arsenic, Dissolved	ug/L	ND	1000	1000	984	987	98	98	70-130	0	10	
Beryllium, Dissolved	ug/L	ND	1000	1000	967	981	97	98	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	10	
Chromium, Dissolved	ug/L	ND	1000	1000	982	995	98	99	70-130	1	10	
Cobalt, Dissolved	ug/L	ND	1000	1000	1000	1000	100	100	70-130	0	6	
Copper, Dissolved	ug/L	ND	1000	1000	977	988	97	99	70-130	1	11	
Iron, Dissolved	ug/L	ND	10000	10000	9470	9570	95	96	70-130	1	10	
Lead, Dissolved	ug/L	ND	1000	1000	989	991	99	99	70-130	0	10	
Nickel, Dissolved	ug/L	ND	1000	1000	1010	1010	101	101	70-130	0	10	
Selenium, Dissolved	ug/L	ND	1000	1000	991	993	99	99	70-130	0	10	
Silver, Dissolved	ug/L	ND	500	500	484	490	97	98	70-130	1	10	
Thallium, Dissolved	ug/L	ND	1000	1000	992	993	99	99	70-130	0	6	
Zinc, Dissolved	ug/L	ND	1000	1000	993	993	99	99	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: MSV/61829 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60170002001, 60170002002

METHOD BLANK: 1383508 | Matrix: Water
Associated Lab Samples: 60170002001, 60170002002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/27/14 15:59	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,2-Dichloroethane	ug/L	ND	1.0	05/27/14 15:59	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/27/14 15:59	
2-Butanone (MEK)	ug/L	ND	10.0	05/27/14 15:59	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/27/14 15:59	N2
Acetone	ug/L	ND	10.0	05/27/14 15:59	N2
Benzene	ug/L	ND	1.0	05/27/14 15:59	
Bromodichloromethane	ug/L	ND	1.0	05/27/14 15:59	
Bromoform	ug/L	ND	1.0	05/27/14 15:59	
Bromomethane	ug/L	ND	5.0	05/27/14 15:59	
Carbon tetrachloride	ug/L	ND	1.0	05/27/14 15:59	
Chloroethane	ug/L	ND	1.0	05/27/14 15:59	
Chloroform	ug/L	ND	1.0	05/27/14 15:59	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/27/14 15:59	N2
Ethylbenzene	ug/L	ND	1.0	05/27/14 15:59	
Methylene chloride	ug/L	ND	1.0	05/27/14 15:59	
Tetrachloroethene	ug/L	ND	1.0	05/27/14 15:59	
Toluene	ug/L	ND	1.0	05/27/14 15:59	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/27/14 15:59	
Trichloroethene	ug/L	ND	1.0	05/27/14 15:59	
Vinyl chloride	ug/L	ND	1.0	05/27/14 15:59	
Xylene (Total)	ug/L	ND	3.0	05/27/14 15:59	N2
1,2-Dichloroethane-d4 (S)	%	101	80-120	05/27/14 15:59	
4-Bromofluorobenzene (S)	%	100	80-120	05/27/14 15:59	
Toluene-d8 (S)	%	100	80-120	05/27/14 15:59	

LABORATORY CONTROL SAMPLE: 1383509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.3	91	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	17.9	90	67-127	N2
1,1,2-Trichloroethane	ug/L	20	18.0	90	67-124	
1,2-Dichloroethane	ug/L	20	18.4	92	70-126	
1,4-Dichlorobenzene	ug/L	20	18.3	91	74-120	
2-Butanone (MEK)	ug/L	100	92.5	93	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	90.0	90	59-131	N2
Acetone	ug/L	100	82.0	82	38-134	N2
Benzene	ug/L	20	17.5	88	75-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

LABORATORY CONTROL SAMPLE: 1383509

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	18.4	92	68-125	
Bromoform	ug/L	20	18.6	93	65-127	
Bromomethane	ug/L	20	20.8	104	13-157	
Carbon tetrachloride	ug/L	20	17.5	88	70-131	
Chloroethane	ug/L	20	19.7	99	47-133	
Chloroform	ug/L	20	18.0	90	65-127	
cis-1,2-Dichloroethene	ug/L	20	18.0	90	68-127	N2
Ethylbenzene	ug/L	20	18.4	92	74-122	
Methylene chloride	ug/L	20	19.5	98	64-129	
Tetrachloroethene	ug/L	20	18.1	90	73-125	
Toluene	ug/L	20	17.5	88	69-126	
trans-1,2-Dichloroethene	ug/L	20	16.6	83	66-129	
Trichloroethene	ug/L	20	17.4	87	71-123	
Vinyl chloride	ug/L	20	20.6	103	43-129	
Xylene (Total)	ug/L	60	56.0	93	75-121	N2
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			99	80-120	
Toluene-d8 (S)	%			100	80-120	

MATRIX SPIKE SAMPLE: 1383510

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4410	88	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4490	90	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4180	84	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4170	83	49-144	
1,4-Dichlorobenzene	ug/L	425	5000	4690	85	33-140	
2-Butanone (MEK)	ug/L	47900	25000	66300	73	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	22200	86	40-160	N2
Acetone	ug/L	106000	25000	124000	71	10-160	N2
Benzene	ug/L	ND	5000	4160	81	37-151	
Bromodichloromethane	ug/L	ND	5000	4250	85	35-142	
Bromoform	ug/L	ND	5000	4410	88	45-142	
Bromomethane	ug/L	ND	5000	4280	86	10-158	
Carbon tetrachloride	ug/L	ND	5000	4490	90	70-140	
Chloroethane	ug/L	ND	5000	4500	90	19-152	
Chloroform	ug/L	ND	5000	4050	81	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4190	84	34-147	N2
Ethylbenzene	ug/L	ND	5000	4380	87	40-142	
Methylene chloride	ug/L	ND	5000	3570	71	31-144	
Tetrachloroethene	ug/L	ND	5000	4250	85	64-148	
Toluene	ug/L	681	5000	4680	80	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	3950	79	54-151	
Trichloroethene	ug/L	ND	5000	4090	82	71-149	
Vinyl chloride	ug/L	ND	5000	4720	94	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

MATRIX SPIKE SAMPLE: 1383510

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	13000	87	37-144	N2
1,2-Dichloroethane-d4 (S)	%				98	80-120	
4-Bromofluorobenzene (S)	%				99	80-120	HS
Toluene-d8 (S)	%				100	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: OEXT/44386 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60170002001

METHOD BLANK: 1384712 | Matrix: Water
Associated Lab Samples: 60170002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/29/14 08:58	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/29/14 08:58	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/29/14 08:58	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/29/14 08:58	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachloroethane	ug/L	ND	5.0	05/29/14 08:58	
Naphthalene	ug/L	ND	5.0	05/29/14 08:58	
Nitrobenzene	ug/L	ND	5.0	05/29/14 08:58	
Pentachlorophenol	ug/L	ND	5.0	05/29/14 08:58	
Phenol	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Tribromophenol (S)	%	93	39-120	05/29/14 08:58	
2-Fluorobiphenyl (S)	%	86	39-120	05/29/14 08:58	
2-Fluorophenol (S)	%	45	17-120	05/29/14 08:58	
Nitrobenzene-d5 (S)	%	84	33-120	05/29/14 08:58	
Phenol-d6 (S)	%	29	11-120	05/29/14 08:58	
Terphenyl-d14 (S)	%	84	45-120	05/29/14 08:58	

LABORATORY CONTROL SAMPLE: 1384713

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	38.7	77	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.3	85	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.3	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	28.6	57	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	44.1	88	40-133	
Hexachloro-1,3-butadiene	ug/L	50	39.8	80	44-116	
Hexachlorocyclopentadiene	ug/L	100	66.1	66	24-120	
Hexachloroethane	ug/L	50	38.4	77	43-113	
Naphthalene	ug/L	50	39.7	79	48-120	
Nitrobenzene	ug/L	50	41.4	83	48-120	
Pentachlorophenol	ug/L	50	45.2	90	47-120	
Phenol	ug/L	50	15.2	30	16-112	
2,4,6-Tribromophenol (S)	%			90	39-120	
2-Fluorobiphenyl (S)	%			85	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			29	11-120	
Terphenyl-d14 (S)	%			85	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

MATRIX SPIKE SAMPLE: 1384714

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3530	71	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4450	89	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3660	73	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	8000	5000	9420	28	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4490J	90	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3400	68	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	6750	68	11-120	
Hexachloroethane	ug/L	ND	5000	3610	72	40-113	
Naphthalene	ug/L	1360	5000	4640	65	45-120	
Nitrobenzene	ug/L	ND	5000	4140	83	38-120	
Pentachlorophenol	ug/L	ND	5000	5000	100	43-135	
Phenol	ug/L	10700	5000	9770	-20	13-112	M1
2,4,6-Tribromophenol (S)	%				92	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				42	17-120	
Nitrobenzene-d5 (S)	%				144	33-120	S0
Phenol-d6 (S)	%				25	11-120	
Terphenyl-d14 (S)	%				80	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: WET/48156 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60170002001

METHOD BLANK: 1386507 | Matrix: Water
Associated Lab Samples: 60170002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	06/02/14 08:01	

LABORATORY CONTROL SAMPLE: 1386508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.7	92	78-114	

MATRIX SPIKE SAMPLE: 1386554

Parameter	Units	60169767002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40	37.5	89	78-114	

SAMPLE DUPLICATE: 1386555

Parameter	Units	60169767004 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	431	413	4	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: WET/48158 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60170002001

METHOD BLANK: 1386542 | Matrix: Water
Associated Lab Samples: 60170002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	06/02/14 08:24	

LABORATORY CONTROL SAMPLE: 1386543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	22.3	112	64-132	

MATRIX SPIKE SAMPLE: 1386544

Parameter	Units	60169767002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	20	13.4	60	64-132	M1

SAMPLE DUPLICATE: 1386545

Parameter	Units	60169767004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	62.0	57.4	8	34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: WET/48127 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60170002001

METHOD BLANK: 1385462 | Matrix: Water
Associated Lab Samples: 60170002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/29/14 10:52	

SAMPLE DUPLICATE: 1385463

Parameter	Units	60169994003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	63900	63700	0	10	

SAMPLE DUPLICATE: 1385464

Parameter	Units	60169967001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	17.0	17.0	0	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: WET/48094
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60170002001

SAMPLE DUPLICATE: 1384760

Parameter	Units	60170005001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	6.9	6.9	1	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: WET/48056
QC Batch Method: SM 5210B
Analysis Method: SM 5210B
Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60170002001

METHOD BLANK: 1384144
Matrix: Water
Associated Lab Samples: 60170002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	05/31/14 07:51	

LABORATORY CONTROL SAMPLE: 1384145

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	194	98	85-115	

SAMPLE DUPLICATE: 1384146

Parameter	Units	60170001001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	31300	32300	3	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: WETA/29587 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60170002001

METHOD BLANK: 1384384 | Matrix: Water
Associated Lab Samples: 60170002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	05/27/14 15:54	

LABORATORY CONTROL SAMPLE: 1384385

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

MATRIX SPIKE SAMPLE: 1384386

Parameter	Units	60169839001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	3.4	2	4.8	68	90-110	M1

MATRIX SPIKE SAMPLE: 1384387

Parameter	Units	60169875006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.1	104	90-110	

SAMPLE DUPLICATE: 1384388

Parameter	Units	60169897001 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	1.7	1.7	1	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

QC Batch: WETA/29602 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60170002001

METHOD BLANK: 1384794 | Matrix: Water
Associated Lab Samples: 60170002001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	05/29/14 07:57	

LABORATORY CONTROL SAMPLE: 1384795

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: 1384796

Parameter	Units	60169372009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	303	250	544	96	90-110	

MATRIX SPIKE SAMPLE: 1384798

Parameter	Units	60169670001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	24.2	50	79.4	110	90-110	

SAMPLE DUPLICATE: 1384800

Parameter	Units	60169756001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	52.4	47.0	11	25	

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QUALIFIERS

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-310
Pace Project No.: 60170002

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60170002001	**316-310**	EPA 200.7	MPRP/27397	EPA 200.7	ICP/20732
60170002001	**316-310**	EPA 200.7	MPRP/27404	EPA 200.7	ICP/20744
60170002001	**316-310**	EPA 245.1	MERP/8435	EPA 245.1	MERC/8390
60170002001	**316-310**	EPA 245.1	MERP/8441	EPA 245.1	MERC/8396
60170002001	**316-310**	EPA 625	OEXT/44386	EPA 625	MSSV/14201
60170002001	**316-310**	EPA 624 Low	MSV/61829		
60170002002	**TRIP BLANK**	EPA 624 Low	MSV/61829		
60170002001	**316-310**	EPA 1664A	WET/48156		
60170002001	**316-310**	EPA 1664A	WET/48158		
60170002001	**316-310**	SM 2540D	WET/48127		
60170002001	**316-310**	SM 4500-H+B	WET/48094		
60170002001	**316-310**	SM 5210B	WET/48056	SM 5210B	WET/48160
60170002001	**316-310**	EPA 350.1	WETA/29587		
60170002001	**316-310**	EPA 410.4	WETA/29602		

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Pace Analytical
www.pacelabs.com

Sample Condition Upon Receipt

WO#: 60170002
60170002

Client Name: Barr Eng

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☑ 2 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 PK

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 1.6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/26/14 BA

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. BOD, pH
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☑No	☐N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes	☐No	☐N/A	13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	HNO3 Added 2.5mL Initial 6.0 final 4.0 / H2SO4 Added 2.0 mL 6.0 1.5
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☑No	☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed BA / Lot # of added preservative 12522 H2SO4, 12B13 HNO3
Trip Blank present: Pace Trip Blank lot # (if purchased): 040714-30E2	☑Yes	☐No	☐N/A	15.
Headspace in VOA vials (>6mm):	☑Yes	☐No	☐N/A	16. 2 of 5
Project sampled in USDA Regulated Area:	☐Yes	☐No	☑N/A	17. List State: NO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/27/14

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

Section A Required Client Information:	Section B Required Project Information:	Section C Invoice Information:
Company: BARR ENGINEERING	Report To: ED GALBRAITH/BARR	Attention: AMY HARGROVE/BRIAN POWER
Address:	Copy To: SCOTT FEDAK/FEEZOR	Company Name: REPUBLIC SERVICES
	DANA BAKER/MARGARET TREANOR -BARR	Address: BRIDGETON, MO 63044
Email To:	Purchase Order No.	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 #: 7585 LINE 2

Regulatory Agency
State / Location
Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N): 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	BOD SM 5210B		Residual Chlorine (Y/N)	60170002
1	316-310 2BP24 1BP3U 2AG4U	OT	G	05/25/14	4:45 pm	1BP3N	1BP3S		14	10	4	1	0	2AG3S				X	X	X	X	X	X	X	X	X	X	X			5D6GU 001
2	TRIP BLANK								2	2															X						2DG4U 002
3																															
4																															
5																															
6																															METALS LIST total & LF Dis:
7																															Al,Sb,As,Be,Cd,Cr,
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																															and Mercury
10																															
11																															
12																															

Matrix codes: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	Paul Linscott Fei	05/26/14	8:30AM	[signature]	05/26/14	8:30AM				
SITE ADDRESS: BRIDGETON LF				[signature] /PASI VG	5/26/14	1250	1.6	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:	Paul Linscott					
SIGNATURE of SAMPLER:	Paul Linscott	DATE Signed: 05/25/14				

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June 03, 2014

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

RE: Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 26, 2014. 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 June 3rd to include available estimated results and associated method detection limits.

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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

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 UNTREATED COMMINGLED
Pace Project No.: 60170003

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60170003001	**TCLP 5-24-14**	Water	05/24/14 16:45	05/26/14 12:50
60170003002	**TRIP BLANK**	Water	05/24/14 16:45	05/26/14 12:50

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SAMPLE ANALYTE COUNT

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60170003001	**TCLP 5-24-14**	EPA 8260	RAB	13
		EPA 5030B/8260	PRG	28
		EPA 1664A	CRT	1
		SM 2540B	JML	1
60170003002	**TRIP BLANK**	EPA 5030B/8260	PRG	28

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

Sample: TCLP 5-24-14 **Lab ID: 60170003001** Collected: 05/24/14 16:45 Received: 05/26/14 12:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV TCLP	Analytical Method: EPA 8260 Leachate Method/Date: EPA 1311; 05/28/14 00:00								
Benzene	ND	ug/L	500	250	10		05/30/14 06:41	71-43-2	
2-Butanone (MEK)	**44200**	ug/L	10000	5000	10		05/30/14 06:41	78-93-3	
Carbon tetrachloride	ND	ug/L	500	250	10		05/30/14 06:41	56-23-5	
Chlorobenzene	ND	ug/L	500	250	10		05/30/14 06:41	108-90-7	
Chloroform	ND	ug/L	2000	1000	10		05/30/14 06:41	67-66-3	
1,2-Dichloroethane	ND	ug/L	500	250	10		05/30/14 06:41	107-06-2	
1,1-Dichloroethene	ND	ug/L	500	250	10		05/30/14 06:41	75-35-4	
Tetrachloroethene	ND	ug/L	500	250	10		05/30/14 06:41	127-18-4	
Trichloroethene	ND	ug/L	500	250	10		05/30/14 06:41	79-01-6	
Vinyl chloride	ND	ug/L	200	100	10		05/30/14 06:41	75-01-4	
Surrogates									
1,2-Dichloroethane-d4 (S)	97	%	80-120		10		05/30/14 06:41	17060-07-0	
Toluene-d8 (S)	98	%	80-120		10		05/30/14 06:41	2037-26-5	
4-Bromofluorobenzene (S)	99	%	80-120		10		05/30/14 06:41	460-00-4	
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	**139000**	ug/L	2500	470	250		05/27/14 19:35	67-64-1	
Benzene	**547**	ug/L	250	15.0	250		05/27/14 19:35	71-43-2	
Bromodichloromethane	ND	ug/L	250	47.5	250		05/27/14 19:35	75-27-4	
Bromoform	ND	ug/L	250	17.5	250		05/27/14 19:35	75-25-2	
Bromomethane	ND	ug/L	1250	40.0	250		05/27/14 19:35	74-83-9	
2-Butanone (MEK)	**61400**	ug/L	2500	148	250		05/27/14 19:35	78-93-3	
Carbon tetrachloride	ND	ug/L	250	45.0	250		05/27/14 19:35	56-23-5	
Chloroethane	ND	ug/L	250	37.5	250		05/27/14 19:35	75-00-3	
Chloroform	ND	ug/L	250	35.0	250		05/27/14 19:35	67-66-3	
1,4-Dichlorobenzene	**919**	ug/L	250	15.0	250		05/27/14 19:35	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	30.0	250		05/27/14 19:35	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	20.0	250		05/27/14 19:35	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	250	50.0	250		05/27/14 19:35	156-60-5	
Ethylbenzene	**185J**	ug/L	250	45.0	250		05/27/14 19:35	100-41-4	
Methylene chloride	ND	ug/L	250	37.5	250		05/27/14 19:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	**1790J**	ug/L	2500	105	250		05/27/14 19:35	108-10-1	
1,1,2,2-Tetrachloroethane	**157J**	ug/L	250	37.5	250		05/27/14 19:35	79-34-5	
Tetrachloroethene	ND	ug/L	250	25.0	250		05/27/14 19:35	127-18-4	
Toluene	**156J**	ug/L	250	42.5	250		05/27/14 19:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	27.5	250		05/27/14 19:35	71-55-6	
1,1,2-Trichloroethane	**170J**	ug/L	250	50.0	250		05/27/14 19:35	79-00-5	
Trichloroethene	ND	ug/L	250	42.5	250		05/27/14 19:35	79-01-6	
Vinyl chloride	ND	ug/L	250	32.5	250		05/27/14 19:35	75-01-4	
Xylene (Total)	**518J**	ug/L	750	105	250		05/27/14 19:35	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	104	%	80-120		250		05/27/14 19:35	460-00-4	HS
1,2-Dichloroethane-d4 (S)	102	%	80-120		250		05/27/14 19:35	17060-07-0	
Toluene-d8 (S)	94	%	80-120		250		05/27/14 19:35	2037-26-5	
Preservation pH	**6.0**		0.10	0.10	250		05/27/14 19:35		pH

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

Sample: TCLP 5-24-14 **Lab ID: 60170003001** Collected: 05/24/14 16:45 Received: 05/26/14 12:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
HEM, Oil and Grease	Analytical Method: EPA 1664A								
Oil and Grease	**589**	mg/L	5.0	0.72	1		06/02/14 08:06		
2540B Total Solids	Analytical Method: SM 2540B								
Total Solids	**28200**	mg/L	5.0	5.0	1		05/27/14 18:14		

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ANALYTICAL RESULTS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

Sample: TRIP BLANK **Lab ID: 60170003002** Collected: 05/24/14 16:45 Received: 05/26/14 12:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 5030B/8260								
Acetone	ND	ug/L	10.0	1.9	1		05/27/14 15:18	67-64-1	
Benzene	ND	ug/L	1.0	0.060	1		05/27/14 15:18	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	0.19	1		05/27/14 15:18	75-27-4	
Bromoform	ND	ug/L	1.0	0.070	1		05/27/14 15:18	75-25-2	
Bromomethane	ND	ug/L	5.0	0.16	1		05/27/14 15:18	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	0.59	1		05/27/14 15:18	78-93-3	
Carbon tetrachloride	ND	ug/L	1.0	0.18	1		05/27/14 15:18	56-23-5	
Chloroethane	ND	ug/L	1.0	0.15	1		05/27/14 15:18	75-00-3	
Chloroform	ND	ug/L	1.0	0.14	1		05/27/14 15:18	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	0.060	1		05/27/14 15:18	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	0.12	1		05/27/14 15:18	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	0.080	1		05/27/14 15:18	156-59-2	
trans-1,2-Dichloroethene	ND	ug/L	1.0	0.20	1		05/27/14 15:18	156-60-5	
Ethylbenzene	ND	ug/L	1.0	0.18	1		05/27/14 15:18	100-41-4	
Methylene chloride	ND	ug/L	1.0	0.15	1		05/27/14 15:18	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	0.42	1		05/27/14 15:18	108-10-1	
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	0.15	1		05/27/14 15:18	79-34-5	
Tetrachloroethene	ND	ug/L	1.0	0.10	1		05/27/14 15:18	127-18-4	
Toluene	ND	ug/L	1.0	0.17	1		05/27/14 15:18	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	0.11	1		05/27/14 15:18	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	0.20	1		05/27/14 15:18	79-00-5	
Trichloroethene	ND	ug/L	1.0	0.17	1		05/27/14 15:18	79-01-6	
Vinyl chloride	ND	ug/L	1.0	0.13	1		05/27/14 15:18	75-01-4	
Xylene (Total)	ND	ug/L	3.0	0.42	1		05/28/14 12:10	1330-20-7	
Surrogates									
4-Bromofluorobenzene (S)	101	%	80-120		1		05/27/14 15:18	460-00-4	
1,2-Dichloroethane-d4 (S)	100	%	80-120		1		05/27/14 15:18	17060-07-0	
Toluene-d8 (S)	94	%	80-120		1		05/27/14 15:18	2037-26-5	
Preservation pH	**1.0**		0.10	0.10	1		05/27/14 15:18		

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

QC Batch: MSV/61914 | Analysis Method: EPA 8260
QC Batch Method: EPA 8260 | Analysis Description: 8260 MSV TCLP
Associated Lab Samples: 60170003001

METHOD BLANK: 1385255 | Matrix: Water
Associated Lab Samples: 60170003001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1-Dichloroethene	ug/L	ND	50.0	05/30/14 05:39	
1,2-Dichloroethane	ug/L	ND	50.0	05/30/14 05:39	
2-Butanone (MEK)	ug/L	ND	1000	05/30/14 05:39	
Benzene	ug/L	ND	50.0	05/30/14 05:39	
Carbon tetrachloride	ug/L	ND	50.0	05/30/14 05:39	
Chlorobenzene	ug/L	ND	50.0	05/30/14 05:39	
Chloroform	ug/L	ND	200	05/30/14 05:39	
Tetrachloroethene	ug/L	ND	50.0	05/30/14 05:39	
Trichloroethene	ug/L	ND	50.0	05/30/14 05:39	
Vinyl chloride	ug/L	ND	20.0	05/30/14 05:39	
1,2-Dichloroethane-d4 (S)	%	100	80-120	05/30/14 05:39	
4-Bromofluorobenzene (S)	%	99	80-120	05/30/14 05:39	
Toluene-d8 (S)	%	100	80-120	05/30/14 05:39	

LABORATORY CONTROL SAMPLE: 1385256

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	1000	861	86	78-126	
1,2-Dichloroethane	ug/L	1000	987	99	77-123	
2-Butanone (MEK)	ug/L	5000	4810	96	52-145	
Benzene	ug/L	1000	897	90	80-120	
Carbon tetrachloride	ug/L	1000	909	91	78-128	
Chlorobenzene	ug/L	1000	941	94	80-120	
Chloroform	ug/L	1000	968	97	79-120	
Tetrachloroethene	ug/L	1000	874	87	80-121	
Trichloroethene	ug/L	1000	931	93	80-120	
Vinyl chloride	ug/L	1000	876	88	59-120	
1,2-Dichloroethane-d4 (S)	%			97	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Toluene-d8 (S)	%			101	80-120	

MATRIX SPIKE SAMPLE: 1385257

Parameter	Units	60169721001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1-Dichloroethene	ug/L	ND	1000	741	74	60-144	
1,2-Dichloroethane	ug/L	ND	1000	946	95	49-148	
2-Butanone (MEK)	ug/L	ND	5000	4730	94	36-145	
Benzene	ug/L	ND	1000	895	89	37-157	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

MATRIX SPIKE SAMPLE: 1385257

Parameter	Units	60169721001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Carbon tetrachloride	ug/L	ND	1000	855	85	68-142	
Chlorobenzene	ug/L	ND	1000	909	91	66-133	
Chloroform	ug/L	1170	1000	2140	97	66-127	
Tetrachloroethene	ug/L	ND	1000	826	83	69-133	
Trichloroethene	ug/L	ND	1000	836	84	61-135	
Vinyl chloride	ug/L	ND	1000	734	73	44-128	
1,2-Dichloroethane-d4 (S)	%				98	80-120	
4-Bromofluorobenzene (S)	%				100	80-120	
Toluene-d8 (S)	%				101	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

QC Batch: MSV/61841 | Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 | Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60170003001, 60170003002

METHOD BLANK: 1384283 | Matrix: Water
Associated Lab Samples: 60170003001, 60170003002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/27/14 14:49	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/27/14 14:49	
1,1,2-Trichloroethane	ug/L	ND	1.0	05/27/14 14:49	
1,2-Dichloroethane	ug/L	ND	1.0	05/27/14 14:49	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/27/14 14:49	
2-Butanone (MEK)	ug/L	ND	10.0	05/27/14 14:49	
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/27/14 14:49	
Acetone	ug/L	ND	10.0	05/27/14 14:49	
Benzene	ug/L	ND	1.0	05/27/14 14:49	
Bromodichloromethane	ug/L	ND	1.0	05/27/14 14:49	
Bromoform	ug/L	ND	1.0	05/27/14 14:49	
Bromomethane	ug/L	ND	5.0	05/27/14 14:49	
Carbon tetrachloride	ug/L	ND	1.0	05/27/14 14:49	
Chloroethane	ug/L	ND	1.0	05/27/14 14:49	
Chloroform	ug/L	ND	1.0	05/27/14 14:49	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/27/14 14:49	
Ethylbenzene	ug/L	ND	1.0	05/27/14 14:49	
Methylene chloride	ug/L	ND	1.0	05/27/14 14:49	
Tetrachloroethene	ug/L	ND	1.0	05/27/14 14:49	
Toluene	ug/L	ND	1.0	05/27/14 14:49	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/27/14 14:49	
Trichloroethene	ug/L	ND	1.0	05/27/14 14:49	
Vinyl chloride	ug/L	ND	1.0	05/27/14 14:49	
Xylene (Total)	ug/L	ND	3.0	05/27/14 14:49	
1,2-Dichloroethane-d4 (S)	%	100	80-120	05/27/14 14:49	
4-Bromofluorobenzene (S)	%	104	80-120	05/27/14 14:49	
Toluene-d8 (S)	%	96	80-120	05/27/14 14:49	

LABORATORY CONTROL SAMPLE: 1384284

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	21.4	107	80-121	
1,1,2,2-Tetrachloroethane	ug/L	20	21.3	106	73-124	
1,1,2-Trichloroethane	ug/L	20	20.8	104	80-120	
1,2-Dichloroethane	ug/L	20	22.0	110	77-123	
1,4-Dichlorobenzene	ug/L	20	21.2	106	80-120	
2-Butanone (MEK)	ug/L	100	110	110	52-145	
4-Methyl-2-pentanone (MIBK)	ug/L	100	125	125	71-131	
Acetone	ug/L	100	117	117	32-155	
Benzene	ug/L	20	22.2	111	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

LABORATORY CONTROL SAMPLE: 1384284

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	22.1	111	80-120	
Bromoform	ug/L	20	20.5	102	73-124	
Bromomethane	ug/L	20	15.6	78	31-144	
Carbon tetrachloride	ug/L	20	21.5	107	78-128	
Chloroethane	ug/L	20	22.3	111	55-137	
Chloroform	ug/L	20	20.8	104	79-120	
cis-1,2-Dichloroethene	ug/L	20	21.8	109	80-120	
Ethylbenzene	ug/L	20	20.2	101	80-121	
Methylene chloride	ug/L	20	21.6	108	73-126	
Tetrachloroethene	ug/L	20	19.2	96	80-121	
Toluene	ug/L	20	21.1	106	80-122	
trans-1,2-Dichloroethene	ug/L	20	19.3	97	79-121	
Trichloroethene	ug/L	20	21.9	109	80-120	
Vinyl chloride	ug/L	20	19.4	97	59-120	
Xylene (Total)	ug/L	60	63.8	106	80-121	
1,2-Dichloroethane-d4 (S)	%			98	80-120	
4-Bromofluorobenzene (S)	%			106	80-120	
Toluene-d8 (S)	%			99	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

QC Batch: MSV/61880
QC Batch Method: EPA 5030B/8260
Analysis Method: EPA 5030B/8260
Analysis Description: 8260 MSV Water 10 mL Purge
Associated Lab Samples: 60170003002

METHOD BLANK: 1384818
Matrix: Water
Associated Lab Samples: 60170003002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Xylene (Total)	ug/L	ND	3.0	05/28/14 09:40	
1,2-Dichloroethane-d4 (S)	%	102	80-120	05/28/14 09:40	
4-Bromofluorobenzene (S)	%	108	80-120	05/28/14 09:40	
Toluene-d8 (S)	%	95	80-120	05/28/14 09:40	

LABORATORY CONTROL SAMPLE: 1384819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	60	63.3	105	80-121	
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Toluene-d8 (S)	%			95	80-120	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

QC Batch: WET/48156 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60170003001

METHOD BLANK: 1386507 | Matrix: Water
Associated Lab Samples: 60170003001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	06/02/14 08:01	

LABORATORY CONTROL SAMPLE: 1386508

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.7	92	78-114	

MATRIX SPIKE SAMPLE: 1386554

Parameter	Units	60169767002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	ND	40	37.5	89	78-114	

SAMPLE DUPLICATE: 1386555

Parameter	Units	60169767004 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	431	413	4	18	

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QUALITY CONTROL DATA

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

QC Batch: WET/48089 | Analysis Method: SM 2540B
QC Batch Method: SM 2540B | Analysis Description: 2540B Total Solids
Associated Lab Samples: 60170003001

METHOD BLANK: 1384661 | Matrix: Water
Associated Lab Samples: 60170003001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Solids	mg/L	ND	5.0	05/27/14 18:12	

LABORATORY CONTROL SAMPLE: 1384662

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Solids	mg/L	1000	991	99	80-120	

SAMPLE DUPLICATE: 1384663

Parameter	Units	60169616001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Solids	mg/L	17500	18000	3	10	

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QUALIFIERS

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

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.

BATCH QUALIFIERS

Batch: MSV/61841

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

Batch: MSV/61880

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

ANALYTE QUALIFIERS

HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).

pH Post-analysis pH measurement indicates insufficient VOA sample preservation.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON UNTREATED COMMINGLED
Pace Project No.: 60170003

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60170003001	**TCLP 5-24-14**	EPA 8260	MSV/61914		
60170003001	**TCLP 5-24-14**	EPA 5030B/8260	MSV/61841		
60170003002	**TRIP BLANK**	EPA 5030B/8260	MSV/61841		
60170003002	**TRIP BLANK**	EPA 5030B/8260	MSV/61880		
60170003001	**TCLP 5-24-14**	EPA 1664A	WET/48156		
60170003001	**TCLP 5-24-14**	SM 2540B	WET/48089		

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Sample Condition Upon Receipt

WO#: 60170003
60170003

Client Name: Barr Eng.

Optional
Proj Due Date:
Proj Name:

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 ☑ Ziplock

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 4.2

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/26/14 BA

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☐Yes	☑No	☐N/A	6.
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC:	☑Yes	☐No	☐N/A	
Includes date/time/ID/analyses Matrix: WT				13.
All containers needing preservation have been checked.	☐Yes	☐No	☑N/A	
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☐No	☑N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed / Lot # of added preservative
Trip Blank present:	☑Yes	☐No	☐N/A	
Pace Trip Blank lot # (if purchased): 040714-3BED				15.
Headspace in VOA vials (>6mm):	☑Yes	☐No	☐N/A	
				16. 3 of 3
Project sampled in USDA Regulated Area:	☐Yes	☐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: _____ Date: 5/27/14

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CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: of

Section A Required Client Information:

Company:	BARR ENGINEERING
Address:	
Email To:	
Phone:	Fax:
Requested Due Date/TAT:	

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
Project Name:	BRIDGETON UNTREATED COMMINGLED
Project Number:	

Section C Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	
Pace Project Manager:	Angie Brown 913-563-1402
Pace Profile #:	PROFILE 6787-LINE 6

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☐ OTHER _____

Site Location STATE: MO

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

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

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED Composite Start Date	Composite Start Time	Composite End/Grab Date	Composite End/Grab Time	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Analysis Test (Y/N)	8260 Volatiles **	TCLP Volatiles *	Total Solids/water matrix	Oil and Grease	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D. 60170003
1	TCLP 5-24-14 2AG1U 2AG3S	18P3U		3D5AH		5/24/14	1645		10	2	2		3						X	X	X	X		** total VOCs Bridgeton List 001
2	TRIP BLANK	WT	G	2D6QH					2				2						X					* footnote %dry solids TCLP 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			
	Paul Lins/ia	05/26/14	8:30AM	[illegible]	05/26/14	8:30AM				
				Brand Oko/PASLKS	5/26/14	1250	4.2	Y	Y	Y

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Hunter King

SIGNATURE of SAMPLER: Hunter King

DATE Signed (MM/DD/YY): 5-24-14

Temp in °C | Received on Ice (Y/N) | Custody Sealed Cooler (Y/N) | Samples Intact (Y/N)

*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.

F-ALL-Q-020rev.08, 12-Oct-2007

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TCLP/SPLP Determination of Percent Solids

(Only if sample is liquid or semi-liquid. Skip if sample is obviously 100% solid.)

Date: 5/27/14 Batch: 6363 / 6364

Analyst: ZNB Balance ID: 60XT5 Reviewed by: _____

Sample Number	A Weight of Beaker (g)	B Weight of Sample & Beaker (g)	C Weight of Filtrate Container (g)	D Weight of 142-mm TCLP Filter (g)	E Weight of Waste Beaker After Filtration (g)	F Weight of Filtrate & Container (g)	G Weight of Filter and Solid Phase After Filtration (g)	H Weight of Filtrate (g) (F - C)	I Weight of Waste Filtered (g) (E - B)	J Percent WET Solids $\left(\frac{(I-H)}{I \times 0.01}\right)$	K DRY Weight #1 of Solid Phase plus Filter (g)	L DRY Weight #2 of Solid Phase plus Filter (g) (1)	M Percent DRY Solids $\left(\frac{(L-D)}{I \times 0.01}\right)$	If Multiphase, Are Phases Compatible (2)
60169638-001	116.0	229.9	278.1	1.3	116.6	387.1	3.6	109.0	113.3	3.8	1.3	1.3	Ø	Yes / No / NA
60170003-001	123.2	243.2	279.8	1.3	~~123.8~~ 124.8	392.8	4.2	113.0	118.6	4.7	1.3	1.3	Ø	Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA
														Yes / No / NA

CEM 5/30/14

NOTE: If Wet Solids are ≥0.5 and <5% and a small amount of liquid is entrapped in the filter, then determine Percent Dry Solids. If the entrapped liquid is oily (non-aqueous) do not determine Percent Dry Solids. If Solids are <0.5%, tumbling is not required because the filtrate is considered to be the TCLP/SPLP extract.

(1) Dry Weight #1 and Dry Weight #2 must be within 1% of each other. If the weights are within 1% of each other, use Dry Weight #2 in further calculations. If not within 1%, continue drying and weighing until two successive weighings are within 1%.

(2) If compatible, combine the filtered liquid resulting from extraction with the initial liquid phase of sample. If the initial liquid phase is not compatible with the filtered liquid resulting from extraction, do not combine. Analyze liquids separately and combine the results mathematically.

If solids are ≥5.0 and <100%	Weight of waste to charge the ZHE = $\frac{25}{\text{Percent solids}} \times 100$ Weight of waste to filter = $\frac{\text{mL of leachate required}}{20 \times \text{Percent solids}} \times 100$

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June 04, 2014

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

RE: Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 28, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

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 316-311
Pace Project No.: 60170032

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60170032001	**316-311**	Water	05/26/14 15:15	05/28/14 02:50
60170032002	**TRIP BLANK**	Water	05/26/14 00:00	05/28/14 02:50

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60170032001	**316-311**	EPA 200.7	JGP	15
		EPA 200.7	SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	SMW	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	JML	1
		SM 4500-H+B	DJR	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60170032002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

Sample: 316-311 **Lab ID: 60170032001** Collected: 05/26/14 15:15 Received: 05/28/14 02:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**11400**	ug/L	750	2	05/30/14 09:20	06/02/14 13:39	7429-90-5	
Antimony	ND	ug/L	100	2	05/30/14 09:20	06/02/14 13:39	7440-36-0	D3
Arsenic	**1130**	ug/L	50.0	1	05/30/14 09:20	06/02/14 13:36	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/30/14 09:20	06/02/14 13:36	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:36	7440-43-9	
Chromium	**276**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:36	7440-47-3	
Cobalt	**43.7**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:36	7440-48-4	
Copper	ND	ug/L	50.0	1	05/30/14 09:20	06/02/14 13:36	7440-50-8	
Iron	**804000**	ug/L	250	1	05/30/14 09:20	06/02/14 13:36	7439-89-6	
Lead	**133**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:36	7439-92-1	
Nickel	**150**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:36	7440-02-0	
Selenium	ND	ug/L	75.0	1	05/30/14 09:20	06/02/14 13:36	7782-49-2	
Silver	ND	ug/L	35.0	1	05/30/14 09:20	06/02/14 13:36	7440-22-4	
Thallium	ND	ug/L	100	1	05/30/14 09:20	06/02/14 13:36	7440-28-0	
Zinc	**5640**	ug/L	500	2	05/30/14 09:20	06/02/14 13:39	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1390**	ug/L	750	2	05/29/14 16:50	05/30/14 14:05	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/29/14 16:50	05/30/14 14:05	7440-36-0	D3
Arsenic, Dissolved	**1000**	ug/L	50.0	1	05/29/14 16:50	05/30/14 14:02	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/29/14 16:50	05/30/14 14:02	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/29/14 16:50	05/30/14 14:02	7440-43-9	
Chromium, Dissolved	**190**	ug/L	25.0	1	05/29/14 16:50	05/30/14 14:02	7440-47-3	
Cobalt, Dissolved	**30.7**	ug/L	25.0	1	05/29/14 16:50	05/30/14 14:02	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/29/14 16:50	05/30/14 14:02	7440-50-8	
Iron, Dissolved	**372000**	ug/L	250	1	05/29/14 16:50	05/30/14 14:02	7439-89-6	M1,R1
Lead, Dissolved	**41.1**	ug/L	25.0	1	05/29/14 16:50	05/30/14 14:02	7439-92-1	
Nickel, Dissolved	**112**	ug/L	25.0	1	05/29/14 16:50	05/30/14 14:02	7440-02-0	
Selenium, Dissolved	**78.4**	ug/L	75.0	1	05/29/14 16:50	05/30/14 14:02	7782-49-2	D9
Silver, Dissolved	ND	ug/L	35.0	1	05/29/14 16:50	05/30/14 14:02	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/29/14 16:50	05/30/14 14:02	7440-28-0	
Zinc, Dissolved	**4770**	ug/L	500	2	05/29/14 16:50	05/30/14 14:05	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**34.8**	ug/L	6.0	1	05/29/14 09:40	05/29/14 16:12	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	06/03/14 10:45	06/03/14 14:37	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/28/14 00:00	05/29/14 11:24	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:24	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:24	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:24	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/28/14 00:00	05/29/14 11:24	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**7070**	ug/L	4000	2	05/28/14 00:00	05/29/14 11:24		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

Sample: 316-311 **Lab ID: 60170032001** Collected: 05/26/14 15:15 Received: 05/28/14 02:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1770**	ug/L	1000	2	05/28/14 00:00	05/29/14 11:24	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:24	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:24	87-86-5	
Phenol	**9500**	ug/L	1000	2	05/28/14 00:00	05/29/14 11:24	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:24	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:24	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	158	%	33-120	2	05/28/14 00:00	05/29/14 11:24	4165-60-0	S0
2-Fluorobiphenyl (S)	78	%	39-120	2	05/28/14 00:00	05/29/14 11:24	321-60-8	
Terphenyl-d14 (S)	78	%	45-120	2	05/28/14 00:00	05/29/14 11:24	1718-51-0	
Phenol-d6 (S)	27	%	11-120	2	05/28/14 00:00	05/29/14 11:24	13127-88-3	
2-Fluorophenol (S)	41	%	17-120	2	05/28/14 00:00	05/29/14 11:24	367-12-4	
2,4,6-Tribromophenol (S)	87	%	39-120	2	05/28/14 00:00	05/29/14 11:24	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**157000**	ug/L	2500	250		05/30/14 13:56	67-64-1	M1,N2
Benzene	ND	ug/L	250	250		05/30/14 13:56	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/30/14 13:56	75-27-4	
Bromoform	ND	ug/L	250	250		05/30/14 13:56	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/30/14 13:56	74-83-9	
2-Butanone (MEK)	**63100**	ug/L	2500	250		05/30/14 13:56	78-93-3	M1,N2
Carbon tetrachloride	ND	ug/L	250	250		05/30/14 13:56	56-23-5	
Chloroethane	ND	ug/L	250	250		05/30/14 13:56	75-00-3	
Chloroform	ND	ug/L	250	250		05/30/14 13:56	67-66-3	
1,4-Dichlorobenzene	**497**	ug/L	250	250		05/30/14 13:56	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/30/14 13:56	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/30/14 13:56	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/30/14 13:56	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/30/14 13:56	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/30/14 13:56	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/30/14 13:56	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/30/14 13:56	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/30/14 13:56	127-18-4	
Toluene	ND	ug/L	250	250		05/30/14 13:56	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/30/14 13:56	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/30/14 13:56	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/30/14 13:56	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/30/14 13:56	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/30/14 13:56	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	102	%	80-120	250		05/30/14 13:56	460-00-4	
Toluene-d8 (S)	107	%	80-120	250		05/30/14 13:56	2037-26-5	
1,2-Dichloroethane-d4 (S)	96	%	80-120	250		05/30/14 13:56	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/30/14 13:56		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1150**	mg/L	5.0	1		06/03/14 10:41		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

Sample: 316-311 **Lab ID: 60170032001** Collected: 05/26/14 15:15 Received: 05/28/14 02:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**8.6**	mg/L	5.0	1		06/03/14 15:04		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**5700**	mg/L	5.0	1		05/29/14 10:59		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/30/14 16:30		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**33100**	mg/L	2.0	1	05/28/14 12:04	06/02/14 10:46		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**658**	mg/L	20.0	200		06/02/14 12:23	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**57900**	mg/L	5000	500		06/03/14 07:21		M1

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

Sample: TRIP BLANK **Lab ID: 60170032002** Collected: 05/26/14 00:00 Received: 05/28/14 02:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/30/14 12:39	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/30/14 12:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/14 12:39	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/14 12:39	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/30/14 12:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/30/14 12:39	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/14 12:39	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/30/14 12:39	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/30/14 12:39	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/14 12:39	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/14 12:39	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/14 12:39	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/14 12:39	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/30/14 12:39	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/30/14 12:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/30/14 12:39	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/14 12:39	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/30/14 12:39	127-18-4	
Toluene	ND	ug/L	1.0	1		05/30/14 12:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/14 12:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/14 12:39	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/14 12:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/30/14 12:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/30/14 12:39	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	1		05/30/14 12:39	460-00-4	
Toluene-d8 (S)	107	%	80-120	1		05/30/14 12:39	2037-26-5	
1,2-Dichloroethane-d4 (S)	91	%	80-120	1		05/30/14 12:39	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/30/14 12:39		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: MERP/8442
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury
Associated Lab Samples: 60170032001

METHOD BLANK: 1385416
Matrix: Water
Associated Lab Samples: 60170032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/29/14 16:03	

LABORATORY CONTROL SAMPLE: 1385417

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	92	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1385418 1385419

Parameter	Units	60170032001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	34.8	150	150	172	175	91	94	70-130	2	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: MERP/8452 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60170032001

METHOD BLANK: 1387693 | Matrix: Water
Associated Lab Samples: 60170032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	06/03/14 14:33	

LABORATORY CONTROL SAMPLE: 1387694

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: 1387695 1387696

Parameter	Units	60170032001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	116	120	77	80	70-130	4	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: MPRP/27435 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60170032001

METHOD BLANK: 1385627 | Matrix: Water
Associated Lab Samples: 60170032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	06/02/14 13:02	
Antimony	ug/L	ND	10.0	06/02/14 13:02	
Arsenic	ug/L	ND	10.0	06/02/14 13:02	
Beryllium	ug/L	ND	1.0	06/02/14 13:02	
Cadmium	ug/L	ND	5.0	06/02/14 13:02	
Chromium	ug/L	ND	5.0	06/02/14 13:02	
Cobalt	ug/L	ND	5.0	06/02/14 13:02	
Copper	ug/L	ND	10.0	06/02/14 13:02	
Iron	ug/L	ND	50.0	06/02/14 13:02	
Lead	ug/L	ND	5.0	06/02/14 13:02	
Nickel	ug/L	ND	5.0	06/02/14 13:02	
Selenium	ug/L	ND	15.0	06/02/14 13:02	
Silver	ug/L	ND	7.0	06/02/14 13:02	
Thallium	ug/L	ND	20.0	06/02/14 13:02	
Zinc	ug/L	ND	50.0	06/02/14 13:02	

LABORATORY CONTROL SAMPLE: 1385628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9860	99	85-115	
Antimony	ug/L	1000	1000	100	85-115	
Arsenic	ug/L	1000	985	99	85-115	
Beryllium	ug/L	1000	979	98	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	1020	102	85-115	
Cobalt	ug/L	1000	998	100	85-115	
Copper	ug/L	1000	986	99	85-115	
Iron	ug/L	10000	9470	95	85-115	
Lead	ug/L	1000	999	100	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	986	99	85-115	
Silver	ug/L	500	492	98	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1385629 1385630

Parameter	Units	60170130001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	5860	50000	50000	59200	59400	107	107	70-130	0	8	
Antimony	ug/L	ND	5000	5000	5080	5080	100	100	70-130	0	7	
Arsenic	ug/L	1190	5000	5000	6380	6380	104	104	70-130	0	10	
Beryllium	ug/L	ND	5000	5000	4700	4690	94	94	70-130	0	7	
Cadmium	ug/L	ND	5000	5000	5180	5190	104	104	70-130	0	10	
Chromium	ug/L	239	5000	5000	5180	5200	99	99	70-130	0	10	
Cobalt	ug/L	37.5	5000	5000	4780	4790	95	95	70-130	0	6	
Copper	ug/L	ND	5000	5000	5120	5120	102	102	70-130	0	11	
Iron	ug/L	592000	50000	50000	608000	617000	33	51	70-130	1	10	M1
Lead	ug/L	79.8	5000	5000	4620	4610	91	91	70-130	0	10	
Nickel	ug/L	134	5000	5000	4960	4960	97	97	70-130	0	10	
Selenium	ug/L	76.8	5000	5000	5530	5560	109	110	70-130	0	10	
Silver	ug/L	ND	2500	2500	2610	2610	104	104	70-130	0	10	
Thallium	ug/L	ND	5000	5000	4400	4440	88	89	70-130	1	6	
Zinc	ug/L	5440	5000	5000	9940	9950	90	90	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: MPRP/27436 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60170032001

METHOD BLANK: 1385631 | Matrix: Water
Associated Lab Samples: 60170032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/30/14 13:55	
Antimony, Dissolved	ug/L	ND	10.0	05/30/14 13:55	
Arsenic, Dissolved	ug/L	ND	10.0	05/30/14 13:55	
Beryllium, Dissolved	ug/L	ND	1.0	05/30/14 13:55	
Cadmium, Dissolved	ug/L	ND	5.0	05/30/14 13:55	
Chromium, Dissolved	ug/L	ND	5.0	06/02/14 12:23	
Cobalt, Dissolved	ug/L	ND	5.0	05/30/14 13:55	
Copper, Dissolved	ug/L	ND	10.0	06/02/14 12:23	
Iron, Dissolved	ug/L	ND	50.0	05/30/14 13:55	
Lead, Dissolved	ug/L	ND	5.0	05/30/14 13:55	
Nickel, Dissolved	ug/L	ND	5.0	05/30/14 13:55	
Selenium, Dissolved	ug/L	ND	15.0	05/30/14 13:55	
Silver, Dissolved	ug/L	ND	7.0	06/02/14 12:23	
Thallium, Dissolved	ug/L	ND	20.0	05/30/14 13:55	
Zinc, Dissolved	ug/L	ND	50.0	05/30/14 13:55	

LABORATORY CONTROL SAMPLE: 1385632

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10600	106	85-115	
Antimony, Dissolved	ug/L	1000	1020	102	85-115	
Arsenic, Dissolved	ug/L	1000	971	97	85-115	
Beryllium, Dissolved	ug/L	1000	994	99	85-115	
Cadmium, Dissolved	ug/L	1000	1000	100	85-115	
Chromium, Dissolved	ug/L	1000	1030	103	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	1020	102	85-115	
Iron, Dissolved	ug/L	10000	9750	98	85-115	
Lead, Dissolved	ug/L	1000	999	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	989	99	85-115	
Silver, Dissolved	ug/L	500	502	100	85-115	
Thallium, Dissolved	ug/L	1000	1000	100	85-115	
Zinc, Dissolved	ug/L	1000	997	100	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1385633 1385634

Parameter	Units	60170032001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1390	50000	50000	54000	54000	105	105	70-130	0	8	
Antimony, Dissolved	ug/L	ND	5000	5000	5240	5200	104	104	70-130	1	7	
Arsenic, Dissolved	ug/L	1000	5000	5000	6230	6180	105	103	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	5040	4690	101	94	70-130	7	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5200	5200	104	104	70-130	0	10	
Chromium, Dissolved	ug/L	190	5000	5000	5090	5130	98	99	70-130	1	10	
Cobalt, Dissolved	ug/L	30.7	5000	5000	4860	4900	97	97	70-130	1	6	
Copper, Dissolved	ug/L	ND	5000	5000	5270	5260	105	105	70-130	0	11	
Iron, Dissolved	ug/L	372000	50000	50000	447000	397000	150	50	70-130	12	10	M1,R1
Lead, Dissolved	ug/L	41.1	5000	5000	4600	4650	91	92	70-130	1	10	
Nickel, Dissolved	ug/L	112	5000	5000	4930	4950	96	97	70-130	0	10	
Selenium, Dissolved	ug/L	78.4	5000	5000	5660	5640	112	111	70-130	0	10	
Silver, Dissolved	ug/L	ND	2500	2500	2660	2660	106	106	70-130	0	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4420	4440	88	89	70-130	1	6	
Zinc, Dissolved	ug/L	4770	5000	5000	9640	9640	98	97	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: MSV/61953 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60170032001, 60170032002

METHOD BLANK: 1386239 | Matrix: Water
Associated Lab Samples: 60170032001, 60170032002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/30/14 12:23	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,2-Dichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/30/14 12:23	
2-Butanone (MEK)	ug/L	ND	10.0	05/30/14 12:23	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/30/14 12:23	N2
Acetone	ug/L	ND	10.0	05/30/14 12:23	N2
Benzene	ug/L	ND	1.0	05/30/14 12:23	
Bromodichloromethane	ug/L	ND	1.0	05/30/14 12:23	
Bromoform	ug/L	ND	1.0	05/30/14 12:23	
Bromomethane	ug/L	ND	5.0	05/30/14 12:23	
Carbon tetrachloride	ug/L	ND	1.0	05/30/14 12:23	
Chloroethane	ug/L	ND	1.0	05/30/14 12:23	
Chloroform	ug/L	ND	1.0	05/30/14 12:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/30/14 12:23	N2
Ethylbenzene	ug/L	ND	1.0	05/30/14 12:23	
Methylene chloride	ug/L	ND	1.0	05/30/14 12:23	
Tetrachloroethene	ug/L	ND	1.0	05/30/14 12:23	
Toluene	ug/L	ND	1.0	05/30/14 12:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/30/14 12:23	
Trichloroethene	ug/L	ND	1.0	05/30/14 12:23	
Vinyl chloride	ug/L	ND	1.0	05/30/14 12:23	
Xylene (Total)	ug/L	ND	3.0	05/30/14 12:23	N2
1,2-Dichloroethane-d4 (S)	%	98	80-120	05/30/14 12:23	
4-Bromofluorobenzene (S)	%	101	80-120	05/30/14 12:23	
Toluene-d8 (S)	%	109	80-120	05/30/14 12:23	

LABORATORY CONTROL SAMPLE: 1386240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	23.6	118	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	96	67-127	N2
1,1,2-Trichloroethane	ug/L	20	21.6	108	67-124	
1,2-Dichloroethane	ug/L	20	23.0	115	70-126	
1,4-Dichlorobenzene	ug/L	20	21.2	106	74-120	
2-Butanone (MEK)	ug/L	100	113	113	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	109	109	59-131	N2
Acetone	ug/L	100	99.5	100	38-134	N2
Benzene	ug/L	20	23.1	115	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

LABORATORY CONTROL SAMPLE: 1386240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	24.6	123	68-125	
Bromoform	ug/L	20	17.9	90	65-127	
Bromomethane	ug/L	20	9.9	49	13-157	
Carbon tetrachloride	ug/L	20	22.4	112	70-131	
Chloroethane	ug/L	20	24.7	124	47-133	
Chloroform	ug/L	20	23.6	118	65-127	
cis-1,2-Dichloroethene	ug/L	20	24.0	120	68-127	N2
Ethylbenzene	ug/L	20	23.8	119	74-122	
Methylene chloride	ug/L	20	21.9	110	64-129	
Tetrachloroethene	ug/L	20	22.3	112	73-125	
Toluene	ug/L	20	24.8	124	69-126	
trans-1,2-Dichloroethene	ug/L	20	22.4	112	66-129	
Trichloroethene	ug/L	20	23.5	117	71-123	
Vinyl chloride	ug/L	20	22.9	114	43-129	
Xylene (Total)	ug/L	60	71.3	119	75-121	N2
1,2-Dichloroethane-d4 (S)	%			114	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			107	80-120	

MATRIX SPIKE SAMPLE: 1386241

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4650	93	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4300	86	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4200	84	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4340	87	49-144	
1,4-Dichlorobenzene	ug/L	497	5000	4950	89	33-140	
2-Butanone (MEK)	ug/L	63100	25000	71400	33	40-160	M1,N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	21700	83	40-160	N2
Acetone	ug/L	157000	25000	140000	-68	10-160	M1,N2
Benzene	ug/L	ND	5000	4380	87	37-151	
Bromodichloromethane	ug/L	ND	5000	4520	90	35-142	
Bromoform	ug/L	ND	5000	3690	74	45-142	
Bromomethane	ug/L	ND	5000	2310	46	10-158	
Carbon tetrachloride	ug/L	ND	5000	4690	94	70-140	
Chloroethane	ug/L	ND	5000	4700	94	19-152	
Chloroform	ug/L	ND	5000	4410	88	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4480	90	34-147	N2
Ethylbenzene	ug/L	ND	5000	4630	92	40-142	
Methylene chloride	ug/L	ND	5000	3800	76	31-144	
Tetrachloroethene	ug/L	ND	5000	4690	94	64-148	
Toluene	ug/L	ND	5000	4760	94	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4390	88	54-151	
Trichloroethene	ug/L	ND	5000	4560	91	71-149	
Vinyl chloride	ug/L	ND	5000	5020	100	22-146	

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(913)599-5665

QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

MATRIX SPIKE SAMPLE: 1386241

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	13900	93	37-144	N2
1,2-Dichloroethane-d4 (S)	%				92	80-120	
4-Bromofluorobenzene (S)	%				101	80-120	
Toluene-d8 (S)	%				107	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: OEXT/44386 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60170032001

METHOD BLANK: 1384712 | Matrix: Water
Associated Lab Samples: 60170032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/29/14 08:58	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/29/14 08:58	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/29/14 08:58	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/29/14 08:58	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachloroethane	ug/L	ND	5.0	05/29/14 08:58	
Naphthalene	ug/L	ND	5.0	05/29/14 08:58	
Nitrobenzene	ug/L	ND	5.0	05/29/14 08:58	
Pentachlorophenol	ug/L	ND	5.0	05/29/14 08:58	
Phenol	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Tribromophenol (S)	%	93	39-120	05/29/14 08:58	
2-Fluorobiphenyl (S)	%	86	39-120	05/29/14 08:58	
2-Fluorophenol (S)	%	45	17-120	05/29/14 08:58	
Nitrobenzene-d5 (S)	%	84	33-120	05/29/14 08:58	
Phenol-d6 (S)	%	29	11-120	05/29/14 08:58	
Terphenyl-d14 (S)	%	84	45-120	05/29/14 08:58	

LABORATORY CONTROL SAMPLE: 1384713

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	38.7	77	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.3	85	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.3	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	28.6	57	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	44.1	88	40-133	
Hexachloro-1,3-butadiene	ug/L	50	39.8	80	44-116	
Hexachlorocyclopentadiene	ug/L	100	66.1	66	24-120	
Hexachloroethane	ug/L	50	38.4	77	43-113	
Naphthalene	ug/L	50	39.7	79	48-120	
Nitrobenzene	ug/L	50	41.4	83	48-120	
Pentachlorophenol	ug/L	50	45.2	90	47-120	
Phenol	ug/L	50	15.2	30	16-112	
2,4,6-Tribromophenol (S)	%			90	39-120	
2-Fluorobiphenyl (S)	%			85	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			29	11-120	
Terphenyl-d14 (S)	%			85	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

MATRIX SPIKE SAMPLE: 1384714

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3530	71	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4450	89	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3660	73	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	8000	5000	9420	28	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4490J	90	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3400	68	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	6750	68	11-120	
Hexachloroethane	ug/L	ND	5000	3610	72	40-113	
Naphthalene	ug/L	1360	5000	4640	65	45-120	
Nitrobenzene	ug/L	ND	5000	4140	83	38-120	
Pentachlorophenol	ug/L	ND	5000	5000	100	43-135	
Phenol	ug/L	10700	5000	9770	-20	13-112	M1
2,4,6-Tribromophenol (S)	%				92	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				42	17-120	
Nitrobenzene-d5 (S)	%				144	33-120	S0
Phenol-d6 (S)	%				25	11-120	
Terphenyl-d14 (S)	%				80	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: WET/48194 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60170032001

METHOD BLANK: 1387827 | Matrix: Water
Associated Lab Samples: 60170032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	06/03/14 10:41	

LABORATORY CONTROL SAMPLE: 1387828

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.9	92	78-114	

MATRIX SPIKE SAMPLE: 1387849

Parameter	Units	60170130001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	1670	167	2160	290	78-114	M1

SAMPLE DUPLICATE: 1387850

Parameter	Units	60170239001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	1200	1160	4	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: WET/48186 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60170032001

METHOD BLANK: 1387325 | Matrix: Water
Associated Lab Samples: 60170032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	06/03/14 15:03	

LABORATORY CONTROL SAMPLE: 1387326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	20.5	102	64-132	

MATRIX SPIKE SAMPLE: 1388023

Parameter	Units	60170130001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	11.4	83.3	53.8	51	64-132	M1

SAMPLE DUPLICATE: 1388024

Parameter	Units	60170239001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	12.1	16.3	29	34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: WET/48127 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60170032001

METHOD BLANK: 1385462 | Matrix: Water
Associated Lab Samples: 60170032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/29/14 10:52	

SAMPLE DUPLICATE: 1385463

Parameter	Units	60169994003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	63900	63700	0	10	

SAMPLE DUPLICATE: 1385464

Parameter	Units	60169967001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	17.0	17.0	0	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: WET/48153
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60170032001

SAMPLE DUPLICATE: 1386451

Parameter	Units	60170142007 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.4	7.4	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: WET/48103 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60170032001

METHOD BLANK: 1384844 | Matrix: Water
Associated Lab Samples: 60170032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	06/02/14 10:33	

LABORATORY CONTROL SAMPLE: 1384845

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	187	95	85-115	

SAMPLE DUPLICATE: 1384846

Parameter	Units	60170037001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	29400	30600	4	17	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: WETA/29661 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60170032001

METHOD BLANK: 1387003 | Matrix: Water
Associated Lab Samples: 60170032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	06/02/14 12:05	

LABORATORY CONTROL SAMPLE: 1387004

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

MATRIX SPIKE SAMPLE: 1387005

Parameter	Units	60170026002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.2	110	90-110	

MATRIX SPIKE SAMPLE: 1387006

Parameter	Units	60170029003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1.7	2	3.5	89	90-110	M1

SAMPLE DUPLICATE: 1387007

Parameter	Units	60170031002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	12.3	12.2	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

QC Batch: WETA/29651 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60170032001

METHOD BLANK: 1386758 | Matrix: Water
Associated Lab Samples: 60170032001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	06/03/14 07:20	

LABORATORY CONTROL SAMPLE: 1386759

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: 1386760

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	57900	25000	79200	85	90-110	M1

MATRIX SPIKE SAMPLE: 1386762

Parameter	Units	60170017002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	6200	5000	10300	83	90-110	M1

SAMPLE DUPLICATE: 1386761

Parameter	Units	60170069001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	41.7	38.4	8	25	

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QUALIFIERS

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-311
Pace Project No.: 60170032

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60170032001	**316-311**	EPA 200.7	MPRP/27435	EPA 200.7	ICP/20764
60170032001	**316-311**	EPA 200.7	MPRP/27436	EPA 200.7	ICP/20762
60170032001	**316-311**	EPA 245.1	MERP/8442	EPA 245.1	MERC/8397
60170032001	**316-311**	EPA 245.1	MERP/8452	EPA 245.1	MERC/8405
60170032001	**316-311**	EPA 625	OEXT/44386	EPA 625	MSSV/14201
60170032001	**316-311**	EPA 624 Low	MSV/61953		
60170032002	**TRIP BLANK**	EPA 624 Low	MSV/61953		
60170032001	**316-311**	EPA 1664A	WET/48194		
60170032001	**316-311**	EPA 1664A	WET/48186		
60170032001	**316-311**	SM 2540D	WET/48127		
60170032001	**316-311**	SM 4500-H+B	WET/48153		
60170032001	**316-311**	SM 5210B	WET/48103	SM 5210B	WET/48177
60170032001	**316-311**	EPA 350.1	WETA/29661		
60170032001	**316-311**	EPA 410.4	WETA/29651		

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Sample Condition Upon Receipt

WO#: 60170032

60170032

Optional
Proj Due Date:
Proj Name:

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-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 5.8

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/28

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. Bod pH
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☑No	☐N/A	12.
Sample labels match COC:	☑Yes	☐No	☐N/A	
Includes date/time/ID/analyses Matrix: WT				13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	HNO_3 initial ~5.0; added 2.5 ml; no change
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☑No	☐N/A	H_2SO_4 initial ~5.0; added 2 ml; final ~2.0 14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed: Lot # of added preservative: 12513-23-2, 12522-2-7
Trip Blank present:	☑Yes	☐No	☐N/A	
Pace Trip Blank lot # (if purchased): May 16				15.
Headspace in VOA vials (>6mm):	☐Yes	☑No	☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☑N/A	17. List State: MD

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: _____

Pace Analytical

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency	
State / Location	
	Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N): 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	BOD SM 5210B	Residual Chlorine (Y/N)	
1	316-311	OT	G	05/26/14	3:15 pm				14	10	4	1	0					X	X	X	X	X	X	X	X	X	X	X		
2	TRIP BLANK								2	2															X					
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

METALS LIST total & LF Dis: Al,Sb,As,Be,Cd,Cr, Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn and Mercury

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	Paul Linscott FEI PL	5-27-14	2:30pm	[illegible]	5-27-14	2:30pm				
SITE ADDRESS: BRIDGETON LF	[illegible] FEI			[illegible] PASI	5/28/14	0260	5.8	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: Paul Linscott					
SIGNATURE of SAMPLER: Paul Linscott	DATE Signed: 05/26/14				

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June 04, 2014

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

RE: Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 28, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

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 316-312
Pace Project No.: 60170037

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60170037001	**316-312**	Water	05/27/14 08:30	05/28/14 02:50
60170037002	**TRIP BLANK**	Water	05/27/14 00:00	05/28/14 02:50

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60170037001	**316-312**	EPA 200.7	JGP	15
		EPA 200.7	JGP, SMW	15
		EPA 245.1	NDJ	1
		EPA 245.1	SMW	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	ESM	1
		SM 4500-H+B	DJR	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60170037002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

Sample: 316-312 **Lab ID: 60170037001** Collected: 05/27/14 08:30 Received: 05/28/14 02:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**6180**	ug/L	750	2	05/30/14 09:20	06/02/14 13:46	7429-90-5	
Antimony	ND	ug/L	100	2	05/30/14 09:20	06/02/14 13:46	7440-36-0	D3
Arsenic	**1220**	ug/L	50.0	1	05/30/14 09:20	06/02/14 13:43	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/30/14 09:20	06/02/14 13:43	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:43	7440-43-9	
Chromium	**258**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:43	7440-47-3	
Cobalt	**40.4**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:43	7440-48-4	
Copper	ND	ug/L	50.0	1	05/30/14 09:20	06/02/14 13:43	7440-50-8	
Iron	**711000**	ug/L	250	1	05/30/14 09:20	06/02/14 13:43	7439-89-6	
Lead	**90.6**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:43	7439-92-1	
Nickel	**140**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:43	7440-02-0	
Selenium	**77.8**	ug/L	75.0	1	05/30/14 09:20	06/02/14 13:43	7782-49-2	
Silver	ND	ug/L	35.0	1	05/30/14 09:20	06/02/14 13:43	7440-22-4	
Thallium	ND	ug/L	100	1	05/30/14 09:20	06/02/14 13:43	7440-28-0	
Zinc	**5550**	ug/L	500	2	05/30/14 09:20	06/02/14 13:46	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1160**	ug/L	750	2	05/29/14 16:50	05/30/14 14:26	7429-90-5	
Antimony, Dissolved	ND	ug/L	100	2	05/29/14 16:50	05/30/14 14:26	7440-36-0	D3
Arsenic, Dissolved	**926**	ug/L	50.0	1	05/29/14 16:50	05/30/14 14:22	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	05/29/14 16:50	05/30/14 14:22	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	05/29/14 16:50	05/30/14 14:22	7440-43-9	
Chromium, Dissolved	**180**	ug/L	25.0	1	05/29/14 16:50	06/02/14 12:33	7440-47-3	
Cobalt, Dissolved	**27.3**	ug/L	25.0	1	05/29/14 16:50	05/30/14 14:22	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	05/29/14 16:50	06/02/14 12:33	7440-50-8	
Iron, Dissolved	**330000**	ug/L	250	1	05/29/14 16:50	05/30/14 14:22	7439-89-6	
Lead, Dissolved	**38.3**	ug/L	25.0	1	05/29/14 16:50	05/30/14 14:22	7439-92-1	
Nickel, Dissolved	**107**	ug/L	25.0	1	05/29/14 16:50	05/30/14 14:22	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	05/29/14 16:50	05/30/14 14:22	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	05/29/14 16:50	06/02/14 12:33	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	05/29/14 16:50	05/30/14 14:22	7440-28-0	
Zinc, Dissolved	**4930**	ug/L	500	2	05/29/14 16:50	05/30/14 14:26	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	05/29/14 09:40	05/29/14 16:19	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	06/03/14 10:45	06/03/14 14:44	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	05/28/14 00:00	05/29/14 11:45	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:45	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:45	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:45	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	05/28/14 00:00	05/29/14 11:45	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**6050**	ug/L	4000	2	05/28/14 00:00	05/29/14 11:45		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

Sample: 316-312 **Lab ID: 60170037001** Collected: 05/27/14 08:30 Received: 05/28/14 02:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1070**	ug/L	1000	2	05/28/14 00:00	05/29/14 11:45	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:45	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:45	87-86-5	
Phenol	**8210**	ug/L	1000	2	05/28/14 00:00	05/29/14 11:45	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:45	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	05/28/14 00:00	05/29/14 11:45	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	138	%	33-120	2	05/28/14 00:00	05/29/14 11:45	4165-60-0	S0
2-Fluorobiphenyl (S)	75	%	39-120	2	05/28/14 00:00	05/29/14 11:45	321-60-8	
Terphenyl-d14 (S)	75	%	45-120	2	05/28/14 00:00	05/29/14 11:45	1718-51-0	
Phenol-d6 (S)	30	%	11-120	2	05/28/14 00:00	05/29/14 11:45	13127-88-3	
2-Fluorophenol (S)	32	%	17-120	2	05/28/14 00:00	05/29/14 11:45	367-12-4	
2,4,6-Tribromophenol (S)	90	%	39-120	2	05/28/14 00:00	05/29/14 11:45	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**122000**	ug/L	2500	250		05/30/14 14:26	67-64-1	N2
Benzene	ND	ug/L	250	250		05/30/14 14:26	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/30/14 14:26	75-27-4	
Bromoform	ND	ug/L	250	250		05/30/14 14:26	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/30/14 14:26	74-83-9	
2-Butanone (MEK)	**54300**	ug/L	2500	250		05/30/14 14:26	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/30/14 14:26	56-23-5	
Chloroethane	ND	ug/L	250	250		05/30/14 14:26	75-00-3	
Chloroform	ND	ug/L	250	250		05/30/14 14:26	67-66-3	
1,4-Dichlorobenzene	**354**	ug/L	250	250		05/30/14 14:26	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/30/14 14:26	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/30/14 14:26	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/30/14 14:26	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/30/14 14:26	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/30/14 14:26	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/30/14 14:26	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/30/14 14:26	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/30/14 14:26	127-18-4	
Toluene	ND	ug/L	250	250		05/30/14 14:26	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/30/14 14:26	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/30/14 14:26	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/30/14 14:26	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/30/14 14:26	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/30/14 14:26	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	101	%	80-120	250		05/30/14 14:26	460-00-4	
Toluene-d8 (S)	107	%	80-120	250		05/30/14 14:26	2037-26-5	
1,2-Dichloroethane-d4 (S)	94	%	80-120	250		05/30/14 14:26	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/30/14 14:26		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1010**	mg/L	5.0	1		06/03/14 10:42		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

Sample: 316-312 **Lab ID: 60170037001** Collected: 05/27/14 08:30 Received: 05/28/14 02:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**10.4**	mg/L	5.0	1		06/03/14 15:04		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**3920**	mg/L	5.0	1		05/30/14 09:54		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/30/14 16:30		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**29400**	mg/L	2.0	1	05/28/14 12:16	06/02/14 10:54		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**596**	mg/L	20.0	200		06/02/14 12:24	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**51100**	mg/L	5000	500		06/03/14 07:22		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

Sample: TRIP BLANK **Lab ID: 60170037002** Collected: 05/27/14 00:00 Received: 05/28/14 02:50 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/30/14 12:54	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/30/14 12:54	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/14 12:54	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/14 12:54	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/30/14 12:54	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/30/14 12:54	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/14 12:54	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/30/14 12:54	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/30/14 12:54	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/14 12:54	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/14 12:54	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/14 12:54	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/14 12:54	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/30/14 12:54	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/30/14 12:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/30/14 12:54	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/14 12:54	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/30/14 12:54	127-18-4	
Toluene	ND	ug/L	1.0	1		05/30/14 12:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/14 12:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/14 12:54	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/14 12:54	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/30/14 12:54	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/30/14 12:54	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	1		05/30/14 12:54	460-00-4	
Toluene-d8 (S)	106	%	80-120	1		05/30/14 12:54	2037-26-5	
1,2-Dichloroethane-d4 (S)	91	%	80-120	1		05/30/14 12:54	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/30/14 12:54		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: MERP/8442 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60170037001

METHOD BLANK: 1385416 | Matrix: Water
Associated Lab Samples: 60170037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	05/29/14 16:03	

LABORATORY CONTROL SAMPLE: 1385417

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	92	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1385418 1385419

Parameter	Units	60170032001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	34.8	150	150	172	175	91	94	70-130	2	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: MERP/8452
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60170037001

METHOD BLANK: 1387693
Matrix: Water
Associated Lab Samples: 60170037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	06/03/14 14:33	

LABORATORY CONTROL SAMPLE: 1387694

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: 1387695 1387696

Parameter	Units	60170032001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	116	120	77	80	70-130	4	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: MPRP/27435 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60170037001

METHOD BLANK: 1385627 | Matrix: Water
Associated Lab Samples: 60170037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	06/02/14 13:02	
Antimony	ug/L	ND	10.0	06/02/14 13:02	
Arsenic	ug/L	ND	10.0	06/02/14 13:02	
Beryllium	ug/L	ND	1.0	06/02/14 13:02	
Cadmium	ug/L	ND	5.0	06/02/14 13:02	
Chromium	ug/L	ND	5.0	06/02/14 13:02	
Cobalt	ug/L	ND	5.0	06/02/14 13:02	
Copper	ug/L	ND	10.0	06/02/14 13:02	
Iron	ug/L	ND	50.0	06/02/14 13:02	
Lead	ug/L	ND	5.0	06/02/14 13:02	
Nickel	ug/L	ND	5.0	06/02/14 13:02	
Selenium	ug/L	ND	15.0	06/02/14 13:02	
Silver	ug/L	ND	7.0	06/02/14 13:02	
Thallium	ug/L	ND	20.0	06/02/14 13:02	
Zinc	ug/L	ND	50.0	06/02/14 13:02	

LABORATORY CONTROL SAMPLE: 1385628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9860	99	85-115	
Antimony	ug/L	1000	1000	100	85-115	
Arsenic	ug/L	1000	985	99	85-115	
Beryllium	ug/L	1000	979	98	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	1020	102	85-115	
Cobalt	ug/L	1000	998	100	85-115	
Copper	ug/L	1000	986	99	85-115	
Iron	ug/L	10000	9470	95	85-115	
Lead	ug/L	1000	999	100	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	986	99	85-115	
Silver	ug/L	500	492	98	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1385629 1385630

Parameter	Units	60170130001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	5860	50000	50000	59200	59400	107	107	70-130	0	8	
Antimony	ug/L	ND	5000	5000	5080	5080	100	100	70-130	0	7	
Arsenic	ug/L	1190	5000	5000	6380	6380	104	104	70-130	0	10	
Beryllium	ug/L	ND	5000	5000	4700	4690	94	94	70-130	0	7	
Cadmium	ug/L	ND	5000	5000	5180	5190	104	104	70-130	0	10	
Chromium	ug/L	239	5000	5000	5180	5200	99	99	70-130	0	10	
Cobalt	ug/L	37.5	5000	5000	4780	4790	95	95	70-130	0	6	
Copper	ug/L	ND	5000	5000	5120	5120	102	102	70-130	0	11	
Iron	ug/L	592000	50000	50000	608000	617000	33	51	70-130	1	10	M1
Lead	ug/L	79.8	5000	5000	4620	4610	91	91	70-130	0	10	
Nickel	ug/L	134	5000	5000	4960	4960	97	97	70-130	0	10	
Selenium	ug/L	76.8	5000	5000	5530	5560	109	110	70-130	0	10	
Silver	ug/L	ND	2500	2500	2610	2610	104	104	70-130	0	10	
Thallium	ug/L	ND	5000	5000	4400	4440	88	89	70-130	1	6	
Zinc	ug/L	5440	5000	5000	9940	9950	90	90	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: MPRP/27436
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60170037001

METHOD BLANK: 1385631
Matrix: Water
Associated Lab Samples: 60170037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	05/30/14 13:55	
Antimony, Dissolved	ug/L	ND	10.0	05/30/14 13:55	
Arsenic, Dissolved	ug/L	ND	10.0	05/30/14 13:55	
Beryllium, Dissolved	ug/L	ND	1.0	05/30/14 13:55	
Cadmium, Dissolved	ug/L	ND	5.0	05/30/14 13:55	
Chromium, Dissolved	ug/L	ND	5.0	06/02/14 12:23	
Cobalt, Dissolved	ug/L	ND	5.0	05/30/14 13:55	
Copper, Dissolved	ug/L	ND	10.0	06/02/14 12:23	
Iron, Dissolved	ug/L	ND	50.0	05/30/14 13:55	
Lead, Dissolved	ug/L	ND	5.0	05/30/14 13:55	
Nickel, Dissolved	ug/L	ND	5.0	05/30/14 13:55	
Selenium, Dissolved	ug/L	ND	15.0	05/30/14 13:55	
Silver, Dissolved	ug/L	ND	7.0	06/02/14 12:23	
Thallium, Dissolved	ug/L	ND	20.0	05/30/14 13:55	
Zinc, Dissolved	ug/L	ND	50.0	05/30/14 13:55	

LABORATORY CONTROL SAMPLE: 1385632

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum, Dissolved	ug/L	10000	10600	106	85-115	
Antimony, Dissolved	ug/L	1000	1020	102	85-115	
Arsenic, Dissolved	ug/L	1000	971	97	85-115	
Beryllium, Dissolved	ug/L	1000	994	99	85-115	
Cadmium, Dissolved	ug/L	1000	1000	100	85-115	
Chromium, Dissolved	ug/L	1000	1030	103	85-115	
Cobalt, Dissolved	ug/L	1000	1010	101	85-115	
Copper, Dissolved	ug/L	1000	1020	102	85-115	
Iron, Dissolved	ug/L	10000	9750	98	85-115	
Lead, Dissolved	ug/L	1000	999	100	85-115	
Nickel, Dissolved	ug/L	1000	1020	102	85-115	
Selenium, Dissolved	ug/L	1000	989	99	85-115	
Silver, Dissolved	ug/L	500	502	100	85-115	
Thallium, Dissolved	ug/L	1000	1000	100	85-115	
Zinc, Dissolved	ug/L	1000	997	100	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1385633 1385634

Parameter	Units	60170032001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1390	50000	50000	54000	54000	105	105	70-130	0	8	
Antimony, Dissolved	ug/L	ND	5000	5000	5240	5200	104	104	70-130	1	7	
Arsenic, Dissolved	ug/L	1000	5000	5000	6230	6180	105	103	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	5040	4690	101	94	70-130	7	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5200	5200	104	104	70-130	0	10	
Chromium, Dissolved	ug/L	190	5000	5000	5090	5130	98	99	70-130	1	10	
Cobalt, Dissolved	ug/L	30.7	5000	5000	4860	4900	97	97	70-130	1	6	
Copper, Dissolved	ug/L	ND	5000	5000	5270	5260	105	105	70-130	0	11	
Iron, Dissolved	ug/L	372000	50000	50000	447000	397000	150	50	70-130	12	10	M1,R1
Lead, Dissolved	ug/L	41.1	5000	5000	4600	4650	91	92	70-130	1	10	
Nickel, Dissolved	ug/L	112	5000	5000	4930	4950	96	97	70-130	0	10	
Selenium, Dissolved	ug/L	78.4	5000	5000	5660	5640	112	111	70-130	0	10	
Silver, Dissolved	ug/L	ND	2500	2500	2660	2660	106	106	70-130	0	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4420	4440	88	89	70-130	1	6	
Zinc, Dissolved	ug/L	4770	5000	5000	9640	9640	98	97	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: MSV/61953 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60170037001, 60170037002

METHOD BLANK: 1386239 | Matrix: Water
Associated Lab Samples: 60170037001, 60170037002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/30/14 12:23	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,2-Dichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/30/14 12:23	
2-Butanone (MEK)	ug/L	ND	10.0	05/30/14 12:23	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/30/14 12:23	N2
Acetone	ug/L	ND	10.0	05/30/14 12:23	N2
Benzene	ug/L	ND	1.0	05/30/14 12:23	
Bromodichloromethane	ug/L	ND	1.0	05/30/14 12:23	
Bromoform	ug/L	ND	1.0	05/30/14 12:23	
Bromomethane	ug/L	ND	5.0	05/30/14 12:23	
Carbon tetrachloride	ug/L	ND	1.0	05/30/14 12:23	
Chloroethane	ug/L	ND	1.0	05/30/14 12:23	
Chloroform	ug/L	ND	1.0	05/30/14 12:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/30/14 12:23	N2
Ethylbenzene	ug/L	ND	1.0	05/30/14 12:23	
Methylene chloride	ug/L	ND	1.0	05/30/14 12:23	
Tetrachloroethene	ug/L	ND	1.0	05/30/14 12:23	
Toluene	ug/L	ND	1.0	05/30/14 12:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/30/14 12:23	
Trichloroethene	ug/L	ND	1.0	05/30/14 12:23	
Vinyl chloride	ug/L	ND	1.0	05/30/14 12:23	
Xylene (Total)	ug/L	ND	3.0	05/30/14 12:23	N2
1,2-Dichloroethane-d4 (S)	%	98	80-120	05/30/14 12:23	
4-Bromofluorobenzene (S)	%	101	80-120	05/30/14 12:23	
Toluene-d8 (S)	%	109	80-120	05/30/14 12:23	

LABORATORY CONTROL SAMPLE: 1386240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	23.6	118	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	96	67-127	N2
1,1,2-Trichloroethane	ug/L	20	21.6	108	67-124	
1,2-Dichloroethane	ug/L	20	23.0	115	70-126	
1,4-Dichlorobenzene	ug/L	20	21.2	106	74-120	
2-Butanone (MEK)	ug/L	100	113	113	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	109	109	59-131	N2
Acetone	ug/L	100	99.5	100	38-134	N2
Benzene	ug/L	20	23.1	115	75-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

LABORATORY CONTROL SAMPLE: 1386240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	24.6	123	68-125	
Bromoform	ug/L	20	17.9	90	65-127	
Bromomethane	ug/L	20	9.9	49	13-157	
Carbon tetrachloride	ug/L	20	22.4	112	70-131	
Chloroethane	ug/L	20	24.7	124	47-133	
Chloroform	ug/L	20	23.6	118	65-127	
cis-1,2-Dichloroethene	ug/L	20	24.0	120	68-127	N2
Ethylbenzene	ug/L	20	23.8	119	74-122	
Methylene chloride	ug/L	20	21.9	110	64-129	
Tetrachloroethene	ug/L	20	22.3	112	73-125	
Toluene	ug/L	20	24.8	124	69-126	
trans-1,2-Dichloroethene	ug/L	20	22.4	112	66-129	
Trichloroethene	ug/L	20	23.5	117	71-123	
Vinyl chloride	ug/L	20	22.9	114	43-129	
Xylene (Total)	ug/L	60	71.3	119	75-121	N2
1,2-Dichloroethane-d4 (S)	%			114	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			107	80-120	

MATRIX SPIKE SAMPLE: 1386241

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4650	93	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4300	86	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4200	84	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4340	87	49-144	
1,4-Dichlorobenzene	ug/L	497	5000	4950	89	33-140	
2-Butanone (MEK)	ug/L	63100	25000	71400	33	40-160	M1,N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	21700	83	40-160	N2
Acetone	ug/L	157000	25000	140000	-68	10-160	M1,N2
Benzene	ug/L	ND	5000	4380	87	37-151	
Bromodichloromethane	ug/L	ND	5000	4520	90	35-142	
Bromoform	ug/L	ND	5000	3690	74	45-142	
Bromomethane	ug/L	ND	5000	2310	46	10-158	
Carbon tetrachloride	ug/L	ND	5000	4690	94	70-140	
Chloroethane	ug/L	ND	5000	4700	94	19-152	
Chloroform	ug/L	ND	5000	4410	88	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4480	90	34-147	N2
Ethylbenzene	ug/L	ND	5000	4630	92	40-142	
Methylene chloride	ug/L	ND	5000	3800	76	31-144	
Tetrachloroethene	ug/L	ND	5000	4690	94	64-148	
Toluene	ug/L	ND	5000	4760	94	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4390	88	54-151	
Trichloroethene	ug/L	ND	5000	4560	91	71-149	
Vinyl chloride	ug/L	ND	5000	5020	100	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

MATRIX SPIKE SAMPLE: 1386241

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	13900	93	37-144	N2
1,2-Dichloroethane-d4 (S)	%				92	80-120	
4-Bromofluorobenzene (S)	%				101	80-120	
Toluene-d8 (S)	%				107	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: OEXT/44386 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60170037001

METHOD BLANK: 1384712 | Matrix: Water
Associated Lab Samples: 60170037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Trichlorophenol	ug/L	ND	5.0	05/29/14 08:58	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	05/29/14 08:58	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	05/29/14 08:58	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	05/29/14 08:58	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachlorocyclopentadiene	ug/L	ND	5.0	05/29/14 08:58	
Hexachloroethane	ug/L	ND	5.0	05/29/14 08:58	
Naphthalene	ug/L	ND	5.0	05/29/14 08:58	
Nitrobenzene	ug/L	ND	5.0	05/29/14 08:58	
Pentachlorophenol	ug/L	ND	5.0	05/29/14 08:58	
Phenol	ug/L	ND	5.0	05/29/14 08:58	
2,4,6-Tribromophenol (S)	%	93	39-120	05/29/14 08:58	
2-Fluorobiphenyl (S)	%	86	39-120	05/29/14 08:58	
2-Fluorophenol (S)	%	45	17-120	05/29/14 08:58	
Nitrobenzene-d5 (S)	%	84	33-120	05/29/14 08:58	
Phenol-d6 (S)	%	29	11-120	05/29/14 08:58	
Terphenyl-d14 (S)	%	84	45-120	05/29/14 08:58	

LABORATORY CONTROL SAMPLE: 1384713

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	38.7	77	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.3	85	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	32.3	65	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	28.6	57	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	44.1	88	40-133	
Hexachloro-1,3-butadiene	ug/L	50	39.8	80	44-116	
Hexachlorocyclopentadiene	ug/L	100	66.1	66	24-120	
Hexachloroethane	ug/L	50	38.4	77	43-113	
Naphthalene	ug/L	50	39.7	79	48-120	
Nitrobenzene	ug/L	50	41.4	83	48-120	
Pentachlorophenol	ug/L	50	45.2	90	47-120	
Phenol	ug/L	50	15.2	30	16-112	
2,4,6-Tribromophenol (S)	%			90	39-120	
2-Fluorobiphenyl (S)	%			85	39-120	
2-Fluorophenol (S)	%			45	17-120	
Nitrobenzene-d5 (S)	%			83	33-120	
Phenol-d6 (S)	%			29	11-120	
Terphenyl-d14 (S)	%			85	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

MATRIX SPIKE SAMPLE: 1384714

Parameter	Units	60169851001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5000	3530	71	44-120	
2,4,6-Trichlorophenol	ug/L	ND	5000	4450	89	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	5000	3660	73	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	8000	5000	9420	28	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	5000	4490J	90	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	5000	3400	68	39-116	
Hexachlorocyclopentadiene	ug/L	ND	10000	6750	68	11-120	
Hexachloroethane	ug/L	ND	5000	3610	72	40-113	
Naphthalene	ug/L	1360	5000	4640	65	45-120	
Nitrobenzene	ug/L	ND	5000	4140	83	38-120	
Pentachlorophenol	ug/L	ND	5000	5000	100	43-135	
Phenol	ug/L	10700	5000	9770	-20	13-112	M1
2,4,6-Tribromophenol (S)	%				92	39-120	
2-Fluorobiphenyl (S)	%				80	39-120	
2-Fluorophenol (S)	%				42	17-120	
Nitrobenzene-d5 (S)	%				144	33-120	S0
Phenol-d6 (S)	%				25	11-120	
Terphenyl-d14 (S)	%				80	45-120	

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: WET/48194 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60170037001

METHOD BLANK: 1387827 | Matrix: Water
Associated Lab Samples: 60170037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	06/03/14 10:41	

LABORATORY CONTROL SAMPLE: 1387828

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.9	92	78-114	

MATRIX SPIKE SAMPLE: 1387849

Parameter	Units	60170130001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	1670	167	2160	290	78-114	M1

SAMPLE DUPLICATE: 1387850

Parameter	Units	60170239001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	1200	1160	4	18	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: WET/48186 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60170037001

METHOD BLANK: 1387325 | Matrix: Water
Associated Lab Samples: 60170037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	06/03/14 15:03	

LABORATORY CONTROL SAMPLE: 1387326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	20.5	102	64-132	

MATRIX SPIKE SAMPLE: 1388023

Parameter	Units	60170130001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	11.4	83.3	53.8	51	64-132	M1

SAMPLE DUPLICATE: 1388024

Parameter	Units	60170239001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	12.1	16.3	29	34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: WET/48142 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60170037001

METHOD BLANK: 1386165 | Matrix: Water
Associated Lab Samples: 60170037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/30/14 09:52	

SAMPLE DUPLICATE: 1386166

Parameter	Units	60170185001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	29.0	36.0	22	10	D6

SAMPLE DUPLICATE: 1386167

Parameter	Units	60170040002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	ND		10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: WET/48153
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60170037001

SAMPLE DUPLICATE: 1386451

Parameter	Units	60170142007 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.4	7.4	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: WET/48103 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60170037001

METHOD BLANK: 1384844 | Matrix: Water
Associated Lab Samples: 60170037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	06/02/14 10:33	

LABORATORY CONTROL SAMPLE: 1384845

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	187	95	85-115	

SAMPLE DUPLICATE: 1384846

Parameter	Units	60170037001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	29400	30600	4	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: WETA/29661 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60170037001

METHOD BLANK: 1387003 | Matrix: Water
Associated Lab Samples: 60170037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	06/02/14 12:05	

LABORATORY CONTROL SAMPLE: 1387004

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

MATRIX SPIKE SAMPLE: 1387005

Parameter	Units	60170026002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	2.2	110	90-110	

MATRIX SPIKE SAMPLE: 1387006

Parameter	Units	60170029003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1.7	2	3.5	89	90-110	M1

SAMPLE DUPLICATE: 1387007

Parameter	Units	60170031002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	12.3	12.2	0	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

QC Batch: WETA/29651 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60170037001

METHOD BLANK: 1386758 | Matrix: Water
Associated Lab Samples: 60170037001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	06/03/14 07:20	

LABORATORY CONTROL SAMPLE: 1386759

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: 1386760

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	57900	25000	79200	85	90-110	M1

MATRIX SPIKE SAMPLE: 1386762

Parameter	Units	60170017002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	6200	5000	10300	83	90-110	M1

SAMPLE DUPLICATE: 1386761

Parameter	Units	60170069001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	41.7	38.4	8	25	

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QUALIFIERS

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-312
Pace Project No.: 60170037

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60170037001	**316-312**	EPA 200.7	MPRP/27435	EPA 200.7	ICP/20764
60170037001	**316-312**	EPA 200.7	MPRP/27436	EPA 200.7	ICP/20762
60170037001	**316-312**	EPA 245.1	MERP/8442	EPA 245.1	MERC/8397
60170037001	**316-312**	EPA 245.1	MERP/8452	EPA 245.1	MERC/8405
60170037001	**316-312**	EPA 625	OEXT/44386	EPA 625	MSSV/14201
60170037001	**316-312**	EPA 624 Low	MSV/61953		
60170037002	**TRIP BLANK**	EPA 624 Low	MSV/61953		
60170037001	**316-312**	EPA 1664A	WET/48194		
60170037001	**316-312**	EPA 1664A	WET/48186		
60170037001	**316-312**	SM 2540D	WET/48142		
60170037001	**316-312**	SM 4500-H+B	WET/48153		
60170037001	**316-312**	SM 5210B	WET/48103	SM 5210B	WET/48177
60170037001	**316-312**	EPA 350.1	WETA/29661		
60170037001	**316-312**	EPA 410.4	WETA/29651		

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Sample Condition Upon Receipt

WO#: 60170037
60170037

Optional
Proj Due Date:
Proj Name:

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 ☑ ZP/C

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 6.0

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 12/5/2014

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. BOD pH
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	Added 2.5 mL of HNO3 to BP3N. pH<2/4.0 Added 2.0 mL of H2SO4 to BP3S. pH<2.0/3.0
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A	14.
Exceptions: VOA coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed: N Lot # of added preservative: 12513 12522
Trip Blank present: Pace Trip Blank lot # (if purchased): Cover	☑Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State: MO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 12/9/14

Pace Analytical

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency	
State / Location	
	Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N	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	BOD SM 5210B		Residual Chlorine (Y/N)	6017 0037
1	5D194 316-312 2AG44 1BP4U 3AG35	OT	G	5/27/14	0830	—	—		53	10	4	1	0	113	93	3			X	X	X	X	X	X	X	X	X	X	X	112	93	4 0 2BP4U
2	TRIP BLANK	—	—	—	—	—	—		2	2																X						2D194
3																																
4																																
5																																
6																																METALS LIST total & LF Dis:
7																																Al,Sb,As,Be,Cd,Cr,
8																																Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																																and Mercury
10																																
11																																
12																																

Preservatives: Unpreserved, H2SO4, HNO3, HCl, NaOH, Na2S2O3, Methanol, Other

Matrix codes: Drinking Water DW; Water WT; Waste Water WW; Product P; Soil/Solid SL; Oil OL; Wipe WP; Air AR; Other OT; Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-27-14	2:30pm	Jeanette Martin	5-27-14	2:30pm				
SITE ADDRESS: BRIDGETON LF				PASI	5/28	0250	6.0	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:	WILLIAM ABERNATHY					
SIGNATURE of SAMPLER:		DATE Signed: 5/27/14				

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June 05, 2014

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

RE: Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 29, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

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CERTIFICATIONS

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

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 316-313
Pace Project No.: 60170130

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60170130001	**316-313**	Water	05/28/14 07:43	05/29/14 01:30
60170130002	**TRIP BLANK**	Water	05/28/14 07:43	05/29/14 01:30

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60170130001	**316-313**	EPA 200.7	JGP	15
		EPA 200.7	NDJ	15
		EPA 245.1	SMW	1
		EPA 245.1	SMW	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	ESM	1
		SM 4500-H+B	DJR	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60170130002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

Sample: 316-313 **Lab ID: 60170130001** Collected: 05/28/14 07:43 Received: 05/29/14 01:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**5860**	ug/L	750	2	05/30/14 09:20	06/02/14 13:53	7429-90-5	
Antimony	ND	ug/L	100	2	05/30/14 09:20	06/02/14 13:53	7440-36-0	D3
Arsenic	**1190**	ug/L	50.0	1	05/30/14 09:20	06/02/14 13:49	7440-38-2	
Beryllium	ND	ug/L	5.0	1	05/30/14 09:20	06/02/14 13:49	7440-41-7	
Cadmium	ND	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:49	7440-43-9	
Chromium	**239**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:49	7440-47-3	
Cobalt	**37.5**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:49	7440-48-4	
Copper	ND	ug/L	50.0	1	05/30/14 09:20	06/02/14 13:49	7440-50-8	
Iron	**592000**	ug/L	250	1	05/30/14 09:20	06/02/14 13:49	7439-89-6	M1
Lead	**79.8**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:49	7439-92-1	
Nickel	**134**	ug/L	25.0	1	05/30/14 09:20	06/02/14 13:49	7440-02-0	
Selenium	**76.8**	ug/L	75.0	1	05/30/14 09:20	06/02/14 13:49	7782-49-2	
Silver	ND	ug/L	35.0	1	05/30/14 09:20	06/02/14 13:49	7440-22-4	
Thallium	ND	ug/L	100	1	05/30/14 09:20	06/02/14 13:49	7440-28-0	
Zinc	**5440**	ug/L	500	2	05/30/14 09:20	06/02/14 13:53	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**2090**	ug/L	750	2	06/02/14 17:00	06/03/14 15:32	7429-90-5	
Antimony, Dissolved	**62.2**	ug/L	50.0	1	06/02/14 17:00	06/03/14 15:29	7440-36-0	D9
Arsenic, Dissolved	**1020**	ug/L	50.0	1	06/02/14 17:00	06/03/14 15:29	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	06/02/14 17:00	06/03/14 15:29	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	06/02/14 17:00	06/03/14 15:29	7440-43-9	
Chromium, Dissolved	**170**	ug/L	25.0	1	06/02/14 17:00	06/03/14 15:29	7440-47-3	
Cobalt, Dissolved	**29.9**	ug/L	25.0	1	06/02/14 17:00	06/03/14 15:29	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	06/02/14 17:00	06/03/14 15:29	7440-50-8	
Iron, Dissolved	**349000**	ug/L	250	1	06/02/14 17:00	06/03/14 15:29	7439-89-6	
Lead, Dissolved	ND	ug/L	25.0	1	06/02/14 17:00	06/03/14 15:29	7439-92-1	
Nickel, Dissolved	**101**	ug/L	25.0	1	06/02/14 17:00	06/03/14 15:29	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	06/02/14 17:00	06/03/14 15:29	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	06/02/14 17:00	06/03/14 15:29	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	06/02/14 17:00	06/03/14 15:29	7440-28-0	
Zinc, Dissolved	**4360**	ug/L	500	2	06/02/14 17:00	06/03/14 15:32	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**37.2**	ug/L	6.0	1	06/03/14 10:45	06/03/14 15:08	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	06/03/14 10:45	06/03/14 14:51	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	06/02/14 00:00	06/03/14 11:34	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:34	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:34	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:34	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	06/02/14 00:00	06/03/14 11:34	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**10600**	ug/L	4000	2	06/02/14 00:00	06/03/14 11:34		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

Sample: 316-313 **Lab ID: 60170130001** Collected: 05/28/14 07:43 Received: 05/29/14 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							
Naphthalene	**5360**	ug/L	1000	2	06/02/14 00:00	06/03/14 11:34	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:34	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:34	87-86-5	
Phenol	**12300**	ug/L	1000	2	06/02/14 00:00	06/03/14 11:34	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:34	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:34	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	168	%	33-120	2	06/02/14 00:00	06/03/14 11:34	4165-60-0	S0
2-Fluorobiphenyl (S)	78	%	39-120	2	06/02/14 00:00	06/03/14 11:34	321-60-8	
Terphenyl-d14 (S)	81	%	45-120	2	06/02/14 00:00	06/03/14 11:34	1718-51-0	
Phenol-d6 (S)	49	%	11-120	2	06/02/14 00:00	06/03/14 11:34	13127-88-3	
2-Fluorophenol (S)	41	%	17-120	2	06/02/14 00:00	06/03/14 11:34	367-12-4	
2,4,6-Tribromophenol (S)	84	%	39-120	2	06/02/14 00:00	06/03/14 11:34	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**102000**	ug/L	2500	250		05/30/14 14:42	67-64-1	N2
Benzene	ND	ug/L	250	250		05/30/14 14:42	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/30/14 14:42	75-27-4	
Bromoform	ND	ug/L	250	250		05/30/14 14:42	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/30/14 14:42	74-83-9	
2-Butanone (MEK)	**46500**	ug/L	2500	250		05/30/14 14:42	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/30/14 14:42	56-23-5	
Chloroethane	ND	ug/L	250	250		05/30/14 14:42	75-00-3	
Chloroform	ND	ug/L	250	250		05/30/14 14:42	67-66-3	
1,4-Dichlorobenzene	**723**	ug/L	250	250		05/30/14 14:42	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/30/14 14:42	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/30/14 14:42	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/30/14 14:42	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/30/14 14:42	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/30/14 14:42	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/30/14 14:42	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/30/14 14:42	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/30/14 14:42	127-18-4	
Toluene	ND	ug/L	250	250		05/30/14 14:42	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/30/14 14:42	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/30/14 14:42	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/30/14 14:42	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/30/14 14:42	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/30/14 14:42	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	250		05/30/14 14:42	460-00-4	HS
Toluene-d8 (S)	103	%	80-120	250		05/30/14 14:42	2037-26-5	
1,2-Dichloroethane-d4 (S)	92	%	80-120	250		05/30/14 14:42	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/30/14 14:42		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1670**	mg/L	5.0	1		06/03/14 10:44		M1

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

Sample: 316-313 **Lab ID: 60170130001** Collected: 05/28/14 07:43 Received: 05/29/14 01:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**11.4**	mg/L	5.0	1		06/03/14 15:05		M1
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4740**	mg/L	5.0	1		05/30/14 10:02		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/30/14 16:30		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**27500**	mg/L	2.0	1	05/29/14 14:45	06/03/14 13:46		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**675**	mg/L	20.0	200		06/02/14 13:00	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**50000**	mg/L	5000	500		06/03/14 07:35		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

Sample: TRIP BLANK **Lab ID: 60170130002** Collected: 05/28/14 07:43 Received: 05/29/14 01:30 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/30/14 13:10	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/30/14 13:10	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/14 13:10	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/14 13:10	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/30/14 13:10	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/30/14 13:10	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/14 13:10	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/30/14 13:10	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/30/14 13:10	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/14 13:10	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/14 13:10	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/14 13:10	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/14 13:10	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/30/14 13:10	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/30/14 13:10	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/30/14 13:10	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/14 13:10	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/30/14 13:10	127-18-4	
Toluene	ND	ug/L	1.0	1		05/30/14 13:10	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/14 13:10	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/14 13:10	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/14 13:10	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/30/14 13:10	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/30/14 13:10	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	99	%	80-120	1		05/30/14 13:10	460-00-4	
Toluene-d8 (S)	107	%	80-120	1		05/30/14 13:10	2037-26-5	
1,2-Dichloroethane-d4 (S)	91	%	80-120	1		05/30/14 13:10	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/30/14 13:10		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: MERP/8456 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60170130001

METHOD BLANK: 1387713 | Matrix: Water
Associated Lab Samples: 60170130001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	06/03/14 15:04	

LABORATORY CONTROL SAMPLE: 1387714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.7	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1387715 1387716

Parameter	Units	60169970001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.8	4.6	96	93	70-130	3	20	

MATRIX SPIKE SAMPLE: 1387717

Parameter	Units	60170223002 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 316-313
Pace Project No.: 60170130

QC Batch: MERP/8453
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60170130001

METHOD BLANK: 1387697
Matrix: Water
Associated Lab Samples: 60170130001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	06/03/14 14:46	

LABORATORY CONTROL SAMPLE: 1387698

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.8	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1387699 1387700

Parameter	Units	60170130001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	111	131	74	88	70-130	17	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: MPRP/27435 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60170130001

METHOD BLANK: 1385627 | Matrix: Water
Associated Lab Samples: 60170130001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	06/02/14 13:02	
Antimony	ug/L	ND	10.0	06/02/14 13:02	
Arsenic	ug/L	ND	10.0	06/02/14 13:02	
Beryllium	ug/L	ND	1.0	06/02/14 13:02	
Cadmium	ug/L	ND	5.0	06/02/14 13:02	
Chromium	ug/L	ND	5.0	06/02/14 13:02	
Cobalt	ug/L	ND	5.0	06/02/14 13:02	
Copper	ug/L	ND	10.0	06/02/14 13:02	
Iron	ug/L	ND	50.0	06/02/14 13:02	
Lead	ug/L	ND	5.0	06/02/14 13:02	
Nickel	ug/L	ND	5.0	06/02/14 13:02	
Selenium	ug/L	ND	15.0	06/02/14 13:02	
Silver	ug/L	ND	7.0	06/02/14 13:02	
Thallium	ug/L	ND	20.0	06/02/14 13:02	
Zinc	ug/L	ND	50.0	06/02/14 13:02	

LABORATORY CONTROL SAMPLE: 1385628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	9860	99	85-115	
Antimony	ug/L	1000	1000	100	85-115	
Arsenic	ug/L	1000	985	99	85-115	
Beryllium	ug/L	1000	979	98	85-115	
Cadmium	ug/L	1000	1010	101	85-115	
Chromium	ug/L	1000	1020	102	85-115	
Cobalt	ug/L	1000	998	100	85-115	
Copper	ug/L	1000	986	99	85-115	
Iron	ug/L	10000	9470	95	85-115	
Lead	ug/L	1000	999	100	85-115	
Nickel	ug/L	1000	1030	103	85-115	
Selenium	ug/L	1000	986	99	85-115	
Silver	ug/L	500	492	98	85-115	
Thallium	ug/L	1000	1010	101	85-115	
Zinc	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1385629 1385630

Parameter	Units	60170130001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	5860	50000	50000	59200	59400	107	107	70-130	0	8	
Antimony	ug/L	ND	5000	5000	5080	5080	100	100	70-130	0	7	
Arsenic	ug/L	1190	5000	5000	6380	6380	104	104	70-130	0	10	
Beryllium	ug/L	ND	5000	5000	4700	4690	94	94	70-130	0	7	
Cadmium	ug/L	ND	5000	5000	5180	5190	104	104	70-130	0	10	
Chromium	ug/L	239	5000	5000	5180	5200	99	99	70-130	0	10	
Cobalt	ug/L	37.5	5000	5000	4780	4790	95	95	70-130	0	6	
Copper	ug/L	ND	5000	5000	5120	5120	102	102	70-130	0	11	
Iron	ug/L	592000	50000	50000	608000	617000	33	51	70-130	1	10	M1
Lead	ug/L	79.8	5000	5000	4620	4610	91	91	70-130	0	10	
Nickel	ug/L	134	5000	5000	4960	4960	97	97	70-130	0	10	
Selenium	ug/L	76.8	5000	5000	5530	5560	109	110	70-130	0	10	
Silver	ug/L	ND	2500	2500	2610	2610	104	104	70-130	0	10	
Thallium	ug/L	ND	5000	5000	4400	4440	88	89	70-130	1	6	
Zinc	ug/L	5440	5000	5000	9940	9950	90	90	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: MPRP/27463 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60170130001

METHOD BLANK: 1387206 | Matrix: Water
Associated Lab Samples: 60170130001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	06/03/14 15:23	
Antimony, Dissolved	ug/L	ND	10.0	06/03/14 15:23	
Arsenic, Dissolved	ug/L	ND	10.0	06/03/14 15:23	
Beryllium, Dissolved	ug/L	ND	1.0	06/03/14 15:23	
Cadmium, Dissolved	ug/L	ND	5.0	06/03/14 15:23	
Chromium, Dissolved	ug/L	ND	5.0	06/03/14 15:23	
Cobalt, Dissolved	ug/L	ND	5.0	06/03/14 15:23	
Copper, Dissolved	ug/L	ND	10.0	06/03/14 15:23	
Iron, Dissolved	ug/L	ND	50.0	06/03/14 15:23	
Lead, Dissolved	ug/L	ND	5.0	06/03/14 15:23	
Nickel, Dissolved	ug/L	ND	5.0	06/03/14 15:23	
Selenium, Dissolved	ug/L	ND	15.0	06/03/14 15:23	
Silver, Dissolved	ug/L	ND	7.0	06/03/14 15:23	
Thallium, Dissolved	ug/L	ND	20.0	06/03/14 15:23	
Zinc, Dissolved	ug/L	ND	50.0	06/03/14 15:23	

LABORATORY CONTROL SAMPLE: 1387207

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	1020	102	85-115	
Arsenic, Dissolved	ug/L	1000	985	98	85-115	
Beryllium, Dissolved	ug/L	1000	1050	105	85-115	
Cadmium, Dissolved	ug/L	1000	1010	101	85-115	
Chromium, Dissolved	ug/L	1000	1040	104	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1000	100	85-115	
Iron, Dissolved	ug/L	10000	10300	103	85-115	
Lead, Dissolved	ug/L	1000	1040	104	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	506	101	85-115	
Thallium, Dissolved	ug/L	1000	1020	102	85-115	
Zinc, Dissolved	ug/L	1000	1030	103	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1387208 1387209

Parameter	Units	60170130001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	2090	50000	50000	54800	54500	105	105	70-130	1	8	
Antimony, Dissolved	ug/L	62.2	5000	5000	5540	5480	110	108	70-130	1	7	
Arsenic, Dissolved	ug/L	1020	5000	5000	6660	6580	113	111	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	5080	5050	102	101	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5380	5330	107	107	70-130	1	10	
Chromium, Dissolved	ug/L	170	5000	5000	5160	5180	100	100	70-130	0	10	
Cobalt, Dissolved	ug/L	29.9	5000	5000	4980	4950	99	98	70-130	1	6	
Copper, Dissolved	ug/L	ND	5000	5000	5540	5460	110	109	70-130	1	11	
Iron, Dissolved	ug/L	349000	50000	50000	400000	400000	103	102	70-130	0	10	
Lead, Dissolved	ug/L	ND	5000	5000	4870	4830	97	96	70-130	1	10	
Nickel, Dissolved	ug/L	101	5000	5000	5060	5020	99	98	70-130	1	10	
Selenium, Dissolved	ug/L	ND	5000	5000	6190	6140	124	123	70-130	1	10	
Silver, Dissolved	ug/L	ND	2500	2500	2700	2690	108	107	70-130	0	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4440	4430	89	89	70-130	0	6	
Zinc, Dissolved	ug/L	4360	5000	5000	9310	9260	99	98	70-130	1	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: MSV/61953 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60170130001, 60170130002

METHOD BLANK: 1386239 | Matrix: Water
Associated Lab Samples: 60170130001, 60170130002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/30/14 12:23	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,2-Dichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/30/14 12:23	
2-Butanone (MEK)	ug/L	ND	10.0	05/30/14 12:23	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/30/14 12:23	N2
Acetone	ug/L	ND	10.0	05/30/14 12:23	N2
Benzene	ug/L	ND	1.0	05/30/14 12:23	
Bromodichloromethane	ug/L	ND	1.0	05/30/14 12:23	
Bromoform	ug/L	ND	1.0	05/30/14 12:23	
Bromomethane	ug/L	ND	5.0	05/30/14 12:23	
Carbon tetrachloride	ug/L	ND	1.0	05/30/14 12:23	
Chloroethane	ug/L	ND	1.0	05/30/14 12:23	
Chloroform	ug/L	ND	1.0	05/30/14 12:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/30/14 12:23	N2
Ethylbenzene	ug/L	ND	1.0	05/30/14 12:23	
Methylene chloride	ug/L	ND	1.0	05/30/14 12:23	
Tetrachloroethene	ug/L	ND	1.0	05/30/14 12:23	
Toluene	ug/L	ND	1.0	05/30/14 12:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/30/14 12:23	
Trichloroethene	ug/L	ND	1.0	05/30/14 12:23	
Vinyl chloride	ug/L	ND	1.0	05/30/14 12:23	
Xylene (Total)	ug/L	ND	3.0	05/30/14 12:23	N2
1,2-Dichloroethane-d4 (S)	%	98	80-120	05/30/14 12:23	
4-Bromofluorobenzene (S)	%	101	80-120	05/30/14 12:23	
Toluene-d8 (S)	%	109	80-120	05/30/14 12:23	

LABORATORY CONTROL SAMPLE: 1386240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	23.6	118	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	96	67-127	N2
1,1,2-Trichloroethane	ug/L	20	21.6	108	67-124	
1,2-Dichloroethane	ug/L	20	23.0	115	70-126	
1,4-Dichlorobenzene	ug/L	20	21.2	106	74-120	
2-Butanone (MEK)	ug/L	100	113	113	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	109	109	59-131	N2
Acetone	ug/L	100	99.5	100	38-134	N2
Benzene	ug/L	20	23.1	115	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

LABORATORY CONTROL SAMPLE: 1386240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	24.6	123	68-125	
Bromoform	ug/L	20	17.9	90	65-127	
Bromomethane	ug/L	20	9.9	49	13-157	
Carbon tetrachloride	ug/L	20	22.4	112	70-131	
Chloroethane	ug/L	20	24.7	124	47-133	
Chloroform	ug/L	20	23.6	118	65-127	
cis-1,2-Dichloroethene	ug/L	20	24.0	120	68-127	N2
Ethylbenzene	ug/L	20	23.8	119	74-122	
Methylene chloride	ug/L	20	21.9	110	64-129	
Tetrachloroethene	ug/L	20	22.3	112	73-125	
Toluene	ug/L	20	24.8	124	69-126	
trans-1,2-Dichloroethene	ug/L	20	22.4	112	66-129	
Trichloroethene	ug/L	20	23.5	117	71-123	
Vinyl chloride	ug/L	20	22.9	114	43-129	
Xylene (Total)	ug/L	60	71.3	119	75-121	N2
1,2-Dichloroethane-d4 (S)	%			114	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			107	80-120	

MATRIX SPIKE SAMPLE: 1386241

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4650	93	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4300	86	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4200	84	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4340	87	49-144	
1,4-Dichlorobenzene	ug/L	497	5000	4950	89	33-140	
2-Butanone (MEK)	ug/L	63100	25000	71400	33	40-160	M1,N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	21700	83	40-160	N2
Acetone	ug/L	157000	25000	140000	-68	10-160	M1,N2
Benzene	ug/L	ND	5000	4380	87	37-151	
Bromodichloromethane	ug/L	ND	5000	4520	90	35-142	
Bromoform	ug/L	ND	5000	3690	74	45-142	
Bromomethane	ug/L	ND	5000	2310	46	10-158	
Carbon tetrachloride	ug/L	ND	5000	4690	94	70-140	
Chloroethane	ug/L	ND	5000	4700	94	19-152	
Chloroform	ug/L	ND	5000	4410	88	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4480	90	34-147	N2
Ethylbenzene	ug/L	ND	5000	4630	92	40-142	
Methylene chloride	ug/L	ND	5000	3800	76	31-144	
Tetrachloroethene	ug/L	ND	5000	4690	94	64-148	
Toluene	ug/L	ND	5000	4760	94	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4390	88	54-151	
Trichloroethene	ug/L	ND	5000	4560	91	71-149	
Vinyl chloride	ug/L	ND	5000	5020	100	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

MATRIX SPIKE SAMPLE: 1386241

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	13900	93	37-144	N2
1,2-Dichloroethane-d4 (S)	%				92	80-120	
4-Bromofluorobenzene (S)	%				101	80-120	
Toluene-d8 (S)	%				107	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: OEXT/44436 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60170130001

METHOD BLANK: 1386877 | Matrix: Water
Associated Lab Samples: 60170130001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	06/03/14 08:46	
2,4,6-Trichlorophenol	ug/L	ND	5.0	06/03/14 08:46	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	06/03/14 08:46	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	06/03/14 08:46	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	06/03/14 08:46	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	06/03/14 08:46	
Hexachlorocyclopentadiene	ug/L	ND	5.0	06/03/14 08:46	
Hexachloroethane	ug/L	ND	5.0	06/03/14 08:46	
Naphthalene	ug/L	ND	5.0	06/03/14 08:46	
Nitrobenzene	ug/L	ND	5.0	06/03/14 08:46	
Pentachlorophenol	ug/L	ND	5.0	06/03/14 08:46	
Phenol	ug/L	ND	5.0	06/03/14 08:46	
2,4,6-Tribromophenol (S)	%	90	39-120	06/03/14 08:46	
2-Fluorobiphenyl (S)	%	82	39-120	06/03/14 08:46	
2-Fluorophenol (S)	%	44	17-120	06/03/14 08:46	
Nitrobenzene-d5 (S)	%	80	33-120	06/03/14 08:46	
Phenol-d6 (S)	%	28	11-120	06/03/14 08:46	
Terphenyl-d14 (S)	%	85	45-120	06/03/14 08:46	

LABORATORY CONTROL SAMPLE: 1386878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.7	79	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.1	84	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	31.8	64	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	29.2	58	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	48.6	97	40-133	
Hexachloro-1,3-butadiene	ug/L	50	38.3	77	44-116	
Hexachlorocyclopentadiene	ug/L	100	75.4	75	24-120	
Hexachloroethane	ug/L	50	36.2	72	43-113	
Naphthalene	ug/L	50	39.9	80	48-120	
Nitrobenzene	ug/L	50	43.1	86	48-120	
Pentachlorophenol	ug/L	50	45.9	92	47-120	
Phenol	ug/L	50	14.6	29	16-112	
2,4,6-Tribromophenol (S)	%			93	39-120	
2-Fluorobiphenyl (S)	%			84	39-120	
2-Fluorophenol (S)	%			42	17-120	
Nitrobenzene-d5 (S)	%			86	33-120	
Phenol-d6 (S)	%			28	11-120	
Terphenyl-d14 (S)	%			88	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

MATRIX SPIKE SAMPLE: 1386879

Parameter	Units	60170245002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	42.0	84	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	43.4	87	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	36.8	74	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	33.4	67	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	41.8	84	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	41.9	84	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	85.3	85	11-120	
Hexachloroethane	ug/L	ND	50	41.4	83	40-113	
Naphthalene	ug/L	ND	50	42.6	85	45-120	
Nitrobenzene	ug/L	ND	50	43.5	87	38-120	
Pentachlorophenol	ug/L	ND	50	42.3	85	43-135	
Phenol	ug/L	ND	50	15.2	30	13-112	
2,4,6-Tribromophenol (S)	%				91	39-120	
2-Fluorobiphenyl (S)	%				86	39-120	
2-Fluorophenol (S)	%				47	17-120	
Nitrobenzene-d5 (S)	%				87	33-120	
Phenol-d6 (S)	%				30	11-120	
Terphenyl-d14 (S)	%				96	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: WET/48194 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60170130001

METHOD BLANK: 1387827 | Matrix: Water
Associated Lab Samples: 60170130001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	06/03/14 10:41	

LABORATORY CONTROL SAMPLE: 1387828

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.9	92	78-114	

MATRIX SPIKE SAMPLE: 1387849

Parameter	Units	60170130001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	1670	167	2160	290	78-114	M1

SAMPLE DUPLICATE: 1387850

Parameter	Units	60170239001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	1200	1160	4	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: WET/48186 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60170130001

METHOD BLANK: 1387325 | Matrix: Water
Associated Lab Samples: 60170130001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	06/03/14 15:03	

LABORATORY CONTROL SAMPLE: 1387326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	20.5	102	64-132	

MATRIX SPIKE SAMPLE: 1388023

Parameter	Units	60170130001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	11.4	83.3	53.8	51	64-132	M1

SAMPLE DUPLICATE: 1388024

Parameter	Units	60170239001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	12.1	16.3	29	34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: WET/48143 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60170130001

METHOD BLANK: 1386168 | Matrix: Water
Associated Lab Samples: 60170130001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	05/30/14 09:58	

SAMPLE DUPLICATE: 1386169

Parameter	Units	60170044004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	775	770	1	10	

SAMPLE DUPLICATE: 1386170

Parameter	Units	60170145001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	ND	8.0		10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: WET/48153
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60170130001

SAMPLE DUPLICATE: 1386451

Parameter	Units	60170142007 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.4	7.4	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: WET/48130 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60170130001

METHOD BLANK: 1385510 | Matrix: Water
Associated Lab Samples: 60170130001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	06/03/14 13:25	

LABORATORY CONTROL SAMPLE: 1385511

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	177	90	85-115	

SAMPLE DUPLICATE: 1385512

Parameter	Units	60170131001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	1440	1400	3	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: WETA/29662
QC Batch Method: EPA 350.1
Analysis Method: EPA 350.1
Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60170130001

METHOD BLANK: 1387008
Matrix: Water
Associated Lab Samples: 60170130001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	06/02/14 12:38	

LABORATORY CONTROL SAMPLE: 1387009

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

MATRIX SPIKE SAMPLE: 1387010

Parameter	Units	60170122002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.9	93	90-110	

MATRIX SPIKE SAMPLE: 1387011

Parameter	Units	60170126002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	4.0	2	5.3	65	90-110	M1

SAMPLE DUPLICATE: 1387012

Parameter	Units	60170127002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

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

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

QC Batch: WETA/29651 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60170130001

METHOD BLANK: 1386758 | Matrix: Water
Associated Lab Samples: 60170130001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	06/03/14 07:20	

LABORATORY CONTROL SAMPLE: 1386759

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: 1386760

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	57900	25000	79200	85	90-110	M1

MATRIX SPIKE SAMPLE: 1386762

Parameter	Units	60170017002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	6200	5000	10300	83	90-110	M1

SAMPLE DUPLICATE: 1386761

Parameter	Units	60170069001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	41.7	38.4	8	25	

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QUALIFIERS

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

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.
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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-313
Pace Project No.: 60170130

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60170130001	**316-313**	EPA 200.7	MPRP/27435	EPA 200.7	ICP/20764
60170130001	**316-313**	EPA 200.7	MPRP/27463	EPA 200.7	ICP/20782
60170130001	**316-313**	EPA 245.1	MERP/8456	EPA 245.1	MERC/8407
60170130001	**316-313**	EPA 245.1	MERP/8453	EPA 245.1	MERC/8406
60170130001	**316-313**	EPA 625	OEXT/44436	EPA 625	MSSV/14224
60170130001	**316-313**	EPA 624 Low	MSV/61953		
60170130002	**TRIP BLANK**	EPA 624 Low	MSV/61953		
60170130001	**316-313**	EPA 1664A	WET/48194		
60170130001	**316-313**	EPA 1664A	WET/48186		
60170130001	**316-313**	SM 2540D	WET/48143		
60170130001	**316-313**	SM 4500-H+B	WET/48153		
60170130001	**316-313**	SM 5210B	WET/48130	SM 5210B	WET/48201
60170130001	**316-313**	EPA 350.1	WETA/29662		
60170130001	**316-313**	EPA 410.4	WETA/29651		

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Sample Condition Upon Receipt

WO#: 60170130

60170130

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 ☑ ZPIC

Thermometer Used: T-239 / T-194 Type of Ice: Wet Blue None (circle one) ☐ Samples received on ice, cooling process has begun.

Cooler Temperature: 4.4

Temperature should be above freezing to 6°C

Optional
Proj Due Date:
Proj Name:

Date and initials of person examining contents: PL 5/29/14

Chain of Custody present:	☑Yes ☐No ☐N/A	1.	
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.	
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.	
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.	
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.	
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. BOD pH	
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.	
Sufficient volume:	☑Yes ☐No ☐N/A	8.	
Correct containers used:	☑Yes ☐No ☐N/A		
Pace containers used:	☑Yes ☐No ☐N/A	9.	
Containers intact:	☑Yes ☐No ☐N/A	10.	
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.	
Filtered volume received for dissolved tests?	☐Yes ☐No ☑N/A	12.	
Sample labels match COC: Includes date/time/ID/analyses Matrix:	☑Yes ☐No ☐N/A LT	13.	
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A		
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A	14.	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed	Lot # of added preservative
Trip Blank present: Pace Trip Blank lot # (if purchased): Cover	☑Yes ☐No ☐N/A	15.	
Headspace in VOA vials (>6mm):	☑Yes ☐No ☐N/A	5 of 5 DIGU. — APPLY FOOTNOTE HS BASED ON HISTORICAL INSTRUCTIONS 16.	
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State: NO	

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____ Date: 5/29/14

F-KS-C-003-Rev.7, 04December2012

Pace Analytical

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

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.	
Client Project ID:	BRIDGETON LF
Container Order Number:	

Section C — Invoice Information:

Attention:	AMY HARGROVE/BRIAN POWER
Company Name:	REPUBLIC SERVICES
Address:	BRIDGETON, MO 63044
Pace Quote Reference:	130426_7588
Pace Project Manager:	Brown, Angie
Pace Profile #:	7585 LINE 2

Regulatory Agency

State / Location: Missouri

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

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N): 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	BOD SM 5210B	Residual Chlorine (Y/N)	60170130
1	2A6U4 316-313 1BP3U 3A635	OT	G	5/28/14	0743	—	—		15	10	4	1	0	1B	P3U			X	X	X	X	X	X	X	X	X	X	1B	P3S	2-5 2BP2U 5D49U 2D49U
2	TRIP BLANK	—	—	—	—	—	—		2	2															X					
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

Requested Analysis Filtered (Y/N)

METALS LIST total & LF Dis: Al,Sb,As,Be,Cd,Cr, Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn and Mercury

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-28-14	2:40pm		5-28-14	2:40pm				
SITE ADDRESS: BRIDGETON LF				PASI	5/29	0130	4.4	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:	WILLIAM ABERNATHY				
SIGNATURE of SAMPLER:	DATE Signed: 5/28/14				

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June 06, 2014

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

RE: Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 30, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

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 316-314
Pace Project No.: 60170239

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60170239001	**316-314**	Water	05/29/14 08:40	05/30/14 01:10
60170239002	**TRIP BLANK**	Water	05/29/14 08:40	05/30/14 01:10

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60170239001	**316-314**	EPA 200.7	NDJ	15
		EPA 200.7	NDJ	15
		EPA 245.1	SMW	1
		EPA 245.1	SMW	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	ESM	1
		SM 4500-H+B	DJR	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60170239002	**TRIP BLANK**	EPA 624 Low	EAK	28

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PROJECT NARRATIVE

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

Date: June 06, 2014

The samples were received outside of required temperature range. Analysis was completed upon client approval.

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

Sample: 316-314 **Lab ID: 60170239001** Collected: 05/29/14 08:40 Received: 05/30/14 01:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**11800**	ug/L	750	2	06/04/14 12:05	06/05/14 14:51	7429-90-5	
Antimony	ND	ug/L	50.0	1	06/04/14 12:05	06/05/14 14:49	7440-36-0	
Arsenic	**1530**	ug/L	50.0	1	06/04/14 12:05	06/05/14 14:49	7440-38-2	
Beryllium	ND	ug/L	5.0	1	06/04/14 12:05	06/05/14 14:49	7440-41-7	
Cadmium	ND	ug/L	25.0	1	06/04/14 12:05	06/05/14 14:49	7440-43-9	
Chromium	**310**	ug/L	25.0	1	06/04/14 12:05	06/05/14 14:49	7440-47-3	
Cobalt	**55.1**	ug/L	25.0	1	06/04/14 12:05	06/05/14 14:49	7440-48-4	
Copper	ND	ug/L	50.0	1	06/04/14 12:05	06/05/14 14:49	7440-50-8	
Iron	**912000**	ug/L	250	1	06/04/14 12:05	06/05/14 14:49	7439-89-6	M1
Lead	**149**	ug/L	25.0	1	06/04/14 12:05	06/05/14 14:49	7439-92-1	
Nickel	**179**	ug/L	25.0	1	06/04/14 12:05	06/05/14 14:49	7440-02-0	
Selenium	ND	ug/L	75.0	1	06/04/14 12:05	06/05/14 14:49	7782-49-2	
Silver	ND	ug/L	35.0	1	06/04/14 12:05	06/05/14 14:49	7440-22-4	
Thallium	ND	ug/L	100	1	06/04/14 12:05	06/05/14 14:49	7440-28-0	
Zinc	**6690**	ug/L	500	2	06/04/14 12:05	06/05/14 14:51	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1630**	ug/L	750	2	06/02/14 17:00	06/04/14 12:02	7429-90-5	
Antimony, Dissolved	ND	ug/L	50.0	1	06/02/14 17:00	06/04/14 11:16	7440-36-0	
Arsenic, Dissolved	**949**	ug/L	50.0	1	06/02/14 17:00	06/04/14 11:16	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	06/02/14 17:00	06/04/14 11:16	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	06/02/14 17:00	06/04/14 11:16	7440-43-9	
Chromium, Dissolved	**147**	ug/L	25.0	1	06/02/14 17:00	06/04/14 11:16	7440-47-3	
Cobalt, Dissolved	ND	ug/L	25.0	1	06/02/14 17:00	06/04/14 11:16	7440-48-4	
Copper, Dissolved	**59.6**	ug/L	50.0	1	06/02/14 17:00	06/04/14 11:16	7440-50-8	D9
Iron, Dissolved	**285000**	ug/L	250	1	06/02/14 17:00	06/04/14 11:16	7439-89-6	
Lead, Dissolved	ND	ug/L	25.0	1	06/02/14 17:00	06/04/14 11:16	7439-92-1	
Nickel, Dissolved	**85.2**	ug/L	25.0	1	06/02/14 17:00	06/04/14 11:16	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	06/02/14 17:00	06/04/14 11:16	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	06/02/14 17:00	06/04/14 11:16	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	06/02/14 17:00	06/04/14 11:16	7440-28-0	
Zinc, Dissolved	**3930**	ug/L	500	2	06/02/14 17:00	06/04/14 12:02	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	**18.6**	ug/L	6.0	1	06/03/14 10:45	06/03/14 15:42	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	06/03/14 10:45	06/03/14 15:02	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	06/02/14 00:00	06/03/14 11:55	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:55	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:55	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:55	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	06/02/14 00:00	06/03/14 11:55	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**6820**	ug/L	4000	2	06/02/14 00:00	06/03/14 11:55		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

Sample: 316-314 **Lab ID: 60170239001** Collected: 05/29/14 08:40 Received: 05/30/14 01:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:55	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:55	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:55	87-86-5	
Phenol	**10200**	ug/L	1000	2	06/02/14 00:00	06/03/14 11:55	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:55	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 11:55	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	148	%	33-120	2	06/02/14 00:00	06/03/14 11:55	4165-60-0	S0
2-Fluorobiphenyl (S)	81	%	39-120	2	06/02/14 00:00	06/03/14 11:55	321-60-8	
Terphenyl-d14 (S)	82	%	45-120	2	06/02/14 00:00	06/03/14 11:55	1718-51-0	
Phenol-d6 (S)	30	%	11-120	2	06/02/14 00:00	06/03/14 11:55	13127-88-3	
2-Fluorophenol (S)	44	%	17-120	2	06/02/14 00:00	06/03/14 11:55	367-12-4	
2,4,6-Tribromophenol (S)	88	%	39-120	2	06/02/14 00:00	06/03/14 11:55	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**101000**	ug/L	2500	250		05/30/14 14:57	67-64-1	N2
Benzene	ND	ug/L	250	250		05/30/14 14:57	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		05/30/14 14:57	75-27-4	
Bromoform	ND	ug/L	250	250		05/30/14 14:57	75-25-2	
Bromomethane	ND	ug/L	1250	250		05/30/14 14:57	74-83-9	
2-Butanone (MEK)	**40400**	ug/L	2500	250		05/30/14 14:57	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		05/30/14 14:57	56-23-5	
Chloroethane	ND	ug/L	250	250		05/30/14 14:57	75-00-3	
Chloroform	ND	ug/L	250	250		05/30/14 14:57	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	250	250		05/30/14 14:57	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		05/30/14 14:57	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		05/30/14 14:57	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		05/30/14 14:57	156-60-5	
Ethylbenzene	ND	ug/L	250	250		05/30/14 14:57	100-41-4	
Methylene chloride	ND	ug/L	250	250		05/30/14 14:57	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		05/30/14 14:57	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		05/30/14 14:57	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		05/30/14 14:57	127-18-4	
Toluene	ND	ug/L	250	250		05/30/14 14:57	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		05/30/14 14:57	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		05/30/14 14:57	79-00-5	
Trichloroethene	ND	ug/L	250	250		05/30/14 14:57	79-01-6	
Vinyl chloride	ND	ug/L	250	250		05/30/14 14:57	75-01-4	
Xylene (Total)	ND	ug/L	750	250		05/30/14 14:57	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	98	%	80-120	250		05/30/14 14:57	460-00-4	HS
Toluene-d8 (S)	104	%	80-120	250		05/30/14 14:57	2037-26-5	
1,2-Dichloroethane-d4 (S)	93	%	80-120	250		05/30/14 14:57	17060-07-0	
Preservation pH	**6.0**		1.0	250		05/30/14 14:57		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1200**	mg/L	5.0	1		06/03/14 10:45		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

Sample: 316-314 **Lab ID: 60170239001** Collected: 05/29/14 08:40 Received: 05/30/14 01:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**12.1**	mg/L	5.0	1		06/03/14 15:06		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4560**	mg/L	5.0	1		06/03/14 11:10		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/30/14 16:30		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**31600**	mg/L	2.0	1	05/30/14 15:07	06/04/14 15:55		L2
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**647**	mg/L	20.0	200		06/02/14 13:12	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**49600**	mg/L	5000	500		06/03/14 07:35		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

Sample: TRIP BLANK **Lab ID: 60170239002** Collected: 05/29/14 08:40 Received: 05/30/14 01:10 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		05/30/14 13:25	67-64-1	N2
Benzene	ND	ug/L	1.0	1		05/30/14 13:25	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		05/30/14 13:25	75-27-4	
Bromoform	ND	ug/L	1.0	1		05/30/14 13:25	75-25-2	
Bromomethane	ND	ug/L	5.0	1		05/30/14 13:25	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		05/30/14 13:25	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		05/30/14 13:25	56-23-5	
Chloroethane	ND	ug/L	1.0	1		05/30/14 13:25	75-00-3	
Chloroform	ND	ug/L	1.0	1		05/30/14 13:25	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		05/30/14 13:25	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		05/30/14 13:25	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/14 13:25	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		05/30/14 13:25	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		05/30/14 13:25	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		05/30/14 13:25	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		05/30/14 13:25	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		05/30/14 13:25	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		05/30/14 13:25	127-18-4	
Toluene	ND	ug/L	1.0	1		05/30/14 13:25	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		05/30/14 13:25	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		05/30/14 13:25	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		05/30/14 13:25	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		05/30/14 13:25	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		05/30/14 13:25	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	1		05/30/14 13:25	460-00-4	
Toluene-d8 (S)	105	%	80-120	1		05/30/14 13:25	2037-26-5	
1,2-Dichloroethane-d4 (S)	92	%	80-120	1		05/30/14 13:25	17060-07-0	
Preservation pH	**6.0**		1.0	1		05/30/14 13:25		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: MERP/8456 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60170239001

METHOD BLANK: 1387713 | Matrix: Water
Associated Lab Samples: 60170239001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	06/03/14 15:04	

LABORATORY CONTROL SAMPLE: 1387714

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.7	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1387715 1387716

Parameter	Units	60169970001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.8	4.6	96	93	70-130	3	20	

MATRIX SPIKE SAMPLE: 1387717

Parameter	Units	60170223002 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 316-314
Pace Project No.: 60170239

QC Batch: MERP/8453
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60170239001

METHOD BLANK: 1387697
Matrix: Water
Associated Lab Samples: 60170239001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	06/03/14 14:46	

LABORATORY CONTROL SAMPLE: 1387698

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	4.8	96	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1387699 1387700

Parameter	Units	60170130001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	111	131	74	88	70-130	17	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: MPRP/27493 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60170239001

METHOD BLANK: 1388563 | Matrix: Water
Associated Lab Samples: 60170239001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	06/05/14 14:41	
Antimony	ug/L	ND	10.0	06/04/14 20:57	
Arsenic	ug/L	ND	10.0	06/04/14 20:57	
Beryllium	ug/L	ND	1.0	06/04/14 20:57	
Cadmium	ug/L	ND	5.0	06/04/14 20:57	
Chromium	ug/L	ND	5.0	06/04/14 20:57	
Cobalt	ug/L	ND	5.0	06/04/14 20:57	
Copper	ug/L	ND	10.0	06/05/14 14:41	
Iron	ug/L	ND	50.0	06/04/14 20:57	
Lead	ug/L	ND	5.0	06/04/14 20:57	
Nickel	ug/L	ND	5.0	06/04/14 20:57	
Selenium	ug/L	ND	15.0	06/04/14 20:57	
Silver	ug/L	ND	7.0	06/04/14 20:57	
Thallium	ug/L	ND	20.0	06/04/14 20:57	
Zinc	ug/L	ND	50.0	06/05/14 14:41	

LABORATORY CONTROL SAMPLE: 1388564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	11300	113	85-115	
Antimony	ug/L	1000	1020	102	85-115	
Arsenic	ug/L	1000	974	97	85-115	
Beryllium	ug/L	1000	909	91	85-115	
Cadmium	ug/L	1000	1000	100	85-115	
Chromium	ug/L	1000	1030	103	85-115	
Cobalt	ug/L	1000	1030	103	85-115	
Copper	ug/L	1000	1080	108	85-115	
Iron	ug/L	10000	9990	100	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	504	101	85-115	
Thallium	ug/L	1000	1020	102	85-115	
Zinc	ug/L	1000	1060	106	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1388565 1388566

Parameter	Units	60170239001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	11800	50000	50000	64000	68800	104	114	70-130	7	8	
Antimony	ug/L	ND	5000	5000	5200	5440	103	108	70-130	5	7	
Arsenic	ug/L	1530	5000	5000	6450	6880	98	107	70-130	6	10	
Beryllium	ug/L	ND	5000	5000	4920	4840	98	97	70-130	1	7	
Cadmium	ug/L	ND	5000	5000	5210	5440	104	109	70-130	4	10	
Chromium	ug/L	310	5000	5000	5180	5400	97	102	70-130	4	10	
Cobalt	ug/L	55.1	5000	5000	4940	5120	98	101	70-130	4	6	
Copper	ug/L	ND	5000	5000	5320	5540	106	111	70-130	4	11	
Iron	ug/L	912000	50000	50000	803000	873000	-218	-78	70-130	8	10	M1
Lead	ug/L	149	5000	5000	4780	4950	93	96	70-130	3	10	
Nickel	ug/L	179	5000	5000	5020	5220	97	101	70-130	4	10	
Selenium	ug/L	ND	5000	5000	5690	5960	113	118	70-130	5	10	
Silver	ug/L	ND	2500	2500	2700	2850	108	114	70-130	5	10	
Thallium	ug/L	ND	5000	5000	4410	4550	88	91	70-130	3	6	
Zinc	ug/L	6690	5000	5000	10700	10800	81	83	70-130	1	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: MPRP/27463 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60170239001

METHOD BLANK: 1387206 | Matrix: Water
Associated Lab Samples: 60170239001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	06/03/14 15:23	
Antimony, Dissolved	ug/L	ND	10.0	06/03/14 15:23	
Arsenic, Dissolved	ug/L	ND	10.0	06/03/14 15:23	
Beryllium, Dissolved	ug/L	ND	1.0	06/03/14 15:23	
Cadmium, Dissolved	ug/L	ND	5.0	06/03/14 15:23	
Chromium, Dissolved	ug/L	ND	5.0	06/03/14 15:23	
Cobalt, Dissolved	ug/L	ND	5.0	06/03/14 15:23	
Copper, Dissolved	ug/L	ND	10.0	06/03/14 15:23	
Iron, Dissolved	ug/L	ND	50.0	06/03/14 15:23	
Lead, Dissolved	ug/L	ND	5.0	06/03/14 15:23	
Nickel, Dissolved	ug/L	ND	5.0	06/03/14 15:23	
Selenium, Dissolved	ug/L	ND	15.0	06/03/14 15:23	
Silver, Dissolved	ug/L	ND	7.0	06/03/14 15:23	
Thallium, Dissolved	ug/L	ND	20.0	06/03/14 15:23	
Zinc, Dissolved	ug/L	ND	50.0	06/03/14 15:23	

LABORATORY CONTROL SAMPLE: 1387207

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	1020	102	85-115	
Arsenic, Dissolved	ug/L	1000	985	98	85-115	
Beryllium, Dissolved	ug/L	1000	1050	105	85-115	
Cadmium, Dissolved	ug/L	1000	1010	101	85-115	
Chromium, Dissolved	ug/L	1000	1040	104	85-115	
Cobalt, Dissolved	ug/L	1000	1020	102	85-115	
Copper, Dissolved	ug/L	1000	1000	100	85-115	
Iron, Dissolved	ug/L	10000	10300	103	85-115	
Lead, Dissolved	ug/L	1000	1040	104	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	506	101	85-115	
Thallium, Dissolved	ug/L	1000	1020	102	85-115	
Zinc, Dissolved	ug/L	1000	1030	103	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1387208 1387209

Parameter	Units	60170130001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	2090	50000	50000	54800	54500	105	105	70-130	1	8	
Antimony, Dissolved	ug/L	62.2	5000	5000	5540	5480	110	108	70-130	1	7	
Arsenic, Dissolved	ug/L	1020	5000	5000	6660	6580	113	111	70-130	1	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	5080	5050	102	101	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5380	5330	107	107	70-130	1	10	
Chromium, Dissolved	ug/L	170	5000	5000	5160	5180	100	100	70-130	0	10	
Cobalt, Dissolved	ug/L	29.9	5000	5000	4980	4950	99	98	70-130	1	6	
Copper, Dissolved	ug/L	ND	5000	5000	5540	5460	110	109	70-130	1	11	
Iron, Dissolved	ug/L	349000	50000	50000	400000	400000	103	102	70-130	0	10	
Lead, Dissolved	ug/L	ND	5000	5000	4870	4830	97	96	70-130	1	10	
Nickel, Dissolved	ug/L	101	5000	5000	5060	5020	99	98	70-130	1	10	
Selenium, Dissolved	ug/L	ND	5000	5000	6190	6140	124	123	70-130	1	10	
Silver, Dissolved	ug/L	ND	2500	2500	2700	2690	108	107	70-130	0	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4440	4430	89	89	70-130	0	6	
Zinc, Dissolved	ug/L	4360	5000	5000	9310	9260	99	98	70-130	1	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: MSV/61953 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60170239001, 60170239002

METHOD BLANK: 1386239 | Matrix: Water
Associated Lab Samples: 60170239001, 60170239002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	05/30/14 12:23	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,2-Dichloroethane	ug/L	ND	1.0	05/30/14 12:23	
1,4-Dichlorobenzene	ug/L	ND	1.0	05/30/14 12:23	
2-Butanone (MEK)	ug/L	ND	10.0	05/30/14 12:23	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	05/30/14 12:23	N2
Acetone	ug/L	ND	10.0	05/30/14 12:23	N2
Benzene	ug/L	ND	1.0	05/30/14 12:23	
Bromodichloromethane	ug/L	ND	1.0	05/30/14 12:23	
Bromoform	ug/L	ND	1.0	05/30/14 12:23	
Bromomethane	ug/L	ND	5.0	05/30/14 12:23	
Carbon tetrachloride	ug/L	ND	1.0	05/30/14 12:23	
Chloroethane	ug/L	ND	1.0	05/30/14 12:23	
Chloroform	ug/L	ND	1.0	05/30/14 12:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	05/30/14 12:23	N2
Ethylbenzene	ug/L	ND	1.0	05/30/14 12:23	
Methylene chloride	ug/L	ND	1.0	05/30/14 12:23	
Tetrachloroethene	ug/L	ND	1.0	05/30/14 12:23	
Toluene	ug/L	ND	1.0	05/30/14 12:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	05/30/14 12:23	
Trichloroethene	ug/L	ND	1.0	05/30/14 12:23	
Vinyl chloride	ug/L	ND	1.0	05/30/14 12:23	
Xylene (Total)	ug/L	ND	3.0	05/30/14 12:23	N2
1,2-Dichloroethane-d4 (S)	%	98	80-120	05/30/14 12:23	
4-Bromofluorobenzene (S)	%	101	80-120	05/30/14 12:23	
Toluene-d8 (S)	%	109	80-120	05/30/14 12:23	

LABORATORY CONTROL SAMPLE: 1386240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	23.6	118	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	19.3	96	67-127	N2
1,1,2-Trichloroethane	ug/L	20	21.6	108	67-124	
1,2-Dichloroethane	ug/L	20	23.0	115	70-126	
1,4-Dichlorobenzene	ug/L	20	21.2	106	74-120	
2-Butanone (MEK)	ug/L	100	113	113	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	109	109	59-131	N2
Acetone	ug/L	100	99.5	100	38-134	N2
Benzene	ug/L	20	23.1	115	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

LABORATORY CONTROL SAMPLE: 1386240

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	24.6	123	68-125	
Bromoform	ug/L	20	17.9	90	65-127	
Bromomethane	ug/L	20	9.9	49	13-157	
Carbon tetrachloride	ug/L	20	22.4	112	70-131	
Chloroethane	ug/L	20	24.7	124	47-133	
Chloroform	ug/L	20	23.6	118	65-127	
cis-1,2-Dichloroethene	ug/L	20	24.0	120	68-127	N2
Ethylbenzene	ug/L	20	23.8	119	74-122	
Methylene chloride	ug/L	20	21.9	110	64-129	
Tetrachloroethene	ug/L	20	22.3	112	73-125	
Toluene	ug/L	20	24.8	124	69-126	
trans-1,2-Dichloroethene	ug/L	20	22.4	112	66-129	
Trichloroethene	ug/L	20	23.5	117	71-123	
Vinyl chloride	ug/L	20	22.9	114	43-129	
Xylene (Total)	ug/L	60	71.3	119	75-121	N2
1,2-Dichloroethane-d4 (S)	%			114	80-120	
4-Bromofluorobenzene (S)	%			101	80-120	
Toluene-d8 (S)	%			107	80-120	

MATRIX SPIKE SAMPLE: 1386241

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4650	93	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	4300	86	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4200	84	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4340	87	49-144	
1,4-Dichlorobenzene	ug/L	497	5000	4950	89	33-140	
2-Butanone (MEK)	ug/L	63100	25000	71400	33	40-160	M1,N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	21700	83	40-160	N2
Acetone	ug/L	157000	25000	140000	-68	10-160	M1,N2
Benzene	ug/L	ND	5000	4380	87	37-151	
Bromodichloromethane	ug/L	ND	5000	4520	90	35-142	
Bromoform	ug/L	ND	5000	3690	74	45-142	
Bromomethane	ug/L	ND	5000	2310	46	10-158	
Carbon tetrachloride	ug/L	ND	5000	4690	94	70-140	
Chloroethane	ug/L	ND	5000	4700	94	19-152	
Chloroform	ug/L	ND	5000	4410	88	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4480	90	34-147	N2
Ethylbenzene	ug/L	ND	5000	4630	92	40-142	
Methylene chloride	ug/L	ND	5000	3800	76	31-144	
Tetrachloroethene	ug/L	ND	5000	4690	94	64-148	
Toluene	ug/L	ND	5000	4760	94	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4390	88	54-151	
Trichloroethene	ug/L	ND	5000	4560	91	71-149	
Vinyl chloride	ug/L	ND	5000	5020	100	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

MATRIX SPIKE SAMPLE: 1386241

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	13900	93	37-144	N2
1,2-Dichloroethane-d4 (S)	%				92	80-120	
4-Bromofluorobenzene (S)	%				101	80-120	
Toluene-d8 (S)	%				107	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: OEXT/44436 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60170239001

METHOD BLANK: 1386877 | Matrix: Water
Associated Lab Samples: 60170239001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	06/03/14 08:46	
2,4,6-Trichlorophenol	ug/L	ND	5.0	06/03/14 08:46	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	06/03/14 08:46	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	06/03/14 08:46	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	06/03/14 08:46	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	06/03/14 08:46	
Hexachlorocyclopentadiene	ug/L	ND	5.0	06/03/14 08:46	
Hexachloroethane	ug/L	ND	5.0	06/03/14 08:46	
Naphthalene	ug/L	ND	5.0	06/03/14 08:46	
Nitrobenzene	ug/L	ND	5.0	06/03/14 08:46	
Pentachlorophenol	ug/L	ND	5.0	06/03/14 08:46	
Phenol	ug/L	ND	5.0	06/03/14 08:46	
2,4,6-Tribromophenol (S)	%	90	39-120	06/03/14 08:46	
2-Fluorobiphenyl (S)	%	82	39-120	06/03/14 08:46	
2-Fluorophenol (S)	%	44	17-120	06/03/14 08:46	
Nitrobenzene-d5 (S)	%	80	33-120	06/03/14 08:46	
Phenol-d6 (S)	%	28	11-120	06/03/14 08:46	
Terphenyl-d14 (S)	%	85	45-120	06/03/14 08:46	

LABORATORY CONTROL SAMPLE: 1386878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.7	79	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.1	84	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	31.8	64	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	29.2	58	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	48.6	97	40-133	
Hexachloro-1,3-butadiene	ug/L	50	38.3	77	44-116	
Hexachlorocyclopentadiene	ug/L	100	75.4	75	24-120	
Hexachloroethane	ug/L	50	36.2	72	43-113	
Naphthalene	ug/L	50	39.9	80	48-120	
Nitrobenzene	ug/L	50	43.1	86	48-120	
Pentachlorophenol	ug/L	50	45.9	92	47-120	
Phenol	ug/L	50	14.6	29	16-112	
2,4,6-Tribromophenol (S)	%			93	39-120	
2-Fluorobiphenyl (S)	%			84	39-120	
2-Fluorophenol (S)	%			42	17-120	
Nitrobenzene-d5 (S)	%			86	33-120	
Phenol-d6 (S)	%			28	11-120	
Terphenyl-d14 (S)	%			88	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

MATRIX SPIKE SAMPLE: 1386879

Parameter	Units	60170245002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	42.0	84	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	43.4	87	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	36.8	74	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	33.4	67	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	41.8	84	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	41.9	84	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	85.3	85	11-120	
Hexachloroethane	ug/L	ND	50	41.4	83	40-113	
Naphthalene	ug/L	ND	50	42.6	85	45-120	
Nitrobenzene	ug/L	ND	50	43.5	87	38-120	
Pentachlorophenol	ug/L	ND	50	42.3	85	43-135	
Phenol	ug/L	ND	50	15.2	30	13-112	
2,4,6-Tribromophenol (S)	%				91	39-120	
2-Fluorobiphenyl (S)	%				86	39-120	
2-Fluorophenol (S)	%				47	17-120	
Nitrobenzene-d5 (S)	%				87	33-120	
Phenol-d6 (S)	%				30	11-120	
Terphenyl-d14 (S)	%				96	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: WET/48194 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60170239001

METHOD BLANK: 1387827 | Matrix: Water
Associated Lab Samples: 60170239001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	06/03/14 10:41	

LABORATORY CONTROL SAMPLE: 1387828

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.9	92	78-114	

MATRIX SPIKE SAMPLE: 1387849

Parameter	Units	60170130001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	1670	167	2160	290	78-114	M1

SAMPLE DUPLICATE: 1387850

Parameter	Units	60170239001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	1200	1160	4	18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: WET/48186 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60170239001

METHOD BLANK: 1387325 | Matrix: Water
Associated Lab Samples: 60170239001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	06/03/14 15:03	

LABORATORY CONTROL SAMPLE: 1387326

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	20.5	102	64-132	

MATRIX SPIKE SAMPLE: 1388023

Parameter	Units	60170130001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	11.4	83.3	53.8	51	64-132	M1

SAMPLE DUPLICATE: 1388024

Parameter	Units	60170239001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	12.1	16.3	29	34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: WET/48200 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60170239001

METHOD BLANK: 1387904 | Matrix: Water
Associated Lab Samples: 60170239001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	06/03/14 11:04	

SAMPLE DUPLICATE: 1387905

Parameter	Units	60170189001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	16.0	14.0	13	10	D6

SAMPLE DUPLICATE: 1387906

Parameter	Units	60170127003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	360	363	1	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: WET/48153
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60170239001

SAMPLE DUPLICATE: 1386451

Parameter	Units	60170142007 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.4	7.4	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: WET/48150 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60170239001

METHOD BLANK: 1386336 | Matrix: Water
Associated Lab Samples: 60170239001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	06/04/14 15:17	

LABORATORY CONTROL SAMPLE: 1386337

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	16.0	8	85-115	L0

SAMPLE DUPLICATE: 1386338

Parameter	Units	60170246002 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	1400	1410	1	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: WETA/29662 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60170239001

METHOD BLANK: 1387008 | Matrix: Water
Associated Lab Samples: 60170239001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	06/02/14 12:38	

LABORATORY CONTROL SAMPLE: 1387009

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

MATRIX SPIKE SAMPLE: 1387010

Parameter	Units	60170122002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.9	93	90-110	

MATRIX SPIKE SAMPLE: 1387011

Parameter	Units	60170126002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	4.0	2	5.3	65	90-110	M1

SAMPLE DUPLICATE: 1387012

Parameter	Units	60170127002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

QC Batch: WETA/29651 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60170239001

METHOD BLANK: 1386758 | Matrix: Water
Associated Lab Samples: 60170239001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	06/03/14 07:20	

LABORATORY CONTROL SAMPLE: 1386759

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: 1386760

Parameter	Units	60170032001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	57900	25000	79200	85	90-110	M1

MATRIX SPIKE SAMPLE: 1386762

Parameter	Units	60170017002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	6200	5000	10300	83	90-110	M1

SAMPLE DUPLICATE: 1386761

Parameter	Units	60170069001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	41.7	38.4	8	25	

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QUALIFIERS

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

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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ANALYTE QUALIFIERS

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).
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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-314
Pace Project No.: 60170239

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60170239001	**316-314**	EPA 200.7	MPRP/27493	EPA 200.7	ICP/20807
60170239001	**316-314**	EPA 200.7	MPRP/27463	EPA 200.7	ICP/20782
60170239001	**316-314**	EPA 245.1	MERP/8456	EPA 245.1	MERC/8407
60170239001	**316-314**	EPA 245.1	MERP/8453	EPA 245.1	MERC/8406
60170239001	**316-314**	EPA 625	OEXT/44436	EPA 625	MSSV/14224
60170239001	**316-314**	EPA 624 Low	MSV/61953		
60170239002	**TRIP BLANK**	EPA 624 Low	MSV/61953		
60170239001	**316-314**	EPA 1664A	WET/48194		
60170239001	**316-314**	EPA 1664A	WET/48186		
60170239001	**316-314**	SM 2540D	WET/48200		
60170239001	**316-314**	SM 4500-H+B	WET/48153		
60170239001	**316-314**	SM 5210B	WET/48150	SM 5210B	WET/48232
60170239001	**316-314**	EPA 350.1	WETA/29662		
60170239001	**316-314**	EPA 410.4	WETA/29651		

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Sample Condition Upon Receipt

WO#: 60170239

60170239

Client Name: Barr Engineering

Optional
Proj Due Date:
Proj Name:

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 ☑ Zplc

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
melted (circle one)

Cooler Temperature: 12-8

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 5/30/14

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. BOD, ph
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes	☐No	☐N/A	received samples with melted ice 13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	initial ph BP3N 5.0, added 2.5mL HNO3. final 4.0
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes	☑No	☐N/A	initial ph BP3S 4.5, added 2.5mL H2SO4, final 3.5 14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed ☑ Lot # of added preservative HNO3 - 12513-25-2 H2SO4 - 12522-2-7
Trip Blank present: Pace Trip Blank lot # (if purchased): covered	☑Yes	☐No	☐N/A	15.
Headspace in VOA vials (>6mm):	☑Yes	☐No	☐N/A	5 of 5 - Drain 16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☑N/A	17. List State: MO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: IGNORE TEMP / HS BASED ON HISTORICAL INSTRUCTIONS
email for temp → PM

Project Manager Review: _____ Date: 6/2/14

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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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency	
State / Location	
	Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test Y/N: 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	BOD SM 5210B	Residual Chlorine (Y/N)	66170239
1	BP3N 316 - 314 2BP24, 2AG44, 3AG35	OT	G	5/29/14	0840	—	—		15 44	10	4	1	0	BP3S	3-5			X	X	X	X	X	X	X	X	X	X	X		SDHAU, BP3U, UV
2	TRIP BLANK	—	—	—	—	—	—		2	2															X					2DHAU, CO
3																														
4																														
5																														
6																														METALS LIST total & LF Dis:
7																														Al,Sb,As,Be,Cd,Cr,
8																														Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																														and Mercury
10																														
11																														
12																														

Matrix codes: Drinking Water DW, Water WT, Waste Water WW, Product P, Soil/Solid SL, Oil OL, Wipe WP, Air AR, Other OT, Tissue TS

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEI	5-29-14	2:10 PM		5-29-14	2:10 PM				
SITE ADDRESS: BRIDGETON LF				E Brockett / Pace	5/30	0110	12-8	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:	Aaron Weber					
SIGNATURE of SAMPLER:	Aaron Weber	DATE Signed: 5/29/14				

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June 10, 2014

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

RE: Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on May 31, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

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 316-315
Pace Project No.: 60170311

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60170311001	**316-315**	Water	05/30/14 07:45	05/31/14 00:55
60170311002	**TRIP BLANK**	Water	05/30/14 07:45	05/31/14 00:55

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60170311001	**316-315**	EPA 200.7	NDJ, SMW	15
		EPA 200.7	NDJ	15
		EPA 245.1	TDS	1
		EPA 245.1	TDS	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	ESM	1
		SM 4500-H+B	DJR	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60170311002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

Sample: 316-315 **Lab ID: 60170311001** Collected: 05/30/14 07:45 Received: 05/31/14 00:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**4320**	ug/L	750	2	06/03/14 17:30	06/04/14 14:14	7429-90-5	
Antimony	ND	ug/L	100	2	06/03/14 17:30	06/04/14 14:14	7440-36-0	D3
Arsenic	**1210**	ug/L	50.0	1	06/03/14 17:30	06/04/14 14:11	7440-38-2	
Beryllium	ND	ug/L	5.0	1	06/03/14 17:30	06/04/14 14:11	7440-41-7	
Cadmium	ND	ug/L	25.0	1	06/03/14 17:30	06/04/14 14:11	7440-43-9	
Chromium	**216**	ug/L	25.0	1	06/03/14 17:30	06/04/14 14:11	7440-47-3	
Cobalt	**34.1**	ug/L	25.0	1	06/03/14 17:30	06/04/14 14:11	7440-48-4	
Copper	ND	ug/L	50.0	1	06/03/14 17:30	06/04/14 14:11	7440-50-8	
Iron	**471000**	ug/L	500	2	06/03/14 17:30	06/05/14 12:58	7439-89-6	M1
Lead	**59.2**	ug/L	25.0	1	06/03/14 17:30	06/04/14 14:11	7439-92-1	
Nickel	**126**	ug/L	25.0	1	06/03/14 17:30	06/04/14 14:11	7440-02-0	
Selenium	ND	ug/L	75.0	1	06/03/14 17:30	06/04/14 14:11	7782-49-2	
Silver	ND	ug/L	35.0	1	06/03/14 17:30	06/04/14 14:11	7440-22-4	
Thallium	ND	ug/L	100	1	06/03/14 17:30	06/04/14 14:11	7440-28-0	
Zinc	**4970**	ug/L	500	2	06/03/14 17:30	06/04/14 14:14	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1770**	ug/L	750	2	06/04/14 17:00	06/10/14 11:13	7429-90-5	
Antimony, Dissolved	**81.2**	ug/L	50.0	1	06/04/14 17:00	06/10/14 11:10	7440-36-0	
Arsenic, Dissolved	**1060**	ug/L	50.0	1	06/04/14 17:00	06/10/14 11:10	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	06/04/14 17:00	06/10/14 11:10	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	06/04/14 17:00	06/10/14 11:10	7440-43-9	
Chromium, Dissolved	**192**	ug/L	25.0	1	06/04/14 17:00	06/10/14 11:10	7440-47-3	
Cobalt, Dissolved	**28.8**	ug/L	25.0	1	06/04/14 17:00	06/10/14 11:10	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	06/04/14 17:00	06/10/14 11:10	7440-50-8	
Iron, Dissolved	**347000**	ug/L	250	1	06/04/14 17:00	06/10/14 11:10	7439-89-6	M1
Lead, Dissolved	**29.3**	ug/L	25.0	1	06/04/14 17:00	06/10/14 11:10	7439-92-1	
Nickel, Dissolved	**94.0**	ug/L	25.0	1	06/04/14 17:00	06/10/14 11:10	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	06/04/14 17:00	06/10/14 11:10	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	06/04/14 17:00	06/10/14 11:10	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	06/04/14 17:00	06/10/14 11:10	7440-28-0	
Zinc, Dissolved	**4450**	ug/L	500	2	06/04/14 17:00	06/10/14 11:13	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	06/05/14 13:00	06/06/14 12:45	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	06/05/14 13:00	06/06/14 12:20	7439-97-6	M1
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	06/02/14 00:00	06/03/14 12:17	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 12:17	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 12:17	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 12:17	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	06/02/14 00:00	06/03/14 12:17	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**8590**	ug/L	4000	2	06/02/14 00:00	06/03/14 12:17		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

Sample: 316-315 **Lab ID: 60170311001** Collected: 05/30/14 07:45 Received: 05/31/14 00:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 12:17	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 12:17	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 12:17	87-86-5	
Phenol	**13200**	ug/L	1000	2	06/02/14 00:00	06/03/14 12:17	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 12:17	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	06/02/14 00:00	06/03/14 12:17	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	171	%	33-120	2	06/02/14 00:00	06/03/14 12:17	4165-60-0	S0
2-Fluorobiphenyl (S)	87	%	39-120	2	06/02/14 00:00	06/03/14 12:17	321-60-8	
Terphenyl-d14 (S)	93	%	45-120	2	06/02/14 00:00	06/03/14 12:17	1718-51-0	
Phenol-d6 (S)	40	%	11-120	2	06/02/14 00:00	06/03/14 12:17	13127-88-3	
2-Fluorophenol (S)	53	%	17-120	2	06/02/14 00:00	06/03/14 12:17	367-12-4	
2,4,6-Tribromophenol (S)	97	%	39-120	2	06/02/14 00:00	06/03/14 12:17	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**122000**	ug/L	2500	250		06/02/14 12:54	67-64-1	N2
Benzene	ND	ug/L	250	250		06/02/14 12:54	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		06/02/14 12:54	75-27-4	
Bromoform	ND	ug/L	250	250		06/02/14 12:54	75-25-2	
Bromomethane	ND	ug/L	1250	250		06/02/14 12:54	74-83-9	
2-Butanone (MEK)	**48600**	ug/L	2500	250		06/02/14 12:54	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		06/02/14 12:54	56-23-5	
Chloroethane	ND	ug/L	250	250		06/02/14 12:54	75-00-3	
Chloroform	ND	ug/L	250	250		06/02/14 12:54	67-66-3	
1,4-Dichlorobenzene	**268**	ug/L	250	250		06/02/14 12:54	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		06/02/14 12:54	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		06/02/14 12:54	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		06/02/14 12:54	156-60-5	
Ethylbenzene	ND	ug/L	250	250		06/02/14 12:54	100-41-4	
Methylene chloride	ND	ug/L	250	250		06/02/14 12:54	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		06/02/14 12:54	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		06/02/14 12:54	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		06/02/14 12:54	127-18-4	
Toluene	ND	ug/L	250	250		06/02/14 12:54	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		06/02/14 12:54	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		06/02/14 12:54	79-00-5	
Trichloroethene	ND	ug/L	250	250		06/02/14 12:54	79-01-6	
Vinyl chloride	ND	ug/L	250	250		06/02/14 12:54	75-01-4	
Xylene (Total)	ND	ug/L	750	250		06/02/14 12:54	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	250		06/02/14 12:54	460-00-4	
Toluene-d8 (S)	100	%	80-120	250		06/02/14 12:54	2037-26-5	
1,2-Dichloroethane-d4 (S)	98	%	80-120	250		06/02/14 12:54	17060-07-0	
Preservation pH	**6.0**		1.0	250		06/02/14 12:54		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1140**	mg/L	5.0	1		06/03/14 10:47		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

Sample: 316-315 **Lab ID: 60170311001** Collected: 05/30/14 07:45 Received: 05/31/14 00:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**8.4**	mg/L	5.0	1		06/04/14 10:26		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**4860**	mg/L	5.0	1		06/05/14 09:17		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		05/31/14 10:45		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**31200**	mg/L	2.0	1	05/31/14 10:17	06/05/14 13:28		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**651**	mg/L	20.0	200		06/02/14 13:13	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**54200**	mg/L	5000	500		06/04/14 07:27		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

Sample: TRIP BLANK **Lab ID: 60170311002** Collected: 05/30/14 07:45 Received: 05/31/14 00:55 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		06/02/14 12:39	67-64-1	N2
Benzene	ND	ug/L	1.0	1		06/02/14 12:39	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		06/02/14 12:39	75-27-4	
Bromoform	ND	ug/L	1.0	1		06/02/14 12:39	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/02/14 12:39	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		06/02/14 12:39	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		06/02/14 12:39	56-23-5	
Chloroethane	ND	ug/L	1.0	1		06/02/14 12:39	75-00-3	
Chloroform	ND	ug/L	1.0	1		06/02/14 12:39	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		06/02/14 12:39	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		06/02/14 12:39	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		06/02/14 12:39	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		06/02/14 12:39	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		06/02/14 12:39	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		06/02/14 12:39	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		06/02/14 12:39	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		06/02/14 12:39	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		06/02/14 12:39	127-18-4	
Toluene	ND	ug/L	1.0	1		06/02/14 12:39	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		06/02/14 12:39	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		06/02/14 12:39	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		06/02/14 12:39	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		06/02/14 12:39	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		06/02/14 12:39	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	1		06/02/14 12:39	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		06/02/14 12:39	2037-26-5	
1,2-Dichloroethane-d4 (S)	98	%	80-120	1		06/02/14 12:39	17060-07-0	
Preservation pH	**6.0**		1.0	1		06/02/14 12:39		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: MERP/8463 | Analysis Method: EPA 245.1
QC Batch Method: EPA 245.1 | Analysis Description: 245.1 Mercury
Associated Lab Samples: 60170311001

METHOD BLANK: 1389350 | Matrix: Water
Associated Lab Samples: 60170311001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	06/06/14 12:36	

LABORATORY CONTROL SAMPLE: 1389351

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.4	109	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1389352 1389353

Parameter	Units	60170139001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.3	4.2	87	84	70-130	3	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: MERP/8462
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60170311001

METHOD BLANK: 1389341
Matrix: Water
Associated Lab Samples: 60170311001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	06/06/14 12:16	

LABORATORY CONTROL SAMPLE: 1389342

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: 1389343 1389344

Parameter	Units	60170311001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	92.4	92.7	62	62	70-130	0	20	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: MPRP/27481 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60170311001

METHOD BLANK: 1387985 | Matrix: Water
Associated Lab Samples: 60170311001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	06/04/14 14:06	
Antimony	ug/L	ND	10.0	06/04/14 14:06	
Arsenic	ug/L	ND	10.0	06/04/14 14:06	
Beryllium	ug/L	ND	1.0	06/04/14 14:06	
Cadmium	ug/L	ND	5.0	06/04/14 14:06	
Chromium	ug/L	ND	5.0	06/04/14 14:06	
Cobalt	ug/L	ND	5.0	06/04/14 14:06	
Copper	ug/L	ND	10.0	06/04/14 14:06	
Iron	ug/L	ND	50.0	06/05/14 12:52	
Lead	ug/L	ND	5.0	06/04/14 14:06	
Nickel	ug/L	ND	5.0	06/04/14 14:06	
Selenium	ug/L	ND	15.0	06/04/14 14:06	
Silver	ug/L	ND	7.0	06/04/14 14:06	
Thallium	ug/L	ND	20.0	06/04/14 14:06	
Zinc	ug/L	ND	50.0	06/04/14 14:06	

LABORATORY CONTROL SAMPLE: 1387986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	8850	88	85-115	
Antimony	ug/L	1000	964	96	85-115	
Arsenic	ug/L	1000	971	97	85-115	
Beryllium	ug/L	1000	915	92	85-115	
Cadmium	ug/L	1000	943	94	85-115	
Chromium	ug/L	1000	948	95	85-115	
Cobalt	ug/L	1000	952	95	85-115	
Copper	ug/L	1000	901	90	85-115	
Iron	ug/L	10000	9510	95	85-115	
Lead	ug/L	1000	955	95	85-115	
Nickel	ug/L	1000	997	100	85-115	
Selenium	ug/L	1000	979	98	85-115	
Silver	ug/L	500	448	90	85-115	
Thallium	ug/L	1000	967	97	85-115	
Zinc	ug/L	1000	962	96	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1387987 1387988

Parameter	Units	60170311001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	4320	50000	50000	50300	50200	92	92	70-130	0	8	
Antimony	ug/L	ND	5000	5000	4810	4930	95	98	70-130	3	7	
Arsenic	ug/L	1210	5000	5000	6360	6350	103	103	70-130	0	10	
Beryllium	ug/L	ND	5000	5000	4500	4580	90	92	70-130	2	7	
Cadmium	ug/L	ND	5000	5000	4910	4860	98	97	70-130	1	10	
Chromium	ug/L	216	5000	5000	4930	4990	94	95	70-130	1	10	
Cobalt	ug/L	34.1	5000	5000	4590	4550	91	90	70-130	1	6	
Copper	ug/L	ND	5000	5000	4980	4980	100	100	70-130	0	11	
Iron	ug/L	471000	50000	50000	472000	507000	1	72	70-130	7	10	M1
Lead	ug/L	59.2	5000	5000	4430	4390	87	87	70-130	1	10	
Nickel	ug/L	126	5000	5000	4810	4770	94	93	70-130	1	10	
Selenium	ug/L	ND	5000	5000	5560	5470	110	109	70-130	2	10	
Silver	ug/L	ND	2500	2500	2550	2550	101	102	70-130	0	10	
Thallium	ug/L	ND	5000	5000	4310	4290	86	86	70-130	1	6	
Zinc	ug/L	4970	5000	5000	9090	9270	82	86	70-130	2	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: MPRP/27502 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60170311001

METHOD BLANK: 1388726 | Matrix: Water
Associated Lab Samples: 60170311001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	06/10/14 11:08	
Antimony, Dissolved	ug/L	ND	10.0	06/10/14 11:08	
Arsenic, Dissolved	ug/L	ND	10.0	06/10/14 11:08	
Beryllium, Dissolved	ug/L	ND	1.0	06/10/14 11:08	
Cadmium, Dissolved	ug/L	ND	5.0	06/10/14 11:08	
Chromium, Dissolved	ug/L	ND	5.0	06/10/14 11:08	
Cobalt, Dissolved	ug/L	ND	5.0	06/10/14 11:08	
Copper, Dissolved	ug/L	ND	10.0	06/10/14 11:08	
Iron, Dissolved	ug/L	ND	50.0	06/10/14 11:08	
Lead, Dissolved	ug/L	ND	5.0	06/10/14 11:08	
Nickel, Dissolved	ug/L	ND	5.0	06/10/14 11:08	
Selenium, Dissolved	ug/L	ND	15.0	06/10/14 11:08	
Silver, Dissolved	ug/L	ND	7.0	06/10/14 11:08	
Thallium, Dissolved	ug/L	ND	20.0	06/10/14 11:08	
Zinc, Dissolved	ug/L	ND	50.0	06/10/14 11:08	

LABORATORY CONTROL SAMPLE: 1388727

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	1020	102	85-115	
Arsenic, Dissolved	ug/L	1000	988	99	85-115	
Beryllium, Dissolved	ug/L	1000	1020	102	85-115	
Cadmium, Dissolved	ug/L	1000	1010	101	85-115	
Chromium, Dissolved	ug/L	1000	1000	100	85-115	
Cobalt, Dissolved	ug/L	1000	1030	103	85-115	
Copper, Dissolved	ug/L	1000	1000	100	85-115	
Iron, Dissolved	ug/L	10000	10500	105	85-115	
Lead, Dissolved	ug/L	1000	1030	103	85-115	
Nickel, Dissolved	ug/L	1000	1040	104	85-115	
Selenium, Dissolved	ug/L	1000	1020	102	85-115	
Silver, Dissolved	ug/L	500	494	99	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1388728 1388729

Parameter	Units	60170311001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1770	50000	50000	52200	52200	101	101	70-130	0	8	
Antimony, Dissolved	ug/L	81.2	5000	5000	5360	5330	106	105	70-130	1	7	
Arsenic, Dissolved	ug/L	1060	5000	5000	6700	6730	113	113	70-130	0	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4900	4860	98	97	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5320	5290	106	105	70-130	1	10	
Chromium, Dissolved	ug/L	192	5000	5000	5020	4980	97	96	70-130	1	10	
Cobalt, Dissolved	ug/L	28.8	5000	5000	4850	4800	96	95	70-130	1	6	
Copper, Dissolved	ug/L	ND	5000	5000	5320	5300	106	105	70-130	0	11	
Iron, Dissolved	ug/L	347000	50000	50000	416000	419000	137	144	70-130	1	10	M1
Lead, Dissolved	ug/L	29.3	5000	5000	4590	4550	91	90	70-130	1	10	
Nickel, Dissolved	ug/L	94.0	5000	5000	4900	4850	96	95	70-130	1	10	
Selenium, Dissolved	ug/L	ND	5000	5000	6100	6090	121	121	70-130	0	10	
Silver, Dissolved	ug/L	ND	2500	2500	2650	2630	105	105	70-130	1	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4230	4160	85	83	70-130	2	6	
Zinc, Dissolved	ug/L	4450	5000	5000	9320	9310	97	97	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: MSV/61983 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60170311001, 60170311002

METHOD BLANK: 1387167 | Matrix: Water
Associated Lab Samples: 60170311001, 60170311002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	06/02/14 12:23	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	06/02/14 12:23	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	06/02/14 12:23	
1,2-Dichloroethane	ug/L	ND	1.0	06/02/14 12:23	
1,4-Dichlorobenzene	ug/L	ND	1.0	06/02/14 12:23	
2-Butanone (MEK)	ug/L	ND	10.0	06/02/14 12:23	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	06/02/14 12:23	N2
Acetone	ug/L	ND	10.0	06/02/14 12:23	N2
Benzene	ug/L	ND	1.0	06/02/14 12:23	
Bromodichloromethane	ug/L	ND	1.0	06/02/14 12:23	
Bromoform	ug/L	ND	1.0	06/02/14 12:23	
Bromomethane	ug/L	ND	5.0	06/02/14 12:23	
Carbon tetrachloride	ug/L	ND	1.0	06/02/14 12:23	
Chloroethane	ug/L	ND	1.0	06/02/14 12:23	
Chloroform	ug/L	ND	1.0	06/02/14 12:23	
cis-1,2-Dichloroethene	ug/L	ND	1.0	06/02/14 12:23	N2
Ethylbenzene	ug/L	ND	1.0	06/02/14 12:23	
Methylene chloride	ug/L	ND	1.0	06/02/14 12:23	
Tetrachloroethene	ug/L	ND	1.0	06/02/14 12:23	
Toluene	ug/L	ND	1.0	06/02/14 12:23	
trans-1,2-Dichloroethene	ug/L	ND	1.0	06/02/14 12:23	
Trichloroethene	ug/L	ND	1.0	06/02/14 12:23	
Vinyl chloride	ug/L	ND	1.0	06/02/14 12:23	
Xylene (Total)	ug/L	ND	3.0	06/02/14 12:23	N2
1,2-Dichloroethane-d4 (S)	%	103	80-120	06/02/14 12:23	
4-Bromofluorobenzene (S)	%	102	80-120	06/02/14 12:23	
Toluene-d8 (S)	%	100	80-120	06/02/14 12:23	

LABORATORY CONTROL SAMPLE: 1387168

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.8	99	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	14.6	73	67-127	N2
1,1,2-Trichloroethane	ug/L	20	20.7	103	67-124	
1,2-Dichloroethane	ug/L	20	20.4	102	70-126	
1,4-Dichlorobenzene	ug/L	20	19.3	96	74-120	
2-Butanone (MEK)	ug/L	100	110	110	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	123	123	59-131	N2
Acetone	ug/L	100	115	115	38-134	N2
Benzene	ug/L	20	19.3	97	75-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

LABORATORY CONTROL SAMPLE: 1387168

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	20.9	104	68-125	
Bromoform	ug/L	20	20.9	105	65-127	
Bromomethane	ug/L	20	13.2	66	13-157	
Carbon tetrachloride	ug/L	20	19.4	97	70-131	
Chloroethane	ug/L	20	20.3	102	47-133	
Chloroform	ug/L	20	19.8	99	65-127	
cis-1,2-Dichloroethene	ug/L	20	20.0	100	68-127	N2
Ethylbenzene	ug/L	20	19.1	96	74-122	
Methylene chloride	ug/L	20	18.8	94	64-129	
Tetrachloroethene	ug/L	20	18.2	91	73-125	
Toluene	ug/L	20	19.4	97	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.2	91	66-129	
Trichloroethene	ug/L	20	24.3	121	71-123	
Vinyl chloride	ug/L	20	19.3	96	43-129	
Xylene (Total)	ug/L	60	56.5	94	75-121	N2
1,2-Dichloroethane-d4 (S)	%			105	80-120	
4-Bromofluorobenzene (S)	%			102	80-120	
Toluene-d8 (S)	%			99	80-120	

MATRIX SPIKE SAMPLE: 1387169

Parameter	Units	60170311001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	5350	107	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5700	114	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	5100	102	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4950	99	49-144	
1,4-Dichlorobenzene	ug/L	268	5000	5230	99	33-140	
2-Butanone (MEK)	ug/L	48600	25000	78500	120	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	29300	115	40-160	N2
Acetone	ug/L	122000	25000	154000	129	10-160	N2
Benzene	ug/L	ND	5000	4950	99	37-151	
Bromodichloromethane	ug/L	ND	5000	5180	104	35-142	
Bromoform	ug/L	ND	5000	5180	104	45-142	
Bromomethane	ug/L	ND	5000	4050	81	10-158	
Carbon tetrachloride	ug/L	ND	5000	5520	110	70-140	
Chloroethane	ug/L	ND	5000	5050	101	19-152	
Chloroform	ug/L	ND	5000	4970	99	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	5080	102	34-147	N2
Ethylbenzene	ug/L	ND	5000	5090	102	40-142	
Methylene chloride	ug/L	ND	5000	4690	92	31-144	
Tetrachloroethene	ug/L	ND	5000	5200	104	64-148	
Toluene	ug/L	ND	5000	4990	100	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4900	98	54-151	
Trichloroethene	ug/L	ND	5000	4960	99	71-149	
Vinyl chloride	ug/L	ND	5000	5200	104	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

MATRIX SPIKE SAMPLE: 1387169

Parameter	Units	60170311001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	15300	102	37-144	N2
1,2-Dichloroethane-d4 (S)	%				100	80-120	
4-Bromofluorobenzene (S)	%				101	80-120	
Toluene-d8 (S)	%				102	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: OEXT/44436 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60170311001

METHOD BLANK: 1386877 | Matrix: Water
Associated Lab Samples: 60170311001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	06/03/14 08:46	
2,4,6-Trichlorophenol	ug/L	ND	5.0	06/03/14 08:46	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	06/03/14 08:46	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	06/03/14 08:46	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	06/03/14 08:46	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	06/03/14 08:46	
Hexachlorocyclopentadiene	ug/L	ND	5.0	06/03/14 08:46	
Hexachloroethane	ug/L	ND	5.0	06/03/14 08:46	
Naphthalene	ug/L	ND	5.0	06/03/14 08:46	
Nitrobenzene	ug/L	ND	5.0	06/03/14 08:46	
Pentachlorophenol	ug/L	ND	5.0	06/03/14 08:46	
Phenol	ug/L	ND	5.0	06/03/14 08:46	
2,4,6-Tribromophenol (S)	%	90	39-120	06/03/14 08:46	
2-Fluorobiphenyl (S)	%	82	39-120	06/03/14 08:46	
2-Fluorophenol (S)	%	44	17-120	06/03/14 08:46	
Nitrobenzene-d5 (S)	%	80	33-120	06/03/14 08:46	
Phenol-d6 (S)	%	28	11-120	06/03/14 08:46	
Terphenyl-d14 (S)	%	85	45-120	06/03/14 08:46	

LABORATORY CONTROL SAMPLE: 1386878

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.7	79	46-120	
2,4,6-Trichlorophenol	ug/L	50	42.1	84	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	31.8	64	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	29.2	58	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	48.6	97	40-133	
Hexachloro-1,3-butadiene	ug/L	50	38.3	77	44-116	
Hexachlorocyclopentadiene	ug/L	100	75.4	75	24-120	
Hexachloroethane	ug/L	50	36.2	72	43-113	
Naphthalene	ug/L	50	39.9	80	48-120	
Nitrobenzene	ug/L	50	43.1	86	48-120	
Pentachlorophenol	ug/L	50	45.9	92	47-120	
Phenol	ug/L	50	14.6	29	16-112	
2,4,6-Tribromophenol (S)	%			93	39-120	
2-Fluorobiphenyl (S)	%			84	39-120	
2-Fluorophenol (S)	%			42	17-120	
Nitrobenzene-d5 (S)	%			86	33-120	
Phenol-d6 (S)	%			28	11-120	
Terphenyl-d14 (S)	%			88	45-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

MATRIX SPIKE SAMPLE: 1386879

Parameter	Units	60170245002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	42.0	84	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	43.4	87	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	36.8	74	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	33.4	67	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	41.8	84	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	41.9	84	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	85.3	85	11-120	
Hexachloroethane	ug/L	ND	50	41.4	83	40-113	
Naphthalene	ug/L	ND	50	42.6	85	45-120	
Nitrobenzene	ug/L	ND	50	43.5	87	38-120	
Pentachlorophenol	ug/L	ND	50	42.3	85	43-135	
Phenol	ug/L	ND	50	15.2	30	13-112	
2,4,6-Tribromophenol (S)	%				91	39-120	
2-Fluorobiphenyl (S)	%				86	39-120	
2-Fluorophenol (S)	%				47	17-120	
Nitrobenzene-d5 (S)	%				87	33-120	
Phenol-d6 (S)	%				30	11-120	
Terphenyl-d14 (S)	%				96	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: WET/48194 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60170311001

METHOD BLANK: 1387827 | Matrix: Water
Associated Lab Samples: 60170311001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	06/03/14 10:41	

LABORATORY CONTROL SAMPLE: 1387828

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.9	92	78-114	

MATRIX SPIKE SAMPLE: 1387849

Parameter	Units	60170130001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	1670	167	2160	290	78-114	M1

SAMPLE DUPLICATE: 1387850

Parameter	Units	60170239001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	1200	1160	4	18	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: WET/48214 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60170311001

METHOD BLANK: 1388457 | Matrix: Water
Associated Lab Samples: 60170311001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	06/04/14 10:25	

LABORATORY CONTROL SAMPLE: 1388458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	23.6	118	64-132	

MATRIX SPIKE SAMPLE: 1388460

Parameter	Units	60170356001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	7.0	76.9	115	141	64-132	M1

SAMPLE DUPLICATE: 1388459

Parameter	Units	60169935001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	148	118	23	34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: WET/48239 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60170311001

METHOD BLANK: 1389165 | Matrix: Water
Associated Lab Samples: 60170311001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	06/05/14 09:13	

SAMPLE DUPLICATE: 1389166

Parameter	Units	60170381001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	847	817	4	10	

SAMPLE DUPLICATE: 1389167

Parameter	Units	60170421004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	87.0	79.0	10	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: WET/48155
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60170311001

SAMPLE DUPLICATE: 1386459

Parameter	Units	60170039002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.9	7.9	0	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: WET/48159 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60170311001

METHOD BLANK: 1386709 | Matrix: Water
Associated Lab Samples: 60170311001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	06/05/14 13:07	

LABORATORY CONTROL SAMPLE: 1386710

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	192	97	85-115	

SAMPLE DUPLICATE: 1386711

Parameter	Units	60170273001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	603	506	17	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: WETA/29662 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60170311001

METHOD BLANK: 1387008 | Matrix: Water
Associated Lab Samples: 60170311001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	06/02/14 12:38	

LABORATORY CONTROL SAMPLE: 1387009

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

MATRIX SPIKE SAMPLE: 1387010

Parameter	Units	60170122002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	2	1.9	93	90-110	

MATRIX SPIKE SAMPLE: 1387011

Parameter	Units	60170126002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	4.0	2	5.3	65	90-110	M1

SAMPLE DUPLICATE: 1387012

Parameter	Units	60170127002 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

QC Batch: WETA/29666 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60170311001

METHOD BLANK: 1387646 | Matrix: Water
Associated Lab Samples: 60170311001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	06/04/14 07:18	

LABORATORY CONTROL SAMPLE: 1387647

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	51.2	102	90-110	

MATRIX SPIKE SAMPLE: 1387648

Parameter	Units	60170279001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	60.6	115	90-110	M1

MATRIX SPIKE SAMPLE: 1387650

Parameter	Units	60170355001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	56100	25000	78800	91	90-110	

SAMPLE DUPLICATE: 1387649

Parameter	Units	60170073001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	65.7	64.8	1	25	

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QUALIFIERS

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

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.
N2	The lab does not hold TNI accreditation for this parameter.
S0	Surrogate recovery outside laboratory control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-315
Pace Project No.: 60170311

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60170311001	**316-315**	EPA 200.7	MPRP/27481	EPA 200.7	ICP/20801
60170311001	**316-315**	EPA 200.7	MPRP/27502	EPA 200.7	ICP/20811
60170311001	**316-315**	EPA 245.1	MERP/8463	EPA 245.1	MERC/8418
60170311001	**316-315**	EPA 245.1	MERP/8462	EPA 245.1	MERC/8417
60170311001	**316-315**	EPA 625	OEXT/44436	EPA 625	MSSV/14224
60170311001	**316-315**	EPA 624 Low	MSV/61983		
60170311002	**TRIP BLANK**	EPA 624 Low	MSV/61983		
60170311001	**316-315**	EPA 1664A	WET/48194		
60170311001	**316-315**	EPA 1664A	WET/48214		
60170311001	**316-315**	SM 2540D	WET/48239		
60170311001	**316-315**	SM 4500-H+B	WET/48155		
60170311001	**316-315**	SM 5210B	WET/48159	SM 5210B	WET/48248
60170311001	**316-315**	EPA 350.1	WETA/29662		
60170311001	**316-315**	EPA 410.4	WETA/29666		

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Sample Condition Upon Receipt

WO#: 60170311

60170311

Optional
Proj Due Date: 6/9/14
Proj Name: Brighton LF

Client Name: Barr Eng

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 ☑ ZPIC

Thermometer Used: T-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 2.2

Temperature should be above freezing to 6°C

Date and initials of person examining contents: PV 5/31/14

Chain of Custody present:	☑Yes	☐No	☐N/A	1.
Chain of Custody filled out:	☑Yes	☐No	☐N/A	2.
Chain of Custody relinquished:	☑Yes	☐No	☐N/A	3.
Sampler name & signature on COC:	☑Yes	☐No	☐N/A	4.
Samples arrived within holding time:	☑Yes	☐No	☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes	☐No	☐N/A	6. PH BOD
Rush Turn Around Time requested:	☐Yes	☑No	☐N/A	7.
Sufficient volume:	☑Yes	☐No	☐N/A	8.
Correct containers used:	☑Yes	☐No	☐N/A	
Pace containers used:	☑Yes	☐No	☐N/A	9.
Containers intact:	☑Yes	☐No	☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes	☐No	☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes	☐No	☑N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes	☐No	☐N/A	13.
All containers needing preservation have been checked.	☑Yes	☐No	☐N/A	Added 2.5 ml of HNO3 to BP3N. PH 6.0/4.0 Added 2.0 ml of H2SO4 to BP3S. PH 6.0/2.5
All containers needing preservation are found to be in compliance with EPA recommendation.	☑Yes	☐No	☐N/A	14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes	☐No		Initial when completed: PV Lot # of added preservative: 12513 12522
Trip Blank present: Pace Trip Blank lot # (if purchased): 040714-3	☑Yes	☐No	☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes	☑No	☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes	☐No	☑N/A	17. List State: MD

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: Samples collected 5/30 0745 as noted on containers

Project Manager Review: _____ Date: 6/2/14

Pace Analytical

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency
State / Location
Missouri

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

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N): 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	BOD SM 5210B	Residual Chlorine (Y/N)	60170311
1	316-315 2AG4U 1BPSU 3AG3S	OT	G						14	10	4	1	0	1BP3S	2-5	1BPSN		X	X	X	X	X	X	X	X	X	X	X	2BPZ	U5D194 04
2	TRIP BLANK								2	2															X					2D194U 002
3																														
4																														
5																														
6																														METALS LIST total & LF Dis:
7																														Al,Sb,As,Be,Cd,Cr,
8																														Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																														and Mercury
10																														
11																														
12																														

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	Paul Linscott / FEI	05/30/14	2:51 pm	[illegible]	05/30/14	2:51 pm				
SITE ADDRESS: BRIDGETON LF				[illegible] PASE	5/31/14	0055	2-2	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: Paul Linscott for Aaron Weber					
SIGNATURE of SAMPLER: Paul Linscott	DATE Signed: 05/30/14				

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June 10, 2014

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

RE: Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

Dear Ed Galbraith:
Enclosed are the analytical results for sample(s) received by the laboratory on June 02, 2014. 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: Bill Abernathy, Feezor Engineering
Kelly Caddy, Barr Engineering
DAN FEEZOR, FEEZOR ENGINEERING
Dana B. Pasi, Barr Engineering Co.
Brian Power, Republic Services
Brian Sehie, Republic Services
Margaret Treanor, Barr Engineering Company

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

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 316-316
Pace Project No.: 60170355

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60170355001	**316-316**	Water	05/31/14 15:45	06/02/14 13:20
60170355002	**TRIP BLANK**	Water	05/31/14 15:45	06/02/14 13:20

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SAMPLE ANALYTE COUNT

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60170355001	**316-316**	EPA 200.7	NDJ, SMW	15
		EPA 200.7	NDJ	15
		EPA 245.1	TDS	1
		EPA 245.1	TDS	1
		EPA 625	JMT	18
		EPA 624 Low	EAK	28
		EPA 1664A	CRT	1
		EPA 1664A	CRT	1
		SM 2540D	ESM	1
		SM 4500-H+B	NDL	1
		SM 5210B	NDL	1
		EPA 350.1	AJM	1
		EPA 410.4	JMC1	1
60170355002	**TRIP BLANK**	EPA 624 Low	EAK	28

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

Sample: 316-316 **Lab ID: 60170355001** Collected: 05/31/14 15:45 Received: 06/02/14 13:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum	**7790**	ug/L	750	2	06/03/14 17:30	06/04/14 14:29	7429-90-5	
Antimony	ND	ug/L	100	2	06/03/14 17:30	06/04/14 14:29	7440-36-0	D3
Arsenic	**1230**	ug/L	50.0	1	06/03/14 17:30	06/04/14 14:23	7440-38-2	
Beryllium	ND	ug/L	5.0	1	06/03/14 17:30	06/04/14 14:23	7440-41-7	
Cadmium	ND	ug/L	25.0	1	06/03/14 17:30	06/04/14 14:23	7440-43-9	
Chromium	**235**	ug/L	25.0	1	06/03/14 17:30	06/04/14 14:23	7440-47-3	
Cobalt	**38.6**	ug/L	25.0	1	06/03/14 17:30	06/04/14 14:23	7440-48-4	
Copper	ND	ug/L	50.0	1	06/03/14 17:30	06/04/14 14:23	7440-50-8	
Iron	**647000**	ug/L	500	2	06/03/14 17:30	06/05/14 13:00	7439-89-6	
Lead	**92.4**	ug/L	25.0	1	06/03/14 17:30	06/04/14 14:23	7439-92-1	
Nickel	**138**	ug/L	25.0	1	06/03/14 17:30	06/04/14 14:23	7440-02-0	
Selenium	ND	ug/L	75.0	1	06/03/14 17:30	06/04/14 14:23	7782-49-2	
Silver	ND	ug/L	35.0	1	06/03/14 17:30	06/04/14 14:23	7440-22-4	
Thallium	ND	ug/L	100	1	06/03/14 17:30	06/04/14 14:23	7440-28-0	
Zinc	**4520**	ug/L	500	2	06/03/14 17:30	06/04/14 14:29	7440-66-6	
200.7 Metals, Dissolved (LF)	Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Aluminum, Dissolved	**1630**	ug/L	750	2	06/04/14 17:00	06/10/14 11:32	7429-90-5	
Antimony, Dissolved	**83.5**	ug/L	50.0	1	06/04/14 17:00	06/10/14 11:25	7440-36-0	
Arsenic, Dissolved	**1080**	ug/L	50.0	1	06/04/14 17:00	06/10/14 11:25	7440-38-2	
Beryllium, Dissolved	ND	ug/L	5.0	1	06/04/14 17:00	06/10/14 11:25	7440-41-7	
Cadmium, Dissolved	ND	ug/L	25.0	1	06/04/14 17:00	06/10/14 11:25	7440-43-9	
Chromium, Dissolved	**194**	ug/L	25.0	1	06/04/14 17:00	06/10/14 11:25	7440-47-3	
Cobalt, Dissolved	**30.3**	ug/L	25.0	1	06/04/14 17:00	06/10/14 11:25	7440-48-4	
Copper, Dissolved	ND	ug/L	50.0	1	06/04/14 17:00	06/10/14 11:25	7440-50-8	
Iron, Dissolved	**326000**	ug/L	250	1	06/04/14 17:00	06/10/14 11:25	7439-89-6	
Lead, Dissolved	ND	ug/L	25.0	1	06/04/14 17:00	06/10/14 11:25	7439-92-1	
Nickel, Dissolved	**109**	ug/L	25.0	1	06/04/14 17:00	06/10/14 11:25	7440-02-0	
Selenium, Dissolved	ND	ug/L	75.0	1	06/04/14 17:00	06/10/14 11:25	7782-49-2	
Silver, Dissolved	ND	ug/L	35.0	1	06/04/14 17:00	06/10/14 11:25	7440-22-4	
Thallium, Dissolved	ND	ug/L	100	1	06/04/14 17:00	06/10/14 11:25	7440-28-0	
Zinc, Dissolved	**4050**	ug/L	500	2	06/04/14 17:00	06/10/14 11:32	7440-66-6	
245.1 Mercury	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury	ND	ug/L	6.0	1	06/05/14 13:00	06/06/14 12:49	7439-97-6	
245.1 Mercury, Dissolved (LF)	Analytical Method: EPA 245.1 Preparation Method: EPA 245.1							
Mercury, Dissolved	ND	ug/L	6.0	1	06/05/14 13:00	06/06/14 12:27	7439-97-6	
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
4,6-Dinitro-2-methylphenol	ND	ug/L	5000	2	06/05/14 00:00	06/06/14 12:02	534-52-1	
Hexachloro-1,3-butadiene	ND	ug/L	1000	2	06/05/14 00:00	06/06/14 12:02	87-68-3	
Hexachlorocyclopentadiene	ND	ug/L	1000	2	06/05/14 00:00	06/06/14 12:02	77-47-4	
Hexachloroethane	ND	ug/L	1000	2	06/05/14 00:00	06/06/14 12:02	67-72-1	
2-Methylphenol(o-Cresol)	ND	ug/L	2000	2	06/05/14 00:00	06/06/14 12:02	95-48-7	N2
3&4-Methylphenol(m&p Cresol)	**6210**	ug/L	4000	2	06/05/14 00:00	06/06/14 12:02		N2

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

Sample: 316-316 **Lab ID: 60170355001** Collected: 05/31/14 15:45 Received: 06/02/14 13:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
625 MSSV	Analytical Method: EPA 625 Preparation Method: EPA 625							
Naphthalene	**1680**	ug/L	1000	2	06/05/14 00:00	06/06/14 12:02	91-20-3	
Nitrobenzene	ND	ug/L	1000	2	06/05/14 00:00	06/06/14 12:02	98-95-3	
Pentachlorophenol	ND	ug/L	1000	2	06/05/14 00:00	06/06/14 12:02	87-86-5	
Phenol	**7660**	ug/L	1000	2	06/05/14 00:00	06/06/14 12:02	108-95-2	
1,2,4-Trichlorobenzene	ND	ug/L	1000	2	06/05/14 00:00	06/06/14 12:02	120-82-1	
2,4,6-Trichlorophenol	ND	ug/L	1000	2	06/05/14 00:00	06/06/14 12:02	88-06-2	
Surrogates								
Nitrobenzene-d5 (S)	118	%	33-120	2	06/05/14 00:00	06/06/14 12:02	4165-60-0	
2-Fluorobiphenyl (S)	64	%	39-120	2	06/05/14 00:00	06/06/14 12:02	321-60-8	
Terphenyl-d14 (S)	62	%	45-120	2	06/05/14 00:00	06/06/14 12:02	1718-51-0	
Phenol-d6 (S)	34	%	11-120	2	06/05/14 00:00	06/06/14 12:02	13127-88-3	
2-Fluorophenol (S)	37	%	17-120	2	06/05/14 00:00	06/06/14 12:02	367-12-4	
2,4,6-Tribromophenol (S)	77	%	39-120	2	06/05/14 00:00	06/06/14 12:02	118-79-6	
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	**102000**	ug/L	2500	250		06/03/14 12:35	67-64-1	N2
Benzene	ND	ug/L	250	250		06/03/14 12:35	71-43-2	
Bromodichloromethane	ND	ug/L	250	250		06/03/14 12:35	75-27-4	
Bromoform	ND	ug/L	250	250		06/03/14 12:35	75-25-2	
Bromomethane	ND	ug/L	1250	250		06/03/14 12:35	74-83-9	
2-Butanone (MEK)	**41200**	ug/L	2500	250		06/03/14 12:35	78-93-3	N2
Carbon tetrachloride	ND	ug/L	250	250		06/03/14 12:35	56-23-5	
Chloroethane	ND	ug/L	250	250		06/03/14 12:35	75-00-3	
Chloroform	ND	ug/L	250	250		06/03/14 12:35	67-66-3	
1,4-Dichlorobenzene	**288**	ug/L	250	250		06/03/14 12:35	106-46-7	
1,2-Dichloroethane	ND	ug/L	250	250		06/03/14 12:35	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	250	250		06/03/14 12:35	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	250	250		06/03/14 12:35	156-60-5	
Ethylbenzene	ND	ug/L	250	250		06/03/14 12:35	100-41-4	
Methylene chloride	ND	ug/L	250	250		06/03/14 12:35	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	2500	250		06/03/14 12:35	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	250	250		06/03/14 12:35	79-34-5	N2
Tetrachloroethene	ND	ug/L	250	250		06/03/14 12:35	127-18-4	
Toluene	ND	ug/L	250	250		06/03/14 12:35	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	250	250		06/03/14 12:35	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	250	250		06/03/14 12:35	79-00-5	
Trichloroethene	ND	ug/L	250	250		06/03/14 12:35	79-01-6	
Vinyl chloride	ND	ug/L	250	250		06/03/14 12:35	75-01-4	
Xylene (Total)	ND	ug/L	750	250		06/03/14 12:35	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	100	%	80-120	250		06/03/14 12:35	460-00-4	
Toluene-d8 (S)	100	%	80-120	250		06/03/14 12:35	2037-26-5	
1,2-Dichloroethane-d4 (S)	96	%	80-120	250		06/03/14 12:35	17060-07-0	
Preservation pH	**6.0**		1.0	250		06/03/14 12:35		
HEM, Oil and Grease	Analytical Method: EPA 1664A							
Oil and Grease	**1880**	mg/L	5.0	1		06/03/14 10:47		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

Sample: 316-316 **Lab ID: 60170355001** Collected: 05/31/14 15:45 Received: 06/02/14 13:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
1664 SGT-HEM, TPH	Analytical Method: EPA 1664A							
Total Petroleum Hydrocarbons	**10.9**	mg/L	5.0	1		06/04/14 10:27		
2540D Total Suspended Solids	Analytical Method: SM 2540D							
Total Suspended Solids	**5420**	mg/L	5.0	1		06/05/14 09:17		
4500H+ pH, Electrometric	Analytical Method: SM 4500-H+B							
pH at 25 Degrees C	**5.4**	Std. Units	0.10	1		06/03/14 13:15		H6
5210B BOD, 5 day	Analytical Method: SM 5210B Preparation Method: SM 5210B							
BOD, 5 day	**37600**	mg/L	2.0	1	06/02/14 15:27	06/07/14 06:50		
350.1 Ammonia	Analytical Method: EPA 350.1							
Nitrogen, Ammonia	**607**	mg/L	20.0	200		06/04/14 14:06	7664-41-7	
410.4 COD	Analytical Method: EPA 410.4							
Chemical Oxygen Demand	**56100**	mg/L	5000	500		06/04/14 07:28		

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ANALYTICAL RESULTS

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

Sample: TRIP BLANK **Lab ID: 60170355002** Collected: 05/31/14 15:45 Received: 06/02/14 13:20 Matrix: Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
624 Volatile Organics	Analytical Method: EPA 624 Low							
Acetone	ND	ug/L	10.0	1		06/03/14 11:49	67-64-1	N2
Benzene	ND	ug/L	1.0	1		06/03/14 11:49	71-43-2	
Bromodichloromethane	ND	ug/L	1.0	1		06/03/14 11:49	75-27-4	
Bromoform	ND	ug/L	1.0	1		06/03/14 11:49	75-25-2	
Bromomethane	ND	ug/L	5.0	1		06/03/14 11:49	74-83-9	
2-Butanone (MEK)	ND	ug/L	10.0	1		06/03/14 11:49	78-93-3	N2
Carbon tetrachloride	ND	ug/L	1.0	1		06/03/14 11:49	56-23-5	
Chloroethane	ND	ug/L	1.0	1		06/03/14 11:49	75-00-3	
Chloroform	ND	ug/L	1.0	1		06/03/14 11:49	67-66-3	
1,4-Dichlorobenzene	ND	ug/L	1.0	1		06/03/14 11:49	106-46-7	
1,2-Dichloroethane	ND	ug/L	1.0	1		06/03/14 11:49	107-06-2	
cis-1,2-Dichloroethene	ND	ug/L	1.0	1		06/03/14 11:49	156-59-2	N2
trans-1,2-Dichloroethene	ND	ug/L	1.0	1		06/03/14 11:49	156-60-5	
Ethylbenzene	ND	ug/L	1.0	1		06/03/14 11:49	100-41-4	
Methylene chloride	ND	ug/L	1.0	1		06/03/14 11:49	75-09-2	
4-Methyl-2-pentanone (MIBK)	ND	ug/L	10.0	1		06/03/14 11:49	108-10-1	N2
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0	1		06/03/14 11:49	79-34-5	N2
Tetrachloroethene	ND	ug/L	1.0	1		06/03/14 11:49	127-18-4	
Toluene	ND	ug/L	1.0	1		06/03/14 11:49	108-88-3	
1,1,1-Trichloroethane	ND	ug/L	1.0	1		06/03/14 11:49	71-55-6	
1,1,2-Trichloroethane	ND	ug/L	1.0	1		06/03/14 11:49	79-00-5	
Trichloroethene	ND	ug/L	1.0	1		06/03/14 11:49	79-01-6	
Vinyl chloride	ND	ug/L	1.0	1		06/03/14 11:49	75-01-4	
Xylene (Total)	ND	ug/L	3.0	1		06/03/14 11:49	1330-20-7	N2
Surrogates								
4-Bromofluorobenzene (S)	101	%	80-120	1		06/03/14 11:49	460-00-4	
Toluene-d8 (S)	100	%	80-120	1		06/03/14 11:49	2037-26-5	
1,2-Dichloroethane-d4 (S)	96	%	80-120	1		06/03/14 11:49	17060-07-0	
Preservation pH	**6.0**		1.0	1		06/03/14 11:49		

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: MERP/8463
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury
Associated Lab Samples: 60170355001

METHOD BLANK: 1389350
Matrix: Water
Associated Lab Samples: 60170355001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	ND	0.20	06/06/14 12:36	

LABORATORY CONTROL SAMPLE: 1389351

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.4	109	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1389352 1389353

Parameter	Units	60170139001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	ND	5	5	4.3	4.2	87	84	70-130	3	20	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: MERP/8462
QC Batch Method: EPA 245.1
Analysis Method: EPA 245.1
Analysis Description: 245.1 Mercury - Dissolved
Associated Lab Samples: 60170355001

METHOD BLANK: 1389341
Matrix: Water
Associated Lab Samples: 60170355001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	ND	0.20	06/06/14 12:16	

LABORATORY CONTROL SAMPLE: 1389342

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: 1389343 1389344

Parameter	Units	60170311001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	ND	150	150	92.4	92.7	62	62	70-130	0	20	M1

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: MPRP/27481
QC Batch Method: EPA 200.7
Analysis Method: EPA 200.7
Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 60170355001

METHOD BLANK: 1387985
Matrix: Water
Associated Lab Samples: 60170355001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	ND	75.0	06/04/14 14:06	
Antimony	ug/L	ND	10.0	06/04/14 14:06	
Arsenic	ug/L	ND	10.0	06/04/14 14:06	
Beryllium	ug/L	ND	1.0	06/04/14 14:06	
Cadmium	ug/L	ND	5.0	06/04/14 14:06	
Chromium	ug/L	ND	5.0	06/04/14 14:06	
Cobalt	ug/L	ND	5.0	06/04/14 14:06	
Copper	ug/L	ND	10.0	06/04/14 14:06	
Iron	ug/L	ND	50.0	06/05/14 12:52	
Lead	ug/L	ND	5.0	06/04/14 14:06	
Nickel	ug/L	ND	5.0	06/04/14 14:06	
Selenium	ug/L	ND	15.0	06/04/14 14:06	
Silver	ug/L	ND	7.0	06/04/14 14:06	
Thallium	ug/L	ND	20.0	06/04/14 14:06	
Zinc	ug/L	ND	50.0	06/04/14 14:06	

LABORATORY CONTROL SAMPLE: 1387986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	10000	8850	88	85-115	
Antimony	ug/L	1000	964	96	85-115	
Arsenic	ug/L	1000	971	97	85-115	
Beryllium	ug/L	1000	915	92	85-115	
Cadmium	ug/L	1000	943	94	85-115	
Chromium	ug/L	1000	948	95	85-115	
Cobalt	ug/L	1000	952	95	85-115	
Copper	ug/L	1000	901	90	85-115	
Iron	ug/L	10000	9510	95	85-115	
Lead	ug/L	1000	955	95	85-115	
Nickel	ug/L	1000	997	100	85-115	
Selenium	ug/L	1000	979	98	85-115	
Silver	ug/L	500	448	90	85-115	
Thallium	ug/L	1000	967	97	85-115	
Zinc	ug/L	1000	962	96	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1387987 1387988

Parameter	Units	60170311001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum	ug/L	4320	50000	50000	50300	50200	92	92	70-130	0	8	
Antimony	ug/L	ND	5000	5000	4810	4930	95	98	70-130	3	7	
Arsenic	ug/L	1210	5000	5000	6360	6350	103	103	70-130	0	10	
Beryllium	ug/L	ND	5000	5000	4500	4580	90	92	70-130	2	7	
Cadmium	ug/L	ND	5000	5000	4910	4860	98	97	70-130	1	10	
Chromium	ug/L	216	5000	5000	4930	4990	94	95	70-130	1	10	
Cobalt	ug/L	34.1	5000	5000	4590	4550	91	90	70-130	1	6	
Copper	ug/L	ND	5000	5000	4980	4980	100	100	70-130	0	11	
Iron	ug/L	471000	50000	50000	472000	507000	1	72	70-130	7	10	M1
Lead	ug/L	59.2	5000	5000	4430	4390	87	87	70-130	1	10	
Nickel	ug/L	126	5000	5000	4810	4770	94	93	70-130	1	10	
Selenium	ug/L	ND	5000	5000	5560	5470	110	109	70-130	2	10	
Silver	ug/L	ND	2500	2500	2550	2550	101	102	70-130	0	10	
Thallium	ug/L	ND	5000	5000	4310	4290	86	86	70-130	1	6	
Zinc	ug/L	4970	5000	5000	9090	9270	82	86	70-130	2	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: MPRP/27502 | Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 | Analysis Description: 200.7 Metals, Dissolved
Associated Lab Samples: 60170355001

METHOD BLANK: 1388726 | Matrix: Water
Associated Lab Samples: 60170355001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum, Dissolved	ug/L	ND	75.0	06/10/14 11:08	
Antimony, Dissolved	ug/L	ND	10.0	06/10/14 11:08	
Arsenic, Dissolved	ug/L	ND	10.0	06/10/14 11:08	
Beryllium, Dissolved	ug/L	ND	1.0	06/10/14 11:08	
Cadmium, Dissolved	ug/L	ND	5.0	06/10/14 11:08	
Chromium, Dissolved	ug/L	ND	5.0	06/10/14 11:08	
Cobalt, Dissolved	ug/L	ND	5.0	06/10/14 11:08	
Copper, Dissolved	ug/L	ND	10.0	06/10/14 11:08	
Iron, Dissolved	ug/L	ND	50.0	06/10/14 11:08	
Lead, Dissolved	ug/L	ND	5.0	06/10/14 11:08	
Nickel, Dissolved	ug/L	ND	5.0	06/10/14 11:08	
Selenium, Dissolved	ug/L	ND	15.0	06/10/14 11:08	
Silver, Dissolved	ug/L	ND	7.0	06/10/14 11:08	
Thallium, Dissolved	ug/L	ND	20.0	06/10/14 11:08	
Zinc, Dissolved	ug/L	ND	50.0	06/10/14 11:08	

LABORATORY CONTROL SAMPLE: 1388727

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	1020	102	85-115	
Arsenic, Dissolved	ug/L	1000	988	99	85-115	
Beryllium, Dissolved	ug/L	1000	1020	102	85-115	
Cadmium, Dissolved	ug/L	1000	1010	101	85-115	
Chromium, Dissolved	ug/L	1000	1000	100	85-115	
Cobalt, Dissolved	ug/L	1000	1030	103	85-115	
Copper, Dissolved	ug/L	1000	1000	100	85-115	
Iron, Dissolved	ug/L	10000	10500	105	85-115	
Lead, Dissolved	ug/L	1000	1030	103	85-115	
Nickel, Dissolved	ug/L	1000	1040	104	85-115	
Selenium, Dissolved	ug/L	1000	1020	102	85-115	
Silver, Dissolved	ug/L	500	494	99	85-115	
Thallium, Dissolved	ug/L	1000	1040	104	85-115	
Zinc, Dissolved	ug/L	1000	1010	101	85-115	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1388728 1388729

Parameter	Units	60170311001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Aluminum, Dissolved	ug/L	1770	50000	50000	52200	52200	101	101	70-130	0	8	
Antimony, Dissolved	ug/L	81.2	5000	5000	5360	5330	106	105	70-130	1	7	
Arsenic, Dissolved	ug/L	1060	5000	5000	6700	6730	113	113	70-130	0	10	
Beryllium, Dissolved	ug/L	ND	5000	5000	4900	4860	98	97	70-130	1	7	
Cadmium, Dissolved	ug/L	ND	5000	5000	5320	5290	106	105	70-130	1	10	
Chromium, Dissolved	ug/L	192	5000	5000	5020	4980	97	96	70-130	1	10	
Cobalt, Dissolved	ug/L	28.8	5000	5000	4850	4800	96	95	70-130	1	6	
Copper, Dissolved	ug/L	ND	5000	5000	5320	5300	106	105	70-130	0	11	
Iron, Dissolved	ug/L	347000	50000	50000	416000	419000	137	144	70-130	1	10	M1
Lead, Dissolved	ug/L	29.3	5000	5000	4590	4550	91	90	70-130	1	10	
Nickel, Dissolved	ug/L	94.0	5000	5000	4900	4850	96	95	70-130	1	10	
Selenium, Dissolved	ug/L	ND	5000	5000	6100	6090	121	121	70-130	0	10	
Silver, Dissolved	ug/L	ND	2500	2500	2650	2630	105	105	70-130	1	10	
Thallium, Dissolved	ug/L	ND	5000	5000	4230	4160	85	83	70-130	2	6	
Zinc, Dissolved	ug/L	4450	5000	5000	9320	9310	97	97	70-130	0	11	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: MSV/62014 | Analysis Method: EPA 624 Low
QC Batch Method: EPA 624 Low | Analysis Description: 624 MSV
Associated Lab Samples: 60170355001, 60170355002

METHOD BLANK: 1387834 | Matrix: Water
Associated Lab Samples: 60170355001, 60170355002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	1.0	06/03/14 11:33	
1,1,2,2-Tetrachloroethane	ug/L	ND	1.0	06/03/14 11:33	N2
1,1,2-Trichloroethane	ug/L	ND	1.0	06/03/14 11:33	
1,2-Dichloroethane	ug/L	ND	1.0	06/03/14 11:33	
1,4-Dichlorobenzene	ug/L	ND	1.0	06/03/14 11:33	
2-Butanone (MEK)	ug/L	ND	10.0	06/03/14 11:33	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	10.0	06/03/14 11:33	N2
Acetone	ug/L	ND	10.0	06/03/14 11:33	N2
Benzene	ug/L	ND	1.0	06/03/14 11:33	
Bromodichloromethane	ug/L	ND	1.0	06/03/14 11:33	
Bromoform	ug/L	ND	1.0	06/03/14 11:33	
Bromomethane	ug/L	ND	5.0	06/03/14 11:33	
Carbon tetrachloride	ug/L	ND	1.0	06/03/14 11:33	
Chloroethane	ug/L	ND	1.0	06/03/14 11:33	
Chloroform	ug/L	ND	1.0	06/03/14 11:33	
cis-1,2-Dichloroethene	ug/L	ND	1.0	06/03/14 11:33	N2
Ethylbenzene	ug/L	ND	1.0	06/03/14 11:33	
Methylene chloride	ug/L	ND	1.0	06/03/14 11:33	
Tetrachloroethene	ug/L	ND	1.0	06/03/14 11:33	
Toluene	ug/L	ND	1.0	06/03/14 11:33	
trans-1,2-Dichloroethene	ug/L	ND	1.0	06/03/14 11:33	
Trichloroethene	ug/L	ND	1.0	06/03/14 11:33	
Vinyl chloride	ug/L	ND	1.0	06/03/14 11:33	
Xylene (Total)	ug/L	ND	3.0	06/03/14 11:33	N2
1,2-Dichloroethane-d4 (S)	%	102	80-120	06/03/14 11:33	
4-Bromofluorobenzene (S)	%	100	80-120	06/03/14 11:33	
Toluene-d8 (S)	%	101	80-120	06/03/14 11:33	

LABORATORY CONTROL SAMPLE: 1387835

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	20	19.0	95	67-129	
1,1,2,2-Tetrachloroethane	ug/L	20	22.0	110	67-127	N2
1,1,2-Trichloroethane	ug/L	20	19.9	100	67-124	
1,2-Dichloroethane	ug/L	20	19.0	95	70-126	
1,4-Dichlorobenzene	ug/L	20	19.4	97	74-120	
2-Butanone (MEK)	ug/L	100	102	102	42-153	N2
4-Methyl-2-pentanone (MIBK)	ug/L	100	110	110	59-131	N2
Acetone	ug/L	100	98.8	99	38-134	N2
Benzene	ug/L	20	18.8	94	75-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

LABORATORY CONTROL SAMPLE: 1387835

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromodichloromethane	ug/L	20	19.7	98	68-125	
Bromoform	ug/L	20	19.9	100	65-127	
Bromomethane	ug/L	20	13.4	67	13-157	
Carbon tetrachloride	ug/L	20	19.0	95	70-131	
Chloroethane	ug/L	20	19.0	95	47-133	
Chloroform	ug/L	20	18.9	94	65-127	
cis-1,2-Dichloroethene	ug/L	20	19.6	98	68-127	N2
Ethylbenzene	ug/L	20	19.1	96	74-122	
Methylene chloride	ug/L	20	18.4	92	64-129	
Tetrachloroethene	ug/L	20	18.8	94	73-125	
Toluene	ug/L	20	18.4	92	69-126	
trans-1,2-Dichloroethene	ug/L	20	18.3	92	66-129	
Trichloroethene	ug/L	20	18.1	91	71-123	
Vinyl chloride	ug/L	20	17.4	87	43-129	
Xylene (Total)	ug/L	60	57.4	96	75-121	N2
1,2-Dichloroethane-d4 (S)	%			100	80-120	
4-Bromofluorobenzene (S)	%			104	80-120	
Toluene-d8 (S)	%			98	80-120	

MATRIX SPIKE SAMPLE: 1387836

Parameter	Units	60170355001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	ND	5000	4560	91	52-155	
1,1,2,2-Tetrachloroethane	ug/L	ND	5000	5170	103	46-146	N2
1,1,2-Trichloroethane	ug/L	ND	5000	4580	92	52-143	
1,2-Dichloroethane	ug/L	ND	5000	4360	87	49-144	
1,4-Dichlorobenzene	ug/L	288	5000	4730	89	33-140	
2-Butanone (MEK)	ug/L	41200	25000	62600	85	40-160	N2
4-Methyl-2-pentanone (MIBK)	ug/L	ND	25000	24700	97	40-160	N2
Acetone	ug/L	102000	25000	118000	61	10-160	N2
Benzene	ug/L	ND	5000	4320	86	37-151	
Bromodichloromethane	ug/L	ND	5000	4530	91	35-142	
Bromoform	ug/L	ND	5000	4540	91	45-142	
Bromomethane	ug/L	ND	5000	3250	64	10-158	
Carbon tetrachloride	ug/L	ND	5000	4760	95	70-140	
Chloroethane	ug/L	ND	5000	4070	81	19-152	
Chloroform	ug/L	ND	5000	4400	88	51-138	
cis-1,2-Dichloroethene	ug/L	ND	5000	4480	90	34-147	N2
Ethylbenzene	ug/L	ND	5000	4570	91	40-142	
Methylene chloride	ug/L	ND	5000	4040	78	31-144	
Tetrachloroethene	ug/L	ND	5000	4670	93	64-148	
Toluene	ug/L	ND	5000	4460	89	47-150	
trans-1,2-Dichloroethene	ug/L	ND	5000	4260	85	54-151	
Trichloroethene	ug/L	ND	5000	4300	86	71-149	
Vinyl chloride	ug/L	ND	5000	3850	77	22-146	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

MATRIX SPIKE SAMPLE: 1387836

Parameter	Units	60170355001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Xylene (Total)	ug/L	ND	15000	13700	91	37-144	N2
1,2-Dichloroethane-d4 (S)	%				97	80-120	
4-Bromofluorobenzene (S)	%				106	80-120	
Toluene-d8 (S)	%				99	80-120	
Preservation pH		6.0		6.0			

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: OEXT/44501 | Analysis Method: EPA 625
QC Batch Method: EPA 625 | Analysis Description: 625 MSS
Associated Lab Samples: 60170355001

METHOD BLANK: 1389069 | Matrix: Water
Associated Lab Samples: 60170355001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	5.0	06/06/14 09:13	
2,4,6-Trichlorophenol	ug/L	ND	5.0	06/06/14 09:13	
2-Methylphenol(o-Cresol)	ug/L	ND	10.0	06/06/14 09:13	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	20.0	06/06/14 09:13	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	25.0	06/06/14 09:13	
Hexachloro-1,3-butadiene	ug/L	ND	5.0	06/06/14 09:13	
Hexachlorocyclopentadiene	ug/L	ND	5.0	06/06/14 09:13	
Hexachloroethane	ug/L	ND	5.0	06/06/14 09:13	
Naphthalene	ug/L	ND	5.0	06/06/14 09:13	
Nitrobenzene	ug/L	ND	5.0	06/06/14 09:13	
Pentachlorophenol	ug/L	ND	5.0	06/06/14 09:13	
Phenol	ug/L	ND	5.0	06/06/14 09:13	
2,4,6-Tribromophenol (S)	%	78	39-120	06/06/14 09:13	
2-Fluorobiphenyl (S)	%	69	39-120	06/06/14 09:13	
2-Fluorophenol (S)	%	38	17-120	06/06/14 09:13	
Nitrobenzene-d5 (S)	%	72	33-120	06/06/14 09:13	
Phenol-d6 (S)	%	25	11-120	06/06/14 09:13	
Terphenyl-d14 (S)	%	66	45-120	06/06/14 09:13	

LABORATORY CONTROL SAMPLE: 1389070

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	38.2	76	46-120	
2,4,6-Trichlorophenol	ug/L	50	38.4	77	49-120	
2-Methylphenol(o-Cresol)	ug/L	50	28.9	58	40-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	50	27.4	55	34-120	N2
4,6-Dinitro-2-methylphenol	ug/L	50	43.6	87	40-133	
Hexachloro-1,3-butadiene	ug/L	50	38.8	78	44-116	
Hexachlorocyclopentadiene	ug/L	100	62.3	62	24-120	
Hexachloroethane	ug/L	50	39.7	79	43-113	
Naphthalene	ug/L	50	40.2	80	48-120	
Nitrobenzene	ug/L	50	41.2	82	48-120	
Pentachlorophenol	ug/L	50	38.8	78	47-120	
Phenol	ug/L	50	12.2	24	16-112	
2,4,6-Tribromophenol (S)	%			89	39-120	
2-Fluorobiphenyl (S)	%			78	39-120	
2-Fluorophenol (S)	%			37	17-120	
Nitrobenzene-d5 (S)	%			82	33-120	
Phenol-d6 (S)	%			23	11-120	
Terphenyl-d14 (S)	%			78	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

MATRIX SPIKE SAMPLE: 1389071

Parameter	Units	60170477001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,2,4-Trichlorobenzene	ug/L	ND	50	36.2	72	44-120	
2,4,6-Trichlorophenol	ug/L	ND	50	36.6	73	50-120	
2-Methylphenol(o-Cresol)	ug/L	ND	50	22.5	45	30-120	N2
3&4-Methylphenol(m&p Cresol)	ug/L	ND	50	24.6	49	27-120	N2
4,6-Dinitro-2-methylphenol	ug/L	ND	50	39.5	79	10-160	
Hexachloro-1,3-butadiene	ug/L	ND	50	38.1	76	39-116	
Hexachlorocyclopentadiene	ug/L	ND	100	60.5	60	11-120	
Hexachloroethane	ug/L	ND	50	36.2	72	40-113	
Naphthalene	ug/L	ND	50	36.5	73	45-120	
Nitrobenzene	ug/L	ND	50	46.7	93	38-120	
Pentachlorophenol	ug/L	ND	50	36.8	74	43-135	
Phenol	ug/L	ND	50	10.7	21	13-112	
2,4,6-Tribromophenol (S)	%				84	39-120	
2-Fluorobiphenyl (S)	%				73	39-120	
2-Fluorophenol (S)	%				33	17-120	
Nitrobenzene-d5 (S)	%				76	33-120	
Phenol-d6 (S)	%				23	11-120	
Terphenyl-d14 (S)	%				75	45-120	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: WET/48194 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 HEM, Oil and Grease
Associated Lab Samples: 60170355001

METHOD BLANK: 1387827 | Matrix: Water
Associated Lab Samples: 60170355001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Oil and Grease	mg/L	ND	5.0	06/03/14 10:41	

LABORATORY CONTROL SAMPLE: 1387828

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	40	36.9	92	78-114	

MATRIX SPIKE SAMPLE: 1387849

Parameter	Units	60170130001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Oil and Grease	mg/L	1670	167	2160	290	78-114	M1

SAMPLE DUPLICATE: 1387850

Parameter	Units	60170239001 Result	Dup Result	RPD	Max RPD	Qualifiers
Oil and Grease	mg/L	1200	1160	4	18	

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REPORT OF LABORATORY ANALYSIS

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Lenexa, KS 66219
(913)599-5665

QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: WET/48214 | Analysis Method: EPA 1664A
QC Batch Method: EPA 1664A | Analysis Description: 1664 SGT-HEM, TPH
Associated Lab Samples: 60170355001

METHOD BLANK: 1388457 | Matrix: Water
Associated Lab Samples: 60170355001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Petroleum Hydrocarbons	mg/L	ND	5.0	06/04/14 10:25	

LABORATORY CONTROL SAMPLE: 1388458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	20	23.6	118	64-132	

MATRIX SPIKE SAMPLE: 1388460

Parameter	Units	60170356001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Petroleum Hydrocarbons	mg/L	7.0	76.9	115	141	64-132	M1

SAMPLE DUPLICATE: 1388459

Parameter	Units	60169935001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Petroleum Hydrocarbons	mg/L	148	118	23	34	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: WET/48239 | Analysis Method: SM 2540D
QC Batch Method: SM 2540D | Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 60170355001

METHOD BLANK: 1389165 | Matrix: Water
Associated Lab Samples: 60170355001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	5.0	06/05/14 09:13	

SAMPLE DUPLICATE: 1389166

Parameter	Units	60170381001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	847	817	4	10	

SAMPLE DUPLICATE: 1389167

Parameter	Units	60170421004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	87.0	79.0	10	10	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: WET/48195
QC Batch Method: SM 4500-H+B
Analysis Method: SM 4500-H+B
Analysis Description: 4500H+B pH
Associated Lab Samples: 60170355001

SAMPLE DUPLICATE: 1387831

Parameter	Units	60170381001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.7	7.8	1	5	H6

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: WET/48181 | Analysis Method: SM 5210B
QC Batch Method: SM 5210B | Analysis Description: 5210B BOD, 5 day
Associated Lab Samples: 60170355001

METHOD BLANK: 1387259 | Matrix: Water
Associated Lab Samples: 60170355001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	ND	2.0	06/07/14 06:39	

LABORATORY CONTROL SAMPLE: 1387260

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	171	86	85-115	

SAMPLE DUPLICATE: 1387261

Parameter	Units	60170356001 Result	Dup Result	RPD	Max RPD	Qualifiers
BOD, 5 day	mg/L	29200	29800	2	17	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: WETA/29696 | Analysis Method: EPA 350.1
QC Batch Method: EPA 350.1 | Analysis Description: 350.1 Ammonia
Associated Lab Samples: 60170355001

METHOD BLANK: 1388432 | Matrix: Water
Associated Lab Samples: 60170355001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	06/04/14 13:35	

LABORATORY CONTROL SAMPLE: 1388433

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2	2.1	104	90-110	

MATRIX SPIKE SAMPLE: 1388434

Parameter	Units	60170128002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	14.6	10	22.7	81	90-110	M1

MATRIX SPIKE SAMPLE: 1388435

Parameter	Units	60170174002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.11	2	2.0	97	90-110	

SAMPLE DUPLICATE: 1388436

Parameter	Units	60170226004 Result	Dup Result	RPD	Max RPD	Qualifiers
Nitrogen, Ammonia	mg/L	ND	ND		18	

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QUALITY CONTROL DATA

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

QC Batch: WETA/29666 | Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 | Analysis Description: 410.4 COD
Associated Lab Samples: 60170355001

METHOD BLANK: 1387646 | Matrix: Water
Associated Lab Samples: 60170355001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	ND	10.0	06/04/14 07:18	

LABORATORY CONTROL SAMPLE: 1387647

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	50	51.2	102	90-110	

MATRIX SPIKE SAMPLE: 1387648

Parameter	Units	60170279001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	ND	50	60.6	115	90-110	M1

MATRIX SPIKE SAMPLE: 1387650

Parameter	Units	60170355001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	56100	25000	78800	91	90-110	

SAMPLE DUPLICATE: 1387649

Parameter	Units	60170073001 Result	Dup Result	RPD	Max RPD	Qualifiers
Chemical Oxygen Demand	mg/L	65.7	64.8	1	25	

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QUALIFIERS

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

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.
N2	The lab does not hold TNI accreditation for this parameter.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BRIDGETON LF 316-316
Pace Project No.: 60170355

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60170355001	**316-316**	EPA 200.7	MPRP/27481	EPA 200.7	ICP/20801
60170355001	**316-316**	EPA 200.7	MPRP/27502	EPA 200.7	ICP/20811
60170355001	**316-316**	EPA 245.1	MERP/8463	EPA 245.1	MERC/8418
60170355001	**316-316**	EPA 245.1	MERP/8462	EPA 245.1	MERC/8417
60170355001	**316-316**	EPA 625	OEXT/44501	EPA 625	MSSV/14242
60170355001	**316-316**	EPA 624 Low	MSV/62014		
60170355002	**TRIP BLANK**	EPA 624 Low	MSV/62014		
60170355001	**316-316**	EPA 1664A	WET/48194		
60170355001	**316-316**	EPA 1664A	WET/48214		
60170355001	**316-316**	SM 2540D	WET/48239		
60170355001	**316-316**	SM 4500-H+B	WET/48195		
60170355001	**316-316**	SM 5210B	WET/48181	SM 5210B	WET/48316
60170355001	**316-316**	EPA 350.1	WETA/29696		
60170355001	**316-316**	EPA 410.4	WETA/29666		

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Sample Condition Upon Receipt

WO#: 60170355

60170355

Optional
Proj Due Date:
Proj Name:

Client Name: Barr

Courier: Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☑ Grands

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-239 / T-194 **Type of Ice:** Wet Blue None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 2.6

Temperature should be above freezing to 6°C

Date and initials of person examining contents: 6/2/14

Chain of Custody present:	☑Yes ☐No ☐N/A	1.
Chain of Custody filled out:	☑Yes ☐No ☐N/A	2.
Chain of Custody relinquished:	☑Yes ☐No ☐N/A	3.
Sampler name & signature on COC:	☑Yes ☐No ☐N/A	4.
Samples arrived within holding time:	☑Yes ☐No ☐N/A	5.
Short Hold Time analyses (<72hr):	☑Yes ☐No ☐N/A	6. BOD pH
Rush Turn Around Time requested:	☐Yes ☑No ☐N/A	7.
Sufficient volume:	☑Yes ☐No ☐N/A	8.
Correct containers used:	☑Yes ☐No ☐N/A	
Pace containers used:	☑Yes ☐No ☐N/A	9.
Containers intact:	☑Yes ☐No ☐N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	☐Yes ☐No ☑N/A	11.
Filtered volume received for dissolved tests?	☐Yes ☑No ☐N/A	12.
Sample labels match COC: Includes date/time/ID/analyses Matrix: WT	☑Yes ☐No ☐N/A	13.
All containers needing preservation have been checked.	☑Yes ☐No ☐N/A	HNO3 initial pH ~5.0; added 2.5 ml; final pH ~4.0
All containers needing preservation are found to be in compliance with EPA recommendation.	☐Yes ☑No ☐N/A	H2SO4 initial pH ~5.0; added 2 ml; final pH ~3.0 14.
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	☑Yes ☐No	Initial when completed: [illegible] Lot # of added preservative: 12513-23-2, 12522-2-7
Trip Blank present: Pace Trip Blank lot # (if purchased): May 08	☑Yes ☐No ☐N/A	15.
Headspace in VOA vials (>6mm):	☐Yes ☑No ☐N/A	16.
Project sampled in USDA Regulated Area:	☐Yes ☐No ☑N/A	17. List State: MO

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

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: [illegible] Date: 6/4

F-KS-C-003-Rev.7, 04December2012

Pace Analytical

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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	BARR ENGINEERING	Report To:	ED GALBRAITH/BARR	Attention:	AMY HARGROVE/BRIAN POWER
Address:		Copy To:	SCOTT FEDAK/FEEZOR	Company Name:	REPUBLIC SERVICES
			DANA BAKER/MARGARET TREANOR -BARR	Address:	BRIDGETON, MO 63044
Email To:		Purchase Order No.		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 #:	7585 LINE 2

Regulatory Agency
State / Location
Missouri

Requested Analysis Filtered (Y/N)

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 START DATE	COLLECTED START TIME	COLLECTED END DATE	COLLECTED END TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test (Y/N): 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	BOD SM 5210B		Residual Chlorine (Y/N)	66170355
																															2(AGBU) 3(AGBS) 2(PBZN) BGBU PBP3S3-2 BGBN4.0
1	316-316	OT	G	05/31/14	0945 PM				14	10	4	1	0						X	X	X	X	X	X	X	X	X	X	X		5(OGBU) 01
2	TRIP BLANK								2	2															X						2(OGBU) 02
3																															
4																															
5																															
6																															METALS LIST total & LF Dis:
7																															Al,Sb,As,Be,Cd,Cr,
8																															Co,Cu,Fe,Pb,Ni,Se,Ag,Tl,Zn
9																															and Mercury
10																															
11																															
12																															

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

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
SITE CONTACT: BILL ABERNATHY 314-502-1299	FEDEX	6-2-14	9:00am	FEDEX	6-2-14	9:00am				
SITE ADDRESS: BRIDGETON LF					6/2/14	1320	2.6	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:	Paul Lindsay					
SIGNATURE of SAMPLER:	Paul Lindsay	DATE Signed: 05/31/14				