



Pace Analytical Services, Inc.
Not NELAP Accredited
4860 Blazer Parkway
Dublin, OH 43017
(614)486-5421

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA

Project: Bridgeton App II 4Q 2015

Pace Project No.: 50133416

QC Batch: WETA/19318 Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 Analysis Description: 365.1 Total Phosphorus
Associated Lab Samples: 50133416001, 50133416002, 50133416003, 50133416004, 50133416006, 50133416007, 50133416008, 50133416009, 50133416010, 50133416012, 50133416013, 50133416014

METHOD BLANK: 1445257 Matrix: Water
Associated Lab Samples: 50133416001, 50133416002, 50133416003, 50133416004, 50133416006, 50133416007, 50133416008, 50133416009, 50133416010, 50133416012, 50133416013, 50133416014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	12/16/15 10:50	

LABORATORY CONTROL SAMPLE: 1445258

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	.5	0.50	100	90-110	

MATRIX SPIKE SAMPLE: 1445261

Parameter	Units	50133633003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	3.7	.5	4.4	121	90-110	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1445874 1445875

Parameter	Units	50133416002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Phosphorus	mg/L	ND	.5	.5	0.49	0.51	98	101	90-110	3 20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Bridgeton App II 4Q 2015
Pace Project No.: 50133416

QC Batch: WETA/19319 Analysis Method: EPA 365.1
QC Batch Method: EPA 365.1 Analysis Description: 365.1 Total Phosphorus
Associated Lab Samples: 50133416016, 50133416017, 50133416018, 50133416019

METHOD BLANK: 1445269 Matrix: Water
Associated Lab Samples: 50133416016, 50133416017, 50133416018, 50133416019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phosphorus	mg/L	ND	0.050	12/16/15 11:07	

LABORATORY CONTROL SAMPLE: 1445270

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	.5	0.48	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1445271 1445272

Parameter	Units	50133633004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Phosphorus	mg/L	1.5	.5	.5	2.1	2.0	112	96	90-110	4 20 MO	

MATRIX SPIKE SAMPLE: 1445273

Parameter	Units	50134298002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phosphorus	mg/L	ND	.5	0.48	95	90-110	

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QUALITY CONTROL DATA

Project: Bridgeton App II 4Q 2015
Pace Project No.: 50133416

QC Batch: WETA/19155 Analysis Method: SM 4500-NH3 G
QC Batch Method: SM 4500-NH3 G Analysis Description: 4500 Ammonia
Associated Lab Samples: 50133416001, 50133416002, 50133416003, 50133416004, 50133416009, 50133416010, 50133416012, 50133416013, 50133416014

METHOD BLANK: 1437911 Matrix: Water
Associated Lab Samples: 50133416001, 50133416002, 50133416003, 50133416004, 50133416009, 50133416010, 50133416012, 50133416013, 50133416014

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	12/04/15 10:33	

LABORATORY CONTROL SAMPLE: 1437912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1437930 1437931

Parameter	Units	50133416001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Nitrogen, Ammonia	mg/L	ND	1	1	0.99	1.0	95	97	90-110	2	20

MATRIX SPIKE SAMPLE: 1438051

Parameter	Units	50133416014 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	ND	1	1.0	98	90-110	

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Page 201 of 265



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QUALITY CONTROL DATA

Project: Bridgeton App II 4Q 2015
Pace Project No.: 50133416

QC Batch: WETA/19208 Analysis Method: SM 4500-NH3 G
QC Batch Method: SM 4500-NH3 G Analysis Description: 4500 Ammonia
Associated Lab Samples: 50133416017, 50133416018, 50133416019

METHOD BLANK: 1440049 Matrix: Water
Associated Lab Samples: 50133416017, 50133416018, 50133416019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	12/08/15 09:09	

LABORATORY CONTROL SAMPLE: 1440050

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1440051 1440052

Parameter	Units	50133772001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
Nitrogen, Ammonia	mg/L	ND	1	1	1.0	1.1	99	104	90-110	5	20	

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QUALITY CONTROL DATA

Project: Bridgeton App II 4Q 2015
Pace Project No.: 50133416

QC Batch: WETA/19194 Analysis Method: SM 4500-NH3 G
QC Batch Method: SM 4500-NH3 B Analysis Description: 4500 Ammonia, Distilled
Associated Lab Samples: 50133416006, 50133416007, 50133416008

METHOD BLANK: 1439736 Matrix: Water
Associated Lab Samples: 50133416006, 50133416007, 50133416008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	12/08/15 09:57	

LABORATORY CONTROL SAMPLE: 1439737

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1.7	1.7	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1439738 1439739

Parameter	Units	50133601001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Nitrogen, Ammonia	mg/L	12.4	1.7	1.7	14.0	13.8	98	83	90-110	2	20 E,P6

MATRIX SPIKE SAMPLE: 1439740

Parameter	Units	50133633004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	2.5	1.7	4.1	98	90-110	

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Page 203 of 265



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QUALITY CONTROL DATA

Project: Bridgeton App II 4Q 2015

Pace Project No.: 50133416

QC Batch:	WETA/19304	Analysis Method:	SM 4500-NH3 G
QC Batch Method:	SM 4500-NH3 B	Analysis Description:	4500 Ammonia, Distilled
Associated Lab Samples:	50133416016		

METHOD BLANK: 1444747 Matrix: Water
Associated Lab Samples: 50133416016

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	ND	0.10	12/15/15 11:29	

LABORATORY CONTROL SAMPLE: 1444748

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1.7	1.6	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1444749 1444750

Parameter	Units	50134211004		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Nitrogen, Ammonia	mg/L	1.6	1.7	1.7	1.7	3.3	3.2	97	94	90-110	2	20		

MATRIX SPIKE SAMPLE: 1444751

Parameter	Units	50134376001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	0.52	1.7	2.2	100	90-110	

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QUALITY CONTROL DATA

Project: Bridgeton App II 4Q 2015

Pace Project No.: 50133416

QC Batch: WETA/19242 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 50133416001, 50133416002, 50133416003, 50133416004, 50133416006, 50133416007, 50133416008, 50133416009, 50133416010, 50133416012, 50133416013

METHOD BLANK: 1441146 Matrix: Water
Associated Lab Samples: 50133416001, 50133416002, 50133416003, 50133416004, 50133416006, 50133416007, 50133416008, 50133416009, 50133416010, 50133416012, 50133416013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	12/10/15 12:11	

LABORATORY CONTROL SAMPLE: 1441147

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	10.2	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1441148 1441149

Parameter	Units	50133519001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Total Organic Carbon	mg/L	1.2	10	10	11.0	10.9	98	97	80-120	1	20

MATRIX SPIKE SAMPLE: 1441150

Parameter	Units	50133519006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	19.1	100	121	102	80-120	

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Page 205 of 265



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QUALITY CONTROL DATA

Project: Bridgeton App II 4Q 2015
Pace Project No.: 50133416

QC Batch: WETA/19259 Analysis Method: SM 5310C
QC Batch Method: SM 5310C Analysis Description: 5310C Total Organic Carbon
Associated Lab Samples: 50133416014, 50133416016, 50133416017, 50133416018, 50133416019

METHOD BLANK: 1442095 Matrix: Water
Associated Lab Samples: 50133416014, 50133416016, 50133416017, 50133416018, 50133416019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	ND	1.0	12/11/15 11:15	

LABORATORY CONTROL SAMPLE: 1442096

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	10.6	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1442097 1442098

Parameter	Units	50134094006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Total Organic Carbon	mg/L	1.4	10	10	11.8	11.7	104	103	80-120	0	20

MATRIX SPIKE SAMPLE: 1442099

Parameter	Units	50134121003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	ND	20	21.1	101	80-120	5d

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QUALITY CONTROL DATA

Project: Bridgeton App II 4Q 2015

Pace Project No.: 50133416

QC Batch: WETA/19254

Analysis Method: EPA 9012

QC Batch Method: EPA 9012

Analysis Description: 9012 Cyanide, Total

Associated Lab Samples: 50133416001, 50133416003, 50133416004, 50133416006, 50133416007, 50133416008, 50133416009, 50133416010, 50133416012, 50133416013, 50133416014, 50133416016, 50133416017, 50133416018, 50133416019

METHOD BLANK: 1441938

Matrix: Water

Associated Lab Samples: 50133416001, 50133416003, 50133416004, 50133416006, 50133416007, 50133416008, 50133416009, 50133416010, 50133416012, 50133416013, 50133416014, 50133416016, 50133416017, 50133416018, 50133416019

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0050	12/11/15 11:18	

LABORATORY CONTROL SAMPLE: 1441939

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.10	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1441940 1441941

Parameter	Units	50133416001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Cyanide	mg/L	0.0055	.1	.1	0.086	0.096	81	91	90-110	11 20	M0

MATRIX SPIKE SAMPLE: 1441942

Parameter	Units	50133416019 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	ND	.1	0.094	94	90-110	

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QUALITY CONTROL DATA

Project: Bridgeton App II 4Q 2015
Pace Project No.: 50133416

QC Batch: WETA/19287 Analysis Method: EPA 9012
QC Batch Method: EPA 9012 Analysis Description: 9012 Cyanide, Total
Associated Lab Samples: 50133416002

METHOD BLANK: 1444452 Matrix: Water
Associated Lab Samples: 50133416002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cyanide	mg/L	ND	0.0050	12/14/15 12:55	

LABORATORY CONTROL SAMPLE: 1444453

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cyanide	mg/L	.1	0.10	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1444454 1444455

Parameter	Units	50134401002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
Cyanide	mg/L	ND	.1	.1	0.098	0.099	98	98	90-110	1	20

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QUALIFIERS

Project: Bridgeton App II 4Q 2015
Pace Project No.: 50133416

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above adjusted reporting limit.
J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
MDL - Adjusted Method Detection Limit.
PQL - Practical Quantitation Limit.
RL - Reporting Limit.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

BATCH QUALIFIERS

Batch: OEXT/41681
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: OEXT/41686
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: MSSV/19685
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: GCSV/17702
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: OEXT/41697
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: OEXT/41712
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: OEXT/41725
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: GCSV/17734
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: OEXT/41739
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.
Batch: OEXT/41757
[M5] A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

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QUALIFIERS

Project: Bridgeton App II 4Q 2015
Pace Project No.: 50133416

BATCH QUALIFIERS

Batch: OEXT/41758

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

Batch: GCSV/17769

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

Batch: GCSV/17770

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

ANALYTE QUALIFIERS

- 1d Sample was analyzed at dilution due to chromatographic interference from target and non-target analytes.
- 2d Surrogate recovery outside laboratory control limits due to matrix interferences; confirmed by similar results from analysis of an in-hold re-extract sample on 12/09/15 at 11:16 on 50GCS8.
- 3d Surrogate recovery outside laboratory control limits due to matrix interferences; confirmed by similar results from analysis of an in-hold re-extract sample on 12/09/15 at 11:24 on 50GCS8.
- 4d Surrogate recovery outside laboratory control limits due to matrix interferences; confirmed by similar results from analysis of an in-hold re-extract sample on 12/09/15 at 11:32 on 50GCS8.
- 5d The spike max integrated. The reported result is estimated.
- B Analyte was detected in the associated method blank.
- D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- D4 Sample was diluted due to the presence of high levels of target analytes.
- E Analyte concentration exceeded the calibration range. The reported result is estimated.
- F1 The sample was analyzed at a dilution due to foaming of the sample in the purge vessel.
- H3 Sample was received or analysis requested beyond the recognized method holding time.
- HS Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
- L3 Analyte recovery in the laboratory control sample (LCS) exceeded QC limits. Analyte presence below reporting limits in associated samples. Results unaffected by high bias.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
- N2 The lab does not hold TNI accreditation for this parameter.
- P1 Routine initial sample volume or weight was not used for extraction, resulting in elevated reporting limits.
- P3 Sample extract could not be concentrated to the routine final volume, resulting in elevated reporting limits.
- P6 Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
- P8 Analyte was detected in the method blank. All associated samples had concentrations of at least ten times greater than the blank or were below the reporting limit.
- R1 RPD value was outside control limits.
- S4 Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Bridgeton App II 4Q 2015
Pace Project No.: 50133416

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50133416001	PZ-109-SS		FLD/1768		
50133416003	PZ-110-SS		FLD/1768		
50133416004	PZ-116-SS		FLD/1768		
50133416006	LCS-5A		FLD/1768		
50133416008	LCS-3D		FLD/1768		
50133416009	PZ-211-SD		FLD/1768		
50133416010	PZ-211-SS		FLD/1768		
50133416012	PZ-209-SD		FLD/1768		
50133416013	PZ-111-SD		FLD/1768		
50133416014	PZ-209-SS		FLD/1768		
50133416016	LCS-4B		FLD/1768		
50133416017	PZ-212-SD		FLD/1768		
50133416018	PZ-212-SS		FLD/1768		
50133416019	PZ-205-SS		FLD/1768		
50133416001	PZ-109-SS	EPA 300.0	GCSV/17717		
50133416002	FB-01	EPA 300.0	GCSV/17717		
50133416003	PZ-110-SS	EPA 300.0	GCSV/17717		
50133416004	PZ-116-SS	EPA 300.0	GCSV/17717		
50133416006	LCS-5A	EPA 300.0	GCSV/17717		
50133416007	LCS-5A-D	EPA 300.0	GCSV/17717		
50133416008	LCS-3D	EPA 300.0	GCSV/17717		
50133416009	PZ-211-SD	EPA 300.0	GCSV/17717		
50133416010	PZ-211-SS	EPA 300.0	GCSV/17717		
50133416012	PZ-209-SD	EPA 300.0	GCSV/17753		
50133416013	PZ-111-SD	EPA 300.0	GCSV/17753		
50133416014	PZ-209-SS	EPA 300.0	GCSV/17753		
50133416016	LCS-4B	EPA 300.0	GCSV/17753		
50133416017	PZ-212-SD	EPA 300.0	GCSV/17753		
50133416018	PZ-212-SS	EPA 300.0	GCSV/17753		
50133416019	PZ-205-SS	EPA 300.0	GCSV/17753		
50133416001	PZ-109-SS	EPA 3510	OEXT/41686	EPA 8081	GCSV/17702
50133416002	FB-01	EPA 3510	OEXT/41686	EPA 8081	GCSV/17702
50133416003	PZ-110-SS	EPA 3510	OEXT/41686	EPA 8081	GCSV/17702
50133416004	PZ-116-SS	EPA 3510	OEXT/41686	EPA 8081	GCSV/17702
50133416006	LCS-5A	EPA 3510	OEXT/41712	EPA 8081	GCSV/17734
50133416007	LCS-5A-D	EPA 3510	OEXT/41712	EPA 8081	GCSV/17734
50133416008	LCS-3D	EPA 3510	OEXT/41712	EPA 8081	GCSV/17734
50133416009	PZ-211-SD	EPA 3510	OEXT/41712	EPA 8081	GCSV/17734
50133416010	PZ-211-SS	EPA 3510	OEXT/41712	EPA 8081	GCSV/17734
50133416012	PZ-209-SD	EPA 3510	OEXT/41712	EPA 8081	GCSV/17734
50133416013	PZ-111-SD	EPA 3510	OEXT/41712	EPA 8081	GCSV/17734
50133416014	PZ-209-SS	EPA 3510	OEXT/41712	EPA 8081	GCSV/17734
50133416016	LCS-4B	EPA 3510	OEXT/41758	EPA 8081	GCSV/17770
50133416017	PZ-212-SD	EPA 3510	OEXT/41758	EPA 8081	GCSV/17770
50133416018	PZ-212-SS	EPA 3510	OEXT/41758	EPA 8081	GCSV/17770
50133416019	PZ-205-SS	EPA 3510	OEXT/41758	EPA 8081	GCSV/17770

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Bridgeton App II 4Q 2015
Pace Project No.: 50133416

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50133416001	PZ-109-SS	EPA 3510	OEXT/41685	EPA 8082	GCSV/17701
50133416002	FB-01	EPA 3510	OEXT/41685	EPA 8082	GCSV/17701
50133416003	PZ-110-SS	EPA 3510	OEXT/41685	EPA 8082	GCSV/17701
50133416004	PZ-116-SS	EPA 3510	OEXT/41685	EPA 8082	GCSV/17701
50133416006	LCS-5A	EPA 3510	OEXT/41711	EPA 8082	GCSV/17733
50133416007	LCS-5A-D	EPA 3510	OEXT/41711	EPA 8082	GCSV/17733
50133416008	LCS-3D	EPA 3510	OEXT/41711	EPA 8082	GCSV/17733
50133416009	PZ-211-SD	EPA 3510	OEXT/41711	EPA 8082	GCSV/17733
50133416010	PZ-211-SS	EPA 3510	OEXT/41711	EPA 8082	GCSV/17733
50133416012	PZ-209-SD	EPA 3510	OEXT/41711	EPA 8082	GCSV/17733
50133416013	PZ-111-SD	EPA 3510	OEXT/41711	EPA 8082	GCSV/17733
50133416014	PZ-209-SS	EPA 3510	OEXT/41711	EPA 8082	GCSV/17733
50133416016	LCS-4B	EPA 3510	OEXT/41757	EPA 8082	GCSV/17769
50133416017	PZ-212-SD	EPA 3510	OEXT/41757	EPA 8082	GCSV/17769
50133416018	PZ-212-SS	EPA 3510	OEXT/41757	EPA 8082	GCSV/17769
50133416019	PZ-205-SS	EPA 3510	OEXT/41757	EPA 8082	GCSV/17769
50133416001	PZ-109-SS	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416002	FB-01	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416003	PZ-110-SS	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416004	PZ-116-SS	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416006	LCS-5A	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416007	LCS-5A-D	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416008	LCS-3D	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416009	PZ-211-SD	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416010	PZ-211-SS	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416012	PZ-209-SD	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416013	PZ-111-SD	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416014	PZ-209-SS	EPA 8151	OEXT/41697	EPA 8151	GCSV/17737
50133416016	LCS-4B	EPA 8151	OEXT/41778	EPA 8151	GCSV/17815
50133416017	PZ-212-SD	EPA 8151	OEXT/41778	EPA 8151	GCSV/17815
50133416018	PZ-212-SS	EPA 8151	OEXT/41778	EPA 8151	GCSV/17815
50133416019	PZ-205-SS	EPA 8151	OEXT/41778	EPA 8151	GCSV/17815
50133416001	PZ-109-SS	EPA 3010	MPRP/18940	EPA 6010	ICP/23131
50133416002	FB-01	EPA 3010	MPRP/18940	EPA 6010	ICP/23131
50133416003	PZ-110-SS	EPA 3010	MPRP/18940	EPA 6010	ICP/23131
50133416004	PZ-116-SS	EPA 3010	MPRP/18940	EPA 6010	ICP/23131
50133416006	LCS-5A	EPA 3010	MPRP/18985	EPA 6010	ICP/23149
50133416007	LCS-5A-D	EPA 3010	MPRP/18985	EPA 6010	ICP/23149
50133416008	LCS-3D	EPA 3010	MPRP/18985	EPA 6010	ICP/23149
50133416009	PZ-211-SD	EPA 3010	MPRP/18985	EPA 6010	ICP/23149
50133416009	PZ-211-SD	EPA 3010	MPRP/19089	EPA 6010	ICP/23170
50133416010	PZ-211-SS	EPA 3010	MPRP/18985	EPA 6010	ICP/23149
50133416010	PZ-211-SS	EPA 3010	MPRP/19089	EPA 6010	ICP/23170
50133416012	PZ-209-SD	EPA 3010	MPRP/18985	EPA 6010	ICP/23149

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Bridgeton App II 4Q 2015

Pace Project No.: 50133416

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50133416012	PZ-209-SD	EPA 3010	MPRP/19089	EPA 6010	ICP/23170
50133416013	PZ-111-SD	EPA 3010	MPRP/18985	EPA 6010	ICP/23149
50133416014	PZ-209-SS	EPA 3010	MPRP/18985	EPA 6010	ICP/23149
50133416014	PZ-209-SS	EPA 3010	MPRP/19089	EPA 6010	ICP/23170
50133416016	LCS-4B	EPA 3010	MPRP/19057	EPA 6010	ICP/23212
50133416017	PZ-212-SD	EPA 3010	MPRP/19057	EPA 6010	ICP/23212
50133416018	PZ-212-SS	EPA 3010	MPRP/19057	EPA 6010	ICP/23212
50133416019	PZ-205-SS	EPA 3010	MPRP/19057	EPA 6010	ICP/23212
50133416001	PZ-109-SS	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416002	FB-01	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416003	PZ-110-SS	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416004	PZ-116-SS	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416006	LCS-5A	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416007	LCS-5A-D	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416008	LCS-3D	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416009	PZ-211-SD	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416010	PZ-211-SS	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416012	PZ-209-SD	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416013	PZ-111-SD	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416014	PZ-209-SS	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416016	LCS-4B	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416017	PZ-212-SD	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416018	PZ-212-SS	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416019	PZ-205-SS	EPA 200.2	MPRP/19406	EPA 6020	ICPM/2608
50133416001	PZ-109-SS	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416002	FB-01	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416003	PZ-110-SS	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416004	PZ-116-SS	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416006	LCS-5A	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416007	LCS-5A-D	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416008	LCS-3D	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416009	PZ-211-SD	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416010	PZ-211-SS	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416012	PZ-209-SD	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416013	PZ-111-SD	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416014	PZ-209-SS	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416016	LCS-4B	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416017	PZ-212-SD	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416018	PZ-212-SS	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416019	PZ-205-SS	EPA 7470	MERP/7232	EPA 7470	MERC/8540
50133416001	PZ-109-SS	EPA 3510	OEXT/41681	EPA 8270	MSSV/19685
50133416002	FB-01	EPA 3510	OEXT/41681	EPA 8270	MSSV/19685
50133416003	PZ-110-SS	EPA 3510	OEXT/41681	EPA 8270	MSSV/19685
50133416004	PZ-116-SS	EPA 3510	OEXT/41681	EPA 8270	MSSV/19685
50133416006	LCS-5A	EPA 3510	OEXT/41725	EPA 8270	MSSV/19759

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Bridgeton App II 4Q 2015

Pace Project No.: 50133416

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50133416007	LCS-5A-D	EPA 3510	OEXT/41725	EPA 8270	MSSV/19759
50133416008	LCS-3D	EPA 3510	OEXT/41725	EPA 8270	MSSV/19759
50133416009	PZ-211-SD	EPA 3510	OEXT/41725	EPA 8270	MSSV/19759
50133416010	PZ-211-SS	EPA 3510	OEXT/41725	EPA 8270	MSSV/19759
50133416012	PZ-209-SD	EPA 3510	OEXT/41725	EPA 8270	MSSV/19759
50133416013	PZ-111-SD	EPA 3510	OEXT/41725	EPA 8270	MSSV/19759
50133416014	PZ-209-SS	EPA 3510	OEXT/41725	EPA 8270	MSSV/19759
50133416016	LCS-4B	EPA 3510	OEXT/41739	EPA 8270	MSSV/19758
50133416017	PZ-212-SD	EPA 3510	OEXT/41739	EPA 8270	MSSV/19758
50133416018	PZ-212-SS	EPA 3510	OEXT/41739	EPA 8270	MSSV/19758
50133416019	PZ-205-SS	EPA 3510	OEXT/41739	EPA 8270	MSSV/19758
50133416001	PZ-109-SS	EPA 8260	MSV/84467		
50133416002	FB-01	EPA 8260	MSV/84467		
50133416003	PZ-110-SS	EPA 8260	MSV/84591		
50133416004	PZ-116-SS	EPA 8260	MSV/84591		
50133416005	TB-07	EPA 8260	MSV/84591		
50133416006	LCS-5A	EPA 8260	MSV/84597		
50133416007	LCS-5A-D	EPA 8260	MSV/84597		
50133416008	LCS-3D	EPA 8260	MSV/84467		
50133416009	PZ-211-SD	EPA 8260	MSV/84591		
50133416010	PZ-211-SS	EPA 8260	MSV/84467		
50133416011	TB-08	EPA 8260	MSV/84467		
50133416012	PZ-209-SD	EPA 8260	MSV/84746		
50133416013	PZ-111-SD	EPA 8260	MSV/84746		
50133416014	PZ-209-SS	EPA 8260	MSV/84739		
50133416015	TB-09	EPA 8260	MSV/84739		
50133416016	LCS-4B	EPA 8260	MSV/84739		
50133416017	PZ-212-SD	EPA 8260	MSV/84746		
50133416018	PZ-212-SS	EPA 8260	MSV/84746		
50133416019	PZ-205-SS	EPA 8260	MSV/84746		
50133416020	TB-10	EPA 8260	MSV/84746		
50133416016	LCS-4B	SM 2510B	WET/26106		
50133416001	PZ-109-SS	SM 2540C	WET/25994		
50133416002	FB-01	SM 2540C	WET/25994		
50133416003	PZ-110-SS	SM 2540C	WET/25994		
50133416004	PZ-116-SS	SM 2540C	WET/25994		
50133416006	LCS-5A	SM 2540C	WET/26034		
50133416007	LCS-5A-D	SM 2540C	WET/26034		
50133416008	LCS-3D	SM 2540C	WET/26034		
50133416009	PZ-211-SD	SM 2540C	WET/26034		
50133416010	PZ-211-SS	SM 2540C	WET/26034		
50133416012	PZ-209-SD	SM 2540C	WET/26058		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Bridgeton App II 4Q 2015

Pace Project No.: 50133416

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50133416013	PZ-111-SD	SM 2540C	WET/26058		
50133416014	PZ-209-SS	SM 2540C	WET/26058		
50133416016	LCS-4B	SM 2540C	WET/26058		
50133416017	PZ-212-SD	SM 2540C	WET/26058		
50133416018	PZ-212-SS	SM 2540C	WET/26058		
50133416019	PZ-205-SS	SM 2540C	WET/26058		
50133416001	PZ-109-SS	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416002	FB-01	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416003	PZ-110-SS	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416004	PZ-116-SS	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416006	LCS-5A	EPA 410.4	WET/26099	EPA 410.4	WET/26116
50133416007	LCS-5A-D	EPA 410.4	WET/26099	EPA 410.4	WET/26116
50133416008	LCS-3D	EPA 410.4	WET/26099	EPA 410.4	WET/26116
50133416009	PZ-211-SD	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416010	PZ-211-SS	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416012	PZ-209-SD	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416013	PZ-111-SD	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416014	PZ-209-SS	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416016	LCS-4B	EPA 410.4	WET/26099	EPA 410.4	WET/26116
50133416017	PZ-212-SD	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416018	PZ-212-SS	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416019	PZ-205-SS	EPA 410.4	WET/26104	EPA 410.4	WET/26118
50133416016	LCS-4B	SM 4500-H+B	WET/26059		
50133416001	PZ-109-SS	SM 4500-S2-D	WET/25987		
50133416002	FB-01	SM 4500-S2-D	WET/25987		
50133416003	PZ-110-SS	SM 4500-S2-D	WET/25987		
50133416004	PZ-116-SS	SM 4500-S2-D	WET/25987		
50133416006	LCS-5A	SM 4500-S2-D	WET/25987		
50133416007	LCS-5A-D	SM 4500-S2-D	WET/25987		
50133416008	LCS-3D	SM 4500-S2-D	WET/25987		
50133416009	PZ-211-SD	SM 4500-S2-D	WET/25987		
50133416010	PZ-211-SS	SM 4500-S2-D	WET/25987		
50133416012	PZ-209-SD	SM 4500-S2-D	WET/26050		
50133416013	PZ-111-SD	SM 4500-S2-D	WET/26050		
50133416014	PZ-209-SS	SM 4500-S2-D	WET/26050		
50133416016	LCS-4B	SM 4500-S2-D	WET/26050		
50133416017	PZ-212-SD	SM 4500-S2-D	WET/26050		
50133416018	PZ-212-SS	SM 4500-S2-D	WET/26050		
50133416019	PZ-205-SS	SM 4500-S2-D	WET/26050		
50133416001	PZ-109-SS	EPA 353.2	WETA/19282		
50133416002	FB-01	EPA 353.2	WETA/19282		
50133416003	PZ-110-SS	EPA 353.2	WETA/19282		
50133416004	PZ-116-SS	EPA 353.2	WETA/19282		
50133416006	LCS-5A	EPA 353.2	WETA/19282		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Bridgeton App II 4Q 2015

Pace Project No.: 50133416

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50133416007	LCS-5A-D	EPA 353.2	WETA/19282		
50133416008	LCS-3D	EPA 353.2	WETA/19282		
50133416009	PZ-211-SD	EPA 353.2	WETA/19282		
50133416010	PZ-211-SS	EPA 353.2	WETA/19282		
50133416012	PZ-209-SD	EPA 353.2	WETA/19282		
50133416013	PZ-111-SD	EPA 353.2	WETA/19282		
50133416014	PZ-209-SS	EPA 353.2	WETA/19282		
50133416016	LCS-4B	EPA 353.2	WETA/19282		
50133416017	PZ-212-SD	EPA 353.2	WETA/19282		
50133416018	PZ-212-SS	EPA 353.2	WETA/19282		
50133416019	PZ-205-SS	EPA 353.2	WETA/19282		
50133416001	PZ-109-SS	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416002	FB-01	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416003	PZ-110-SS	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416004	PZ-116-SS	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416006	LCS-5A	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416007	LCS-5A-D	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416008	LCS-3D	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416009	PZ-211-SD	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416010	PZ-211-SS	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416012	PZ-209-SD	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416013	PZ-111-SD	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416014	PZ-209-SS	EPA 365.1	WETA/19318	EPA 365.1	WETA/19335
50133416016	LCS-4B	EPA 365.1	WETA/19319	EPA 365.1	WETA/19336
50133416017	PZ-212-SD	EPA 365.1	WETA/19319	EPA 365.1	WETA/19336
50133416018	PZ-212-SS	EPA 365.1	WETA/19319	EPA 365.1	WETA/19336
50133416019	PZ-205-SS	EPA 365.1	WETA/19319	EPA 365.1	WETA/19336
50133416001	PZ-109-SS	SM 4500-NH3 G	WETA/19155		
50133416002	FB-01	SM 4500-NH3 G	WETA/19155		
50133416003	PZ-110-SS	SM 4500-NH3 G	WETA/19155		
50133416004	PZ-116-SS	SM 4500-NH3 G	WETA/19155		
50133416009	PZ-211-SD	SM 4500-NH3 G	WETA/19155		
50133416010	PZ-211-SS	SM 4500-NH3 G	WETA/19155		
50133416012	PZ-209-SD	SM 4500-NH3 G	WETA/19155		
50133416013	PZ-111-SD	SM 4500-NH3 G	WETA/19155		
50133416014	PZ-209-SS	SM 4500-NH3 G	WETA/19155		
50133416017	PZ-212-SD	SM 4500-NH3 G	WETA/19208		
50133416018	PZ-212-SS	SM 4500-NH3 G	WETA/19208		
50133416019	PZ-205-SS	SM 4500-NH3 G	WETA/19208		
50133416006	LCS-5A	SM 4500-NH3 B	WETA/19194	SM 4500-NH3 G	WETA/19212
50133416007	LCS-5A-D	SM 4500-NH3 B	WETA/19194	SM 4500-NH3 G	WETA/19212
50133416008	LCS-3D	SM 4500-NH3 B	WETA/19194	SM 4500-NH3 G	WETA/19212
50133416016	LCS-4B	SM 4500-NH3 B	WETA/19304	SM 4500-NH3 G	WETA/19327
50133416001	PZ-109-SS	SM 5310C	WETA/19242		
50133416002	FB-01	SM 5310C	WETA/19242		

REPORT OF LABORATORY ANALYSIS

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Pace Analytical Services, Inc.
Not NELAP Accredited
4860 Blazer Parkway
Dublin, OH 43017
(614)486-5421

Pace Analytical Services, Inc.
7726 Moller Road
Indianapolis, IN 46268
(317)228-3100

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Bridgeton App II 4Q 2015

Pace Project No.: 50133416

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
50133416003	PZ-110-SS	SM 5310C	WETA/19242		
50133416004	PZ-116-SS	SM 5310C	WETA/19242		
50133416006	LCS-5A	SM 5310C	WETA/19242		
50133416007	LCS-5A-D	SM 5310C	WETA/19242		
50133416008	LCS-3D	SM 5310C	WETA/19242		
50133416009	PZ-211-SD	SM 5310C	WETA/19242		
50133416010	PZ-211-SS	SM 5310C	WETA/19242		
50133416012	PZ-209-SD	SM 5310C	WETA/19242		
50133416013	PZ-111-SD	SM 5310C	WETA/19242		
50133416014	PZ-209-SS	SM 5310C	WETA/19259		
50133416016	LCS-4B	SM 5310C	WETA/19259		
50133416017	PZ-212-SD	SM 5310C	WETA/19259		
50133416018	PZ-212-SS	SM 5310C	WETA/19259		
50133416019	PZ-205-SS	SM 5310C	WETA/19259		
50133416001	PZ-109-SS	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416002	FB-01	EPA 9012	WETA/19287	EPA 9012	WETA/19302
50133416003	PZ-110-SS	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416004	PZ-116-SS	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416006	LCS-5A	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416007	LCS-5A-D	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416008	LCS-3D	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416009	PZ-211-SD	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416010	PZ-211-SS	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416012	PZ-209-SD	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416013	PZ-111-SD	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416014	PZ-209-SS	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416016	LCS-4B	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416017	PZ-212-SD	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416018	PZ-212-SS	EPA 9012	WETA/19254	EPA 9012	WETA/19270
50133416019	PZ-205-SS	EPA 9012	WETA/19254	EPA 9012	WETA/19270

REPORT OF LABORATORY ANALYSIS

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company:	Republic Services - Missouri Landfills	Report To:	Jon Wilkerson	Attention:	
Address:	4631 North St. Peters Parkway	Copy To:		Company Name:	
City:	St. Charles, MO 63304			Address:	
Email:	wilkerson@hershassociates.com	Purchase Order #:		Pace Quote:	
Phone:	(636) 578-8635	Project Name:	Bridgeton App II 4Q 2015	Pace Project Manager:	chrissy.boyce@pacelabs.com
Requested Due Date:		Project #:		Pace Profile #:	4762 see PM for the items

Page: 1 Of 1

ITEM #	MATRIX ID One Character per box. (A-Z, 0-9 / -) 00 Sample IDs must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							ANALYSES TEST	Y/N	Residual Chlorine (Y/N)	50133416																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
				START	END							Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol					Other	Cl, F, SO4, TDS, Phosphoru	TOC, NH3, NO3/NO2, COB	Cyanide	Sulfide by SM4500-S2-D	Metals, Mercury	8280 volatiles	8270 Semivolatiles	Pesticides 8081	PCBs by 8082	Herbicides by 8151																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
1	P2-109-SS		G			11/30/15	0923				15	8	1	1	3	1							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	CABLE COMMENTS
	David [Signature]	11/30/15	1700	10 FedEx	11/30/15	1700	1.3
				FedEx			1.1
				8082 4919 6786			0.7
	FedEx			[Signature]	12/1/15	0803	1.0
SAMPLER NAME AND SIGNATURE							
PRINT Name of SAMPLER		[Signature]					
SIGNATURE of SAMPLER		[Signature]					
DATE Signed:		11/30/15					
Samples (V/N)		Received on 1					
Sealed (V/N)		7					
Coolant (V/N)		7					
Custody (V/N)		7					
Samples (V/N)		7					

Page 218 of 265

Sample Condition Upon Receipt

Pace Analytical

Client Name: Bridgeton

Project # 50133416

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 9082 499 6796

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Date/Time 5035A kits placed in freezer

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer 1 2 3 4 5 6 A B C D E F

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

Cooler Temperature 1.3, 1.1, 0.7, 1.0 / 1.3, 1.1, 0.7, 1.0 - Ice Visible in Sample Containers: ☐ yes ☒ no
(Initial/Corrected)

Temp should be above freezing to 6°C

Comments:

Date and initials of person examining contents: 12/1/15

Are samples from West Virginia?	☐ Yes ☒ No	1.
Document any containers out of temp.		
Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	3.
Chain of Custody Relinquished:	☐ Yes ☐ No ☐ N/A	4.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	5.
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No ☐ N/A	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No ☐ N/A	7.
Containers Intact:	☒ Yes ☐ No ☐ N/A	8.
Sample Labels match COC:	☒ Yes ☐ No ☐ N/A	9.
-Includes date/time/ID/Analysis		
All containers needing acid/base pres. have been checked? exceptions: VOA, coliform, TOC, O&G	☒ Yes ☐ No ☐ N/A	10. (Circle) <u>HNO3</u> H2SO4 <u>NaOH</u> <u>NaOH/ZnAc</u>
All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.		
Residual Chlorine Check (SVOC 625 Pest/PCB 608)		11. Present Absent
Residual Chlorine Check (Total/Amenable/Free Cyanide)		12. Present Absent
Headspace in VOA Vials (>6mm):	☒ Yes ☐ No ☐ N/A	13. <u>F3-01</u> <u>1/3</u>
Headspace Wisconsin Sulfide	☐ Yes ☐ No	14.
Trip Blank Present:	☒ Yes ☐ No ☐ N/A	15.
Trip Blank Custody Seals Present	☒ Yes ☐ No ☐ N/A	
Project Manager Review		
Samples Arrived within Hold Time:	☒ Yes ☐ No ☐ N/A	15.
Sufficient Volume:	☒ Yes ☐ No ☐ N/A	16.
Correct Containers Used:	☒ Yes ☐ No ☐ N/A	17.

Client Notification/ Resolution:

Field Data Required? Y / N.

Person Contacted: _____ Date/Time: _____

Comments/ Resolution:

Project Manager Review:

CCB

Date:

12-2-15

Sample Container Count

CLIENT: B. B. B. B.

COC PAGE of
COC ID#

Project # 50133416

Sample Line

Item	DG9H	AG1U	WGFU	AG0U	R	4/6	BP2N	BP2U	BP2S	BP3N	BP3U	BP3S	AG3S	AG1H	BP3C	BP1U	SP5T	AG2U	BP3Z	pH <2	pH >9	pH >12
1	3	6	2																			
2																						
3																						
4																						
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						

Container Codes

DG9H	40mL HCL amber vial	AG0U	100mL unpreserved amber glass	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 glass	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	SP5T	120mL Coliform Na Thiosulfate
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 glass	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber glass	AF	Air Filter	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 glass	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	WGFU	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

CHAIN-OF-CUSTODY / Analytical Request Document

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

50133416

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company:	Republic Services - Missouri Landfills	Report To:	Jon Wilkerson	Attention:	
Address:	4831 North St. Peters Parkway	Copy To:		Company Name:	
City:	St. Charles, MO 63304	Purchase Order #:		Address:	
Email:	jwilkerson@harscoassociates.com	Project Name:	Bridgeton App II 4Q 2015	Place Order:	
Phone:	(836) 578-8635	Project #:		Place Project Manager:	chris.boyle@peacelabs.com
Requested Due Date:				Place Profile #:	4782 see PM for line items

ITEM #	MATRIX	CODE	COLLECTED		DATE	TIME	DATE	TIME	RECEIVED BY / APPLICATION	DATE	TIME	SUBMIT CONDITIONS	Received on	Temp in C	Temp in F	Sealed in	Cooling	Samples	Infected	
			START	END																
1	Waste Water	WWT			12/16/15	0840														
2	Waste Water	WWT			12/16/15	0840														
3	Waste Water	WWT			12/16/15	1000														
4	Waste Water	WWT			12/16/15	1100														
5	Waste Water	WWT			12/16/15	1430														
6	Waste Water	WWT			12/16/15	1430														
7	Waste Water	WWT			12/16/15	1430														
8	Waste Water	WWT			12/16/15	1430														
9	Waste Water	WWT			12/16/15	1430														
10	Waste Water	WWT			12/16/15	1430														
11	Waste Water	WWT			12/16/15	1430														
12	Waste Water	WWT			12/16/15	1430														

Sample Condition Upon Receipt

Face Analytical

Client Name: BANK OF AMERICA

Project # 50133416

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other

Tracking #: 8082 497 6800

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals Intact: ☒ yes ☐ no

Date/Time 5035A kits placed in freezer

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other

Thermometer 1 2 3 4 5 6 A B C D E F Type of Ice: Wet Blue None ☐ Samples on Ice, cooling process has begun

Cooler Temperature 1.1, 1.8, 2.4, 1.3, 1.3 / 1.1, 1.6, 2.4 Ice Visible in Sample Containers: ☐ yes ☒ no
(Initial/Corrected) 1.3, 1.3

Date and Initials of person examining contents: TR 12/2/15

Temp should be above freezing to 6°C

Comments:

Are samples from West Virginia?	☐ Yes ☒ No	1.
Document any containers out of temp.		
Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	3.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	4.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	5.
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No ☐ N/A	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No ☐ N/A	7.
Containers Intact:	☒ Yes ☐ No ☐ N/A	8.
Sample Labels match COC:	☒ Yes ☐ No ☐ N/A	9.
-Includes date/time/ID/Analysis		
All containers needing acid/base pres. have been checked?	☒ Yes ☐ No ☐ N/A	10.
exceptions: VOA, coliform, TOC, O&G		
All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.		
Residual Chlorine Check (SVOC 625 Pest/PCB 608)		11. Present Absent
Residual Chlorine Check (Total/Amenable/Free Cyanide)		12. Present Absent
Headspace in VOA Vials (>6mm):	☒ Yes ☐ No ☐ N/A	13. <u>LCS-5A 3/3, LCS-5D 3/3, LCS 3D 3/3</u>
Headspace Wisconsin Sulfide	☐ Yes ☐ No	14.
Trip Blank Present:	☒ Yes ☐ No ☐ N/A	15.
Trip Blank Custody Seals Present	☒ Yes ☐ No ☐ N/A	
Project Manager Review		
Samples Arrived within Hold Time:	☒ Yes ☐ No ☐ N/A	15.
Sufficient Volume:	☒ Yes ☐ No ☐ N/A	16.
Correct Containers Used:	☒ Yes ☐ No ☐ N/A	17.

(Circle) ENCLOSURE H2SO4 NaOH NaOH/ZnAc
LCS-5A pH 7-6
LCS-5D pH 7-6
LCS-3D pH 7-6

Field Data Required? Y / N.

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution:

Project Manager Review: CHB

Date: 12-4-15

Sample Container Count

CLIENT: Bacard

COC PAGE of
COC ID#

Project # 50133416

Sample Line Item	DG9H	AG1U	WG1U	AG0U	R	4/6	BP2N	BP2U	BP2S	BP3N	BP3U	BP3S	AG3S	AG1H	BP3C	BP1U	SP5T	AG2U	DG3H	BP3Z	pH <2	pH >9	pH >12
1			6								1	1	1							3	1		
2			1								1	1	1							1	1		
3			1								1	1	1							1	1		
4			3								1	1	1							1	1		
5			3								1	1	1							1	1		
6			3								1	1	1							1	1		
7																							
8																							
9																							
10																							
11																							
12																							

Container Codes

DG9H	40mL HCL amber vial	AG0U	100mL unpreserved amber glass	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
WG1U	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 glass	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	SP5T	120mL Coliform Na Thiosulfate
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 glass	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber glass	AF	Air Filter	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 glass	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	WGFU	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

ADDITIONAL COMMENTS	REQUISITIONED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
	Ward Hest		12/02/01	16:00			TO FedEx		12/02/01	16:00				
	Ward Hest						50824996811							
							Th. Auburn / PACS		12-3-05	10:00			3.6	Y
													3.3	Y
													0.8	Y

SAMPLER NAME AND SIGNATURE:

PRINT Name of SAMPLER: Ward Hest

SIGNATURE of SAMPLER: [Signature]

DATE Signed: 12/03/05

Page 224 of 265

Sample Condition Upon Receipt

Face Analytical

Client Name: Republic Services Project # 50133416

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 808249196811

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals intact: ☒ yes ☐ no

Date/Time 5035A kits placed in freezer

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer 123456 A B C D E F

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

Cooler Temperature 3.6 3.3 0.4
(Initial/Corrected)

Ice Visible in Sample Containers: ☐ yes ☒ no

Temp should be above freezing to 8°C

Comments:

Date and Initials of person examining contents: HS 12-8-15

Are samples from West Virginia?	☐ Yes ☒ No	1.
Document any containers out of temp.		
Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	3.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	4.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	5.
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No ☐ N/A	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No ☐ N/A	7.
Containers Intact:	☒ Yes ☐ No ☐ N/A	8.
Sample Labels match COC:	☒ Yes ☐ No ☐ N/A	9.
-Includes date/time/ID/Analysis		
All containers needing acid/base pres. have been checked?	☒ Yes ☐ No ☐ N/A	10
exceptions: VOA, coliform, TOC, O&G		(Circle) HNO3 H2SO4 NaOH NaOH/ZnAc
All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.		
Residual Chlorine Check (SVOC 625 Pest/PCB 608)		11. Present Absent
Residual Chlorine Check (Total/Amenable/Free Cyanide)		12. Present Absent
Headspace in VOA Vials (>6mm):	☐ Yes ☒ No ☐ N/A	13
Headspace Wisconsin Sulfide	☐ Yes ☐ No	14
Trip Blank Present:	☒ Yes ☐ No ☐ N/A	15
Trip Blank Custody Seals Present	☒ Yes ☐ No ☐ N/A	
Project Manager Review		
Samples Arrived within Hold Time:	☒ Yes ☐ No ☐ N/A	15.
Sufficient Volume:	☐ Yes ☐ No ☐ N/A	16.
Correct Containers Used:	☒ Yes ☐ No ☐ N/A	17.

Client Notification/ Resolution:

Field Data Required? Y / N.

Person Contacted: _____ Date/Time: _____

Comments/ Resolution:

Project Manager Review:

Chris

Date: 12-4-15

CLIENT: Republic Services

COC PAGE 1 of 1

Project # 50133416

Project #

Sample Line

$\text{pH} < 2$ $\text{pH} > 9$ $\text{pH} > 12$

DG9H AG1U WGFU AG0U R 4/6 BP2N BP2U BP3N BP3S AG3S AG1H BP3C BP1U SP5T AG2U

[illegible]

Container: Codes

DG9H	40mL HCL amber vial	AG0U	100mL unpreserved amber glass	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
WG9U	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 glass	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	SP5T	120mL Colliform Na Thiosulfate
BP2U	500mL unpreserved plastic	AG2S	500mL H2SO4 amber glass	BP2O	500mL NaOH plastic	JG9U	4oz unpreserved amber wide
BP2S	500mL H2SO4 plastic	AG2U	500mL unpreserved amber glass	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber glass	AF	Air Filter	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 glass	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

Sample Condition Upon Receipt

Pace Analytical

Client Name: Republic - Missouri Project # 5933416

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 8082 4919 6822

Custody Seal on Cooler/Box Present: ☒ yes ☐ no Seals Intact: ☒ yes ☐ no

Date/Time 5035A kits placed in freezer

Packing Material: ☐ Bubble Wrap ☒ Bubble Bags ☐ None ☐ Other _____

Thermometer 123456 ABCDEF

Type of Ice: Wet ☐ Blue ☐ None

☐ Samples on ice, cooling process has begun

Cooler Temperature 0.3°C/0.3°C, 0.5°C/0.5°C

Ice Visible in Sample Containers: ☐ yes ☒ no

(Initial/Corrected) 0.5°C/0.5°C, 0.6°C/0.6°C

Temp should be above freezing to 6°C

Comments:

Date and Initials of person examining contents: AT 12/4/15

Are samples from West Virginia?	☐ Yes ☒ No	1.
Document any containers out of temp.		
Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	2.
Chain of Custody Filled Out:	☒ Yes ☐ No ☐ N/A	3.
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	4.
Sampler Name & Signature on COC:	☒ Yes ☐ No ☐ N/A	5.
Short Hold Time Analysis (<72hr):	☐ Yes ☒ No ☐ N/A	6.
Rush Turn Around Time Requested:	☐ Yes ☒ No ☐ N/A	7.
Containers Intact:	☒ Yes ☐ No ☐ N/A	8.
Sample Labels match COC:	☒ Yes ☐ No ☐ N/A	9.
-Includes date/time/ID/Analysis		
All containers needing acid/base pres. have been checked?	☒ Yes ☐ No ☐ N/A	10. (Circle) <u>HNO3</u> <u>H2SO4</u> <u>NaOH</u> <u>NaOH/ZnAc</u>
exceptions: VOA, coliform, TOC, O&G		
All containers needing preservation are found to be in compliance with EPA recommendation (<2, >9, >12) unless otherwise noted.		
Residual Chlorine Check (SVOC 625 Pest/PCB 608)		11. Present Absent
Residual Chlorine Check (Total/Amenable/Free Cyanide)		12. Present <u>Absent</u>
Headspace in VOA Vials (>6mm):	☐ Yes ☒ No ☐ N/A	13.
Headspace Wisconsin Sulfide	☐ Yes ☐ No	14.
Trip Blank Present:	☒ Yes ☐ No ☐ N/A	15.
Trip Blank Custody Seals Present	☒ Yes ☐ No ☐ N/A	
Project Manager Review		
Samples Arrived within Hold Time:	☒ Yes ☐ No ☐ N/A	15.
Sufficient Volume:	☒ Yes ☐ No ☐ N/A	16.
Correct Containers Used:	☒ Yes ☐ No ☐ N/A	17.

Field Data Required? Y / N

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____

Comments/ Resolution:

Project Manager Review: _____

CMB

Date: 12-4-15

Sample Container Count

CLIENT: Republic - Missouri

COC PAGE 1 of 1
COC ID# _____

Project # 50133416

Sample Line

Item	DG9H	AG1U	WG9U	AG0U	R	4/6	BP2U	BP2S	BP3N	BP3U	BP3S	AG3S	AG1H	BP3C	BP1U	SP5T	AG2U	pH <2	pH >9	pH >12
1	3	6	2						1	1	1	1	1	1	1	1	1	✓	✓	✓
2	1	1	1						1	1	1	1	1	1	1	1	1	✓	✓	✓
3	1	1	1						1	1	1	1	1	1	1	1	1	✓	✓	✓
4	1	1	1						1	1	1	1	1	1	1	1	1	✓	✓	✓
5	1	1	1						1	1	1	1	1	1	1	1	1	✓	✓	✓
6																				
7																				
8																				
9																				
10																				
11																				
12																				

Container Codes

DG9H	40mL HCL amber vial	AG0U	100mL unpreserved amber glass	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
WG9U	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 glass	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	SP5T	120mL Coliform Na Thiosulfate
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 glass	BP2Z	500mL NaOH, Zn Ac	U	Summa Can
BP3N	250mL HNO3 plastic	AG3U	250mL unpreserved amber glass	AF	Air Filter	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 glass	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

GROUNDWATER ELEVATION MEASUREMENTS

Site: Bridgeton Landfill, Bridgeton, Missouri

Personnel: W. Herst J. W. Kinman - Feezor

Well ID	Date	Time	Depth to Water (ft)	Depth to Water Previous Event (ft)	Total Depth (ft)	Total Depth Previous Event (ft)	Notes
D-85	11/16/15	1056	25.83	21.22	77.17	77.19	
I-68		0920	19.03	14.29	40.47	40.47	
I-73		1444	30.76	27.45	50.54	50.82	
LR-103		1436	39.29	35.90	49.80	49.90	
LR-104		1430	32.35	28.95	69.33	69.33	
MW-1204		1536	16.39	16.48	222.52	223.98	
PZ-100-KS		0946	23.77	22.22	381.32	381.34	
PZ-100-SD		0957	30.59	28.90	96.21 (Top of Pump)	96.19 (Top of Pump)	
PZ-100-SS		0959	28.56	27.70	89.37 (Top of Pump)	89.40 (Top of Pump)	
PZ-101-SS		1137	37.88	36.64	155.63	155.65	
PZ-102-SS		1149	19.88	18.43	91.25	91.25	
PZ-102R-SS		1145	19.80	18.20	91.15	91.02	
PZ-103-SS		1157	11.57	9.48	149.62	149.88	
PZ-104-KS		1617	17.24	15.72	93.30 (Top of Pump)	93.27 (Top of Pump)	
PZ-104-SD		1612	21.62	21.27	120.63 (Top of Pump)	120.52 (Top of Pump)	
PZ-104-SS		1608	20.33	18.51	140.25 (Top of Pump)	140.61 (Top of Pump)	
PZ-105-SS		1544	25.15	25.44	144.85 (Top of Pump)	144.92 (Top of Pump)	
PZ-106-KS		1520	3.02	1.58	375.00	374.97	
PZ-106-SD		1508	13.21	11.63	196.23 (Top of Pump)	196.24 (Top of Pump)	
PZ-106-SS		1515	12.49	10.85	161.39 (Top of Pump)	161.53 (Top of Pump)	
PZ-107-SS		1500	32.98	29.98	103.78	104.00	
PZ-109-SS		1413	25.43	20.64	131.00 (Top of Pump)	129.81 (Top of Pump)	
PZ-110-SS		1406	29.93	26.24	107.21 (Top of Pump)	107.02 (Top of Pump)	
PZ-111-KS		1341	7.45	6.14	374.60	374.59	
PZ-111-SD		1358	34.51	31.19	197.08 (Top of Pump)	196.89 (Top of Pump)	
PZ-112-AS		1128	31.22	27.29	38.37	38.34	
PZ-113-AD		1115	30.33	26.29	110.11	110.12	
PZ-113-AS		1112	30.25	26.24	39.01	39.25	
PZ-113-SS	✓	1118	30.56	26.60	160.21	160.24	

Page 1 of 2

GROUNDWATER ELEVATION MEASUREMENTS

Site: Bridgeton Landfill, Bridgeton, Missouri

Personnel: W. Herst J. W. Kinson - Feeler

Well ID	Date	Time	Depth to Water (ft)	Depth to Water Previous Event (ft)	Total Depth (ft)	Total Depth Previous Event (ft)	Notes
PZ-114-AS	11/16/15	0913	19.52	14.52	26.11 (Top of Pump)	26.29 (Top of Pump)	
PZ-115-SS		0910	15.28	10.67	81.03 (Top of Pump)	81.07 (Top of Pump)	
PZ-116-SS		1529	17.69	17.65	149.65 (Top of Pump)	149.89 (Top of Pump)	
PZ-200-SS		0938	20.41	19.84	99.49	99.57	Labeled as GMP-7.
PZ-201A-SS		0925	10.14	7.89	86.20 (Top of Pump)	86.22 (Top of Pump)	
PZ-202-SS		1209	12.55	11.22	85.24 (Top of Pump)	85.23 (Top of Pump)	
PZ-203-SS		1552	25.61	25.99	111.37	111.36	
PZ-204-SS		1031	7.15	10.27	88.00	88.03	
PZ-204A-SS		1027	5.12	5.18	84.38	84.27	
PZ-205-AS		1454	29.22	29.33	54.07	54.05	
PZ-205-SS		1449	30.90	27.71	92.94 (Top of Pump)	93.00 (Top of Pump)	
PZ-206-SS		1420	29.18	25.85	129.80	130.01	
PZ-207-AS		1103	31.05	26.63	38.95	39.00	
PZ-208-SS		1045	19.72	18.93	100.36	100.36	
PZ-209-SD		1213	24.35	23.45	101.40 (Top of Pump)	101.42 (Top of Pump)	
PZ-209-SS		1219	22.56	21.16	99.90 (Top of Pump)	100.00 (Top of Pump)	
PZ-210-SD		1558	27.16	27.25	101.79 (Top of Pump)	101.81 (Top of Pump)	
PZ-210-SS		1602	26.45	25.97	101.44 (Top of Pump)	101.53 (Top of Pump)	
PZ-211-SD		1225	22.97	22.16	99.35 (Top of Pump)	99.41 (Top of Pump)	
PZ-211-SS		1229	21.13	19.60	98.14 (Top of Pump)	98.18 (Top of Pump)	
PZ-212-SD		1010	15.43	13.26	92.62 (Top of Pump)	92.81 (Top of Pump)	
PZ-212-SS		1014	12.94	11.22	93.88 (Top of Pump)	94.00 (Top of Pump)	
PZ-305-AI		1428	31.84	28.59	43.70	43.67	
S-84	✓	1056	25.57	21.02	32.89	32.91	
		1052					

FIELD INFORMATION LOG Part 1

Facility: Bridgeton Landfill

Location: Bridgeton, Missouri

Sample Matrix: Groundwater

Sample Point ID: PZ-109-SS

Sampler(s): W. Hest
J. N. Johnson

Top of Casing (ft, msl) 460.19

PURGE INFORMATION:

Method of Well Purge: Bladder Pump 14

Date/Time Initiated: 11/30/15 0851^{WN}0902

Initial Water Level (feet): 25.31

Initial Water Level Previous Event (feet): 20.74

Ground Water Elevation (ft, msl): 434.88

Ground Water Elevation Previous Event (ft, msl): 439.45

Well Total Depth (feet): Top of Pump = 131.00

Well Total Depth Previous Event (feet): Top of Pump = 129.81

Dedicated Equipment: Yes ☒ No ☐

Casing Diameter (inches): 2

One Borehole Volume (gal): Not Applicable

One Borehole Volume Previous Event (gal): N/A

Total Volume Purged (mL): 6300

Purged Dry?: Yes _____ No ☒

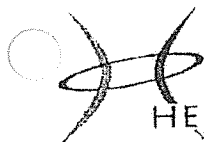
Water Level after Purge (feet): 32.80

Date/Time Completed: 11/30/15

PURGE DATA: Discharge: 4.5 sec Refill: 6.0 sec Pressure: 70 psi

Average Purge Rate: 33/ mL / min

[illegible]



HERST & ASSOCIATES, INC.[®]

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Personal Attention

FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sampling Method: Bladder Pump

Water Level @ Sampling (ft): 38.80

Parameters: Annual: Semi-Annual:

Sample Point ID: PZ-109-SS

Dedicated: Yes ✓ No

Well Collection Sequence #: of

Quarterly: ✓ Monthly: Other:

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
11/30/15 0723	VOC: ~331 Other: ~331	18.7	7.21	715	1.94		

INSTRUMENT CALIBRATION DATA:

Start of day: (Date/Time) 11/30/15 0730

End of day: (Date/Time) 11/30/15 1615

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 20/205083

pH / Sp. Cond. Meter: Oakton Rental
2124571

pH / Sp. Cond. Meter S/N: Oakton Rental
2124571

Start of day		End of day	
0.02	NTU std = 0.02	0.01	NTU std = 0.02
9.48	NTU std = 10.0	9.89	NTU std = 10.0
992.3	NTU std = 1,000	1039	NTU std = 1,000
4.06	4.01	4.12	
6.99	7.00	7.08	
10.19	10.01	10.11	
1413	1413µS	1352	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Cloudy, damp, low 40's

Sample Characteristics: clear, no odor

COMMENTS AND OBSERVATIONS:

Sp. Cond. Prediction Limit = 996.2 µS; Historical Range from Nov 2010 - Aug 2015: 782 - 834 µS.

pH Prediction Limits = 6.40 - 8.00 s.u.; Historical Range from Nov 2010 - Aug 2015: 6.83 - 7.36 s.u.

Well Closed and Locked?: Y/N Full Suite Collected?: Y/N # Bottles Collected: 15

Date: 11/30/15

By: [Signature]

Title: Managing Director

Company: Herst & Associates, Inc.

FIELD INFORMATION LOG Part 1

Facility: Bridgeton Landfill

Location: Bridgeton, Missouri

Sample Matrix: Groundwater

Sample Point ID: PZ-110-SS

Sampler(s): W Herst
J. Wilkerson

Top of Casing (ft, msl) 461.34

PURGE INFORMATION:

Method of Well Purge: Bladder Pump

Date/Time Initiated: 11/30/15 1051

Initial Water Level (feet): 28.98

Initial Water Level Previous Event (feet): 26.33

Ground Water Elevation (ft, msl): 432.36

Ground-Water Elevation Previous Event (ft, msl): 435.01

Well Total Depth (feet): Top of Pump = 107.21

Well Total Depth Previous Event (feet): Top of Pump = 107.02

Dedicated Equipment: Yes ✓ No

Casing Diameter (inches): 2

One Borehole Volume (gal): Not Applicable

One Borehole Volume Previous Event (gal): N/A

Total Volume Purged (mL): 5520

Purged Dry?: Yes _____ No ✓

Water Level after Purge (feet): 33.16

Date/Time Completed: 11/30/15

PURGE DATA: Discharge: 5.5 sec Refill: 6.0 sec Pressure: 57 psi

Average Purge Rate: 305 mL / min

[illegible]



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: PZ-110-SS

Sampling Method: Bladder Pump

Dedicated: Yes ☒ No ☐

Water Level @ Sampling (ft): 33.16

Well Collection Sequence #: of

Parameters: Annual: ☐ Semi-Annual: ☐ Quarterly: ☒ Monthly: ☐ Other: ☐

Quarterly: ☒ Monthly: ☐ Other: ☐

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
11/30/15	VOC: 12325	14.0	6.80	1402	1.44		
11/11	Other: 325						

INSTRUMENT CALIBRATION DATA:

Start of day: (Date/Time) 11/30/15 0730

End of day: (Date/Time) 11/30/15 1615

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 201205083

pH / Sp. Cond. Meter: 2124571

pH / Sp. Cond. Meter S/N: 2124571

Start of day		End of day	
0.02	NTU std = 0.02	0.01	NTU std = 0.02
9.48	NTU std = 10.0	9.89	NTU std = 10.0
992.3	NTU std = 1,000	1039	NTU std = 1,000
4.06	4.01	4.12	
6.99	7.00	7.08	
10.19	10.01	10.11	
1413	1413µS	1352	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Cloudy, damp low 40's

Sample Characteristics: clear, no odor

COMMENTS AND OBSERVATIONS:

Sp. Cond. Prediction Limit = 2,354 µS; Historical Range from Nov 2010 - Aug 2015: 1738 - 2250 µS.

pH Prediction Limits = 5.90 - 7.67 s.u.; Historical Range from Nov 2010 - Aug 2015: 6.47 - 6.94 s.u.

Well Closed and Locked?: ☒ Y / ☐ N Full Suite Collected?: ☒ Y / ☐ N # Bottles Collected: 15

Date: 11/30/15

By: Wendy

Title: Managing Director

Company: Herst & Associates, Inc.

FIELD INFORMATION LOG Part 1

Facility: Bridgeton Landfill

Location: Bridgeton, Missouri

Sample Matrix: Groundwater

Sample Point ID: PZ-116-SS

Sampler(s): W. Herst
J. W. Johnson

Top of Casing (ft, msl) 484.85

PURGE INFORMATION:

Method of Well Purge: Bladder Pump

Date/Time Initiated: 11/30/15 1353

Initial Water Level (feet): 17.65

Initial Water Level Previous Event (feet): 17.72

Ground Water Elevation (ft, msl): 467.20

Ground Water Elevation Previous Event (ft, msl): 467.13

Well Total Depth (feet): Top of Pump = 14965

Well Total Depth Previous Event (feet): Top of Pump = 149.89

Dedicated Equipment: Yes ✓ No

Casing Diameter (inches): 2

One Borehole Volume (gal): Not Applicable

One Borehole Volume Previous Event (gal): N/A

Total Volume Purged (mL): 4,725

Purged Dry?: Yes _____ No ✓

Water Level after Purge (feet): 30.19

Date/Time Completed: 11/30/15

PURGE DATA: Discharge: 4.5 sec Refill: 6.0 sec Pressure: 75 psi
5.70 ft 77 wt

Average Purge Rate: 271 mL / min

[illegible]



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: PZ-116-SS

Sampling Method: Bladder Pump

Dedicated: Yes ☒ No ☐

Water Level @ Sampling (ft): 30.19

Well Collection Sequence #: of

Parameters: Annual: ☐ Semi-Annual: ☐ Quarterly: ☐ Monthly: ☐ Other: ☒

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
11/30/15 1418	VOC: ~306 Other: ~306	20.1	7.70	566	1.26		

INSTRUMENT CALIBRATION DATA:

Start of day: (Date/Time) 11/30/15 0730

End of day: (Date/Time) 11/30/15 1615

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 201205083

pH / Sp. Cond. Meter: Oakton Rental
2124571

pH / Sp. Cond. Meter S/N: Oakton Rental
2124571

Start of day		End of day	
0.02	NTU std = 0.02	0.01	NTU std = 0.02
9.48	NTU std = 10.0	9.89	NTU std = 10.0
992.3	NTU std = 1,000	1039	NTU std = 1,000
4.06	4.01	4.12	
6.99	7.00	7.08	
10.19	10.01	10.11	
1413	1413 µS	1352	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Cloudy, damp, middle 40's

Sample Characteristics: Clear, no odor

COMMENTS AND OBSERVATIONS:

Well Closed and Locked? ☒ Y ☐ N Full Suite Collected? ☒ Y ☐ N # Bottles Collected: 15

Date: 11/30/15

By: Wood Herst

Title: Managing Director

Company: Herst & Associates, Inc.



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: LCS-5A

Sampling Method: Leachate Grab

Dedicated: Yes ☒ No ☐

Water Level @ Sampling (ft): Not Applicable

Well Collection Sequence #: of

Parameters: Annual: ☐ Semi-Annual: ☐ Quarterly: ☐ Monthly: ☐ Other: ☒

Quarterly: ☐ Monthly: ☐ Other: ☒

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
	VOC:	34.7	6.87	7,500	4565		
	Other:						

INSTRUMENT CALIBRATION DATA:

Start of day:
(Date/Time) 12/01/15 0730

End of day:
(Date/Time) 12/01/15 1550

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 201205082

pH / Sp. Cond. Meter: Oakton Pentel

pH / Sp. Cond. Meter S/N: 2124571

Start of day		End of day	
0.01	NTU std = 0.02	0.00	NTU std = 0.02
10.08	NTU std = 10.0	10.41	NTU std = 10.0
994.8	NTU std = 1,000	1094	NTU std = 1,000
4.05	4.01	4.12	
7.12	7.00	7.09	
10.12	10.01	10.12	
1413	1413 µS	1347	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Sunny 40°s

Sample Characteristics: leachate odor, black to dark green

COMMENTS AND OBSERVATIONS:

Well Closed and Locked?: Y / N N/A Full Suite Collected? Y / N Y # Bottles Collected: 15

VOAs effervesced, VOAs were collected
unpreserved. Not possible to fill VOA vials
with zero headspace.

Date: 12/01/15 By: Ward Herst Title: Manager

Company: Herst & Associates, Inc.



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FIELD INFORMATION LOG Part 1

Top of Casing (ft, msl) Not Applicable

PURGE INFORMATION:

Date/Time Completed: Not Applicable

PURGE DATA: Discharge: N/A sec Refill: N/A sec Pressure: N/A psi

Average Purge Rate: Not Applicable mL / min

[illegible]



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sampling Method: Leachate Grab

Water Level @ Sampling (ft): Not Applicable

Parameters: Annual: Semi-Annual: Quarterly: Monthly: Other:

Sample Point ID: LCS-3D

Dedicated: Yes ✓ No

Well Collection Sequence #: of

Quarterly: Monthly: Other: ✓

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
12/2/15 1000	VOC: Other:	15.9	10.84 pH	5450	102.2		

INSTRUMENT CALIBRATION DATA:

Start of day:
(Date/Time) 12/2/15 0730

End of day:
(Date/Time) 12/2/15 1550

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 292050P2

pH / Sp. Cond. Meter: 2124571

pH / Sp. Cond. Meter S/N: 2124571

Start of day	End of day	NTU std =
0.01	0.00	0.02
10.08	10.41	10.0
994.8	1094	1,000
4.05	4.12	
7.12	7.09	
10.12	10.12	
1413	1347	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Sunny 40°s

Sample Characteristics: pH paper from MDMR shows ~5; black to dark green

COMMENTS AND OBSERVATIONS:

Well Closed and Locked?: Y / N N/A Full Suite Collected? (Y) N # Bottles Collected: 15

Date: 12/2/15 By: Ward Herst Title: Mingyay Drexton

Company: Herst & Associates, Inc.



FIELD INFORMATION LOG Part 1



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: PZ-211-SD

Sampling Method: Bladder Pump

Dedicated: Yes ☒ No ☐

Water Level @ Sampling (ft): 33.59

Well Collection Sequence #: _____ of _____

Parameters: Annual: _____ Semi-Annual: _____

Quarterly: _____ Monthly: _____ Other: ☒

Assessment

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
12/01/15 1110	VOC: ~312.5 Other: ~312.5	13.9	7.57	892	13.28		

INSTRUMENT CALIBRATION DATA:

Start of day:
(Date/Time) 12/01/15 0730

End of day:
(Date/Time) 12/01/15 1550

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 201205082

pH / Sp. Cond. Meter: Oakton Rental
2124571

pH / Sp. Cond. Meter S/N: 2124571

Start of day		End of day	
0.01	NTU std = 0.02	0.00	NTU std = 0.02
10.08	NTU std = 10.0	10.41	NTU std = 10.0
994.8	NTU std = 1,000	1094	NTU std = 1,000
4.05	4.01	4.12	
7.12	7.00	7.09	
10.12	10.01	10.12	
1413	1413 µS	1347	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Sunny, 40°-50°, cold wind

Sample Characteristics: clear, no odor

COMMENTS AND OBSERVATIONS:

Well Closed and Locked?: Y/N Full Suite Collected?: Y/N # Bottles Collected: 15

Date: 12/01/15 By: Ward Herst Title: Managing Director

Company: Herst & Associates, Inc.

FIELD INFORMATION LOG Part 1

Facility: Bridgeton Landfill

Location: Bridgeton, Missouri

Sample Matrix: Groundwater

Sample Point ID: PZ-211-SS

Sampler(s): W. Herst
T. W. Kmsen

Top of Casing (ft, msl) 487.41

PURGE INFORMATION:

Method of Well Purge: Bladder Pump

Date/Time Initiated: 12/01/15 1410

Initial Water Level (feet): 20.27

Initial Water Level Previous Event (feet): 19.64

Ground Water Elevation (ft, msl): 467.14

Ground Water Elevation Previous Event (ft, msl): 467.77

Well Total Depth (feet): Top of Pump = 98.14

Well Total Depth Previous Event (feet): Top of Pump = 98.8'

Dedicated Equipment: Yes ✓ No

Casing Diameter (inches): 2

One Borehole Volume (gal): Not Applicable

One Borehole Volume Previous Event (gal): N/A

Total Volume Purged (mL): 5,900

Purged Dry?: Yes _____ No

Water Level after Purge (feet): 20.82

Date/Time Completed: 12/01/15

PURGE DATA: Discharge: 4.5 sec Refill: 6.0 sec Pressure: 52 psi

Average Purge Rate: 328 mL / min

[illegible]



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: PZ-211-SS

Sampling Method: Bladder Pump

Dedicated: Yes ☒ No ☐

Water Level @ Sampling (ft): 33.41

Well Collection Sequence #: _____ of _____

Parameters: Annual: _____ Semi-Annual: _____ Quarterly: _____ Monthly: _____ Other: ☒

Assessment

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
12/01/15 1430	VOC: 362.5 Other: 362.5	14.1	7.39	648	20.82		

INSTRUMENT CALIBRATION DATA:

Start of day: (Date/Time) 12/01/15 0730

End of day: (Date/Time) 12/01/15 1550

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 201205082

pH / Sp. Cond. Meter: Oakton Reck
2124571

pH / Sp. Cond. Meter S/N: Oakton Reck
2124571

Start of day		End of day	
0.2	NTU std = 0.02	0.00	NTU std = 0.02
10.08	NTU std = 10.0	10.41	NTU std = 10.0
9948	NTU std = 1,000	1094	NTU std = 1,000
405	4.01	4.12	
7.12	7.00	7.09	
10.12	10.01	10.12	
1413	1413 µS	1347	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Sunny, low 50's, slight wind

Sample Characteristics: clear, no odor

COMMENTS AND OBSERVATIONS:

Well Closed and Locked? ☒ Y ☐ N

Full Suite Collected? ☒ Y ☐ N

Bottles Collected: 15

Date: 12/01/15

By: Ward Herst

Title: Managing Director

Company: Herst & Associates, Inc.

FIELD INFORMATION LOG Part 1

Facility: Bridgeton Landfill

Location: Bridgeton, Missouri

Sample Matrix: Groundwater

Sample Point ID: PZ-209-SD

Sampler(s): W. Herbst
J. Wilkerson

Top of Casing (ft, msl) 489.58

PURGE INFORMATION:

Method of Well Purge: Bladder Pump

Date/Time Initiated: 12/02/15 0828

Initial Water Level (feet): 23.48

Initial Water Level Previous Event (feet): 23.63

Ground Water Elevation (ft. msl): 466.10

Ground Water Elevation Previous Event (ft, msl): 465.95

Well Total Depth (feet): Top of Pump = 101.40

Well Total Depth Previous Event (feet): Top of Pump = 101.42

Dedicated Equipment: Yes ✓ No

Casing Diameter (inches): 2

One Borehole Volume (gal): Not Applicable

One Borehole Volume Previous Event (gal): N/A

Total Volume Purged (mL): 5,500

Purged Dry?: Yes _____ No ✓

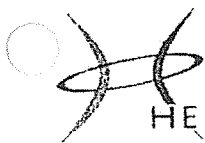
Water Level after Purge (feet): 35.32

Date/Time Completed: 12/02/15

PURGE DATA: Discharge: 4.5 sec Refill: 6.0 sec Pressure: 55 psi

Average Purge Rate: 324 mL / min

[illegible]



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sampling Method: Bladder Pump

Water Level @ Sampling (ft): 35.32

Parameters: Annual: Semi-Annual:

Sample Point ID: PZ-209-SD

Dedicated: Yes ✓ No

Well Collection Sequence #: of

Quarterly: Monthly: Other: ✓
Assessment

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
12/02/15 0847	VOC: <u>2324</u> Other: <u>2324</u>	<u>12.8</u>	<u>7.51</u>	<u>766</u>	<u>1.34</u>		

INSTRUMENT CALIBRATION DATA:

Start of day:
(Date/Time) 12/2/15 0735

End of day:
(Date/Time) 12/2/15 1530

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 201205083

pH / Sp. Cond. Meter: Oakton Rental
2124571

pH / Sp. Cond. Meter S/N: Oakton Rental
2124571

Start of day		End of day	
0.00	NTU std = 0.02	0.00	NTU std = 0.02
9.58	NTU std = 10.0	9.76 9.76	NTU std = 10.0
970.0	NTU std = 1,000	976.8	NTU std = 1,000
4.05	4.01	4.10	
7.12	7.00	7.11	
10.14	10.01	10.12	
1381	1413 µS	1300	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Sunny, 30°S

Sample Characteristics: clear, no odor - Landfill gas odor at the well due to landfill drilling nearby.

COMMENTS AND OBSERVATIONS:

Well Closed and Locked? Y/N Full Suite Collected? Y/N # Bottles Collected: 16

Collected a field filtered radionuclide sample at PZ-209-SD in addition to normal sample kit

Date: 12/02/15 By: Ward Herst Title: Managing Director

Company: Herst & Associates, Inc.



FIELD INFORMATION LOG Part 1



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: PZ-111-SD

Sampling Method: Bladder Pump

Dedicated: Yes ☒ No ☐

Water Level @ Sampling (ft): 49.83

Well Collection Sequence #: _____ of _____

Parameters: Annual: _____ Semi-Annual: _____

Quarterly: ☒ Monthly: _____ Other: _____

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
12/02/15 10:58	VOC: ~343 Other: ~343	15.1	7.29	729	1.38		

INSTRUMENT CALIBRATION DATA:

Start of day:
(Date/Time) 12/2/15 0735

End of day:
(Date/Time) 12/2/15 1530

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 201205083

pH / Sp. Cond. Meter: Oakton Reckle
2124571

pH / Sp. Cond. Meter S/N: Oakton Reckle
2124571

Start of day		End of day	
0.00	NTU std = 0.02	0.00	NTU std = 0.02
9.58	NTU std = 10.0	9.76	NTU std = 10.0
970.0	NTU std = 1,000	976.8	NTU std = 1,000
4.05	4.01	4.10	
7.12	7.00	7.11	
10.14	10.01	10.12	
1381	1413 µS	1300	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Cloudy, 30°s

Sample Characteristics: clear, no odor

COMMENTS AND OBSERVATIONS:

Sp. Cond. Prediction Limit = 1,016 µS; Historical Range from Nov 2010 - Aug 2015: 806 - 851 µS.

pH Prediction Limits = 6.37 - 8.07 s.u.; Historical Range from Nov 2010 - Aug 2015: 6.89 - 7.43 s.u.

Well Closed and Locked? ☒ / N Full Suite Collected? ☒ / N # Bottles Collected: 15

Date: 12/02/15 By: Ward Herst Title: Managing Director

Company: Herst & Associates, Inc.

FIELD INFORMATION LOG Part 1

Facility: Bridgeton Landfill

Location: Bridgeton, Missouri

Sample Matrix: Groundwater

Sample Point ID: PZ-209-SS

Sampler(s): W. Heist
J. W. Kinsley

Top of Casing (ft, msl) 489.68

PURGE INFORMATION:

Method of Well Purge: Bladder Pump

Date/Time Initiated: 12/02/15 1339

Initial Water Level (feet): 22.76

Initial Water Level Previous Event (feet): 21.08

Ground Water Elevation (ft, msl): 466.92

Ground Water Elevation Previous Event (ft, msl): 468.60

Well Total Depth (feet): Top of Pump = 9990

Well Total Depth Previous Event (feet): Top of Pump = 100.00

Dedicated Equipment: Yes ✓ No

Casing Diameter (Inches): 2

One Borehole Volume (gal): Not Applicable

One Borehole Volume Previous Event (gal): N/A

Total Volume Purged (mL): 5,600

Purged Dry?: Yes _____ No

Water Level after Purge (feet): 34.01

Date/Time Completed: 12/02/15

PURGE DATA: Discharge: 4.5 sec Refill: 6.0 sec Pressure: 47 psi

Average Purge Rate: 3.1 mL / min

[illegible]



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: PZ-209-SS

Sampling Method: Bladder Pump

Dedicated: Yes ☒ No ☐

Water Level @ Sampling (ft): 34.01

Well Collection Sequence #: _____ of _____

Parameters: Annual: _____ Semi-Annual: _____

Quarterly: _____ Monthly: _____ Other: ☒ Assessment

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
12/03/15 1400	VOC: ~311 Other: ~311	13.11	7.47	648	4.59		

INSTRUMENT CALIBRATION DATA:

Start of day: (Date/Time) 12/2/15 0735

End of day: (Date/Time) 12/2/15 1530

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 201205083

pH / Sp. Cond. Meter: Oakton Rental
2124571

pH / Sp. Cond. Meter S/N: Oakton Rental
2124571

Start of day		End of day	
0.00	NTU std = 0.02	0.00	NTU std = 0.02
9.58	NTU std = 10.0	9.76	NTU std = 10.0
970.0	NTU std = 1,000	976.8	NTU std = 1,000
4.05	4.01	4.10	
7.12	7.00	7.11	
10.14	10.01	10.12	
1381	1413µS	1300	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: cloudy, low 40's

Sample Characteristics: clear, no odor*

COMMENTS AND OBSERVATIONS:

Well Closed and Locked? ☒ Y ☐ N

Full Suite Collected? ☒ Y ☐ N

Bottles Collected: 15

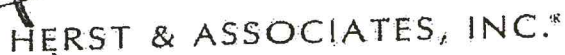
* Landfill has odor at the well due to ongoing drilling in the landfill

Date: 12/02/15

By: Ward Herst

Title: Managing Director

Company: Herst & Associates, Inc.



FIELD INFORMATION LOG Part 1

Date/Time Completed: Not Applicable

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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: LCS-4B

Sampling Method: Leachate Grab

Dedicated: Yes ☒ No ☐

Water Level @ Sampling (ft): Not Applicable

Well Collection Sequence #: of

Parameters: Annual: Semi-Annual: Quarterly: Monthly: Other: ☒

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
12/03/15	VOC:	48°C					
0815	Other:						

INSTRUMENT CALIBRATION DATA:

measured using a stick thermometer

Start of day:
(Date/Time)

End of day:
(Date/time)

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N:

pH / Sp. Cond.
Meter:

pH / Sp. Cond.
Meter S/N:

Start of day	End of day	NTU std =
		0.02
		10.0
		1,000

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling:

Sample Characteristics:

COMMENTS AND OBSERVATIONS:

Well Closed and Locked?: N/A Full Suite Collected?: Y/N # Bottles Collected: 0

12/01/15 DIRTY - sample port only blows air

Resample on 12/03/15 using a different sample port

Date: 12/01/15 By: Ward Herst Title: Managing Director

Company: Herst & Associates, Inc.

FIELD INFORMATION LOG Part 1

Facility: Bridgeton Landfill

Location: Bridgeton, Missouri

Sample Matrix: Groundwater

Sample Point ID: PZ-212-SD

Sampler(s): W. Hersch
J. W. Kilson

Top of Casing (ft, msl) 482.72

PURGE INFORMATION:

Method of Well Purge: Bladder Pump

Date/Time Initiated: 12/23/15 0940

Initial Water Level (feet): 14.58

Initial Water Level Previous Event (feet): 13.53

Ground Water Elevation (ft. msl): 468.14

Ground Water Elevation Previous Event (ft. msl): 469.19

Well Total Depth (feet): Top of Pump = 9262

Well Total Depth Previous Event (feet): Top of Pump = 92.81

Dedicated Equipment: Yes ✓ No

Casing Diameter (inches): 2

One Borehole Volume (gal): Not Applicable

One Borehole Volume Previous Event (gal): N/A

Total Volume Purged (mL): 5,800

Purged Dry?: Yes _____ No

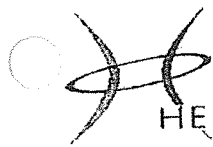
Water Level after Purge (feet): 25.74

Date/Time Completed: 12/03/15

PURGE DATA: Discharge: 4.5 sec Refill: 6.0 sec Pressure: 50 psi

Average Purge Rate: 362.5 mL / min

[illegible]



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: PZ-212-SD

Sampling Method: Bladder Pump

Dedicated: Yes ☒ No ☐

Water Level @ Sampling (ft): 25.74

Well Collection Sequence #: _____ of _____

Parameters: Annual: _____ Semi-Annual: _____

Quarterly: _____ Monthly: _____ Other: ☒ Assessment

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
12/23/15 1000	VOC: <u>23.50</u> Other: <u>23.50</u>	13.5	7.51	1140	6.34		

INSTRUMENT CALIBRATION DATA:

Start of day:
(Date/Time) 12/3/15 0730

End of day:
(Date/Time) 12/3/15 1530

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 201205023

pH / Sp. Cond. Meter: Oakton Rptel
2124571

pH / Sp. Cond. Meter S/N: Oakton Rptel
2124571

Start of day		End of day	
0.01	NTU std = 0.02	0.04	NTU std = 0.02
10.11	NTU std = 10.0	11.53	NTU std = 10.0
1004	NTU std = 1,000	1032	NTU std = 1,000
4.35	4.01	4.23	
7.16	7.00	7.07	
9.94	10.01	9.63	
1389	1413 µS	1435	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Sunny, 40°s

Sample Characteristics: clear, no odor

COMMENTS AND OBSERVATIONS:

Well Closed and Locked?: Y/N Full Suite Collected?: Y/N # Bottles Collected: 15

Date: 12/23/15 By: Ward Herst Title: Managing Director

Company: Herst & Associates, Inc.

FIELD INFORMATION LOG Part 1

Facility: Bridgeton Landfill

Location: Bridgeton, Missouri

Sample Matrix: Groundwater

Sample Point ID: PZ-212-SS

Sampler(s): W. Herst
J. Wilkerson

Top of Casing (ft, msl) 482.79

PURGE INFORMATION:

Method of Well Purge: Bladder Pump

Date/Time Initiated: 12/03/15 1110

Initial Water Level (feet): 10.68

Initial Water Level Previous Event (feet): 11.01

Ground Water Elevation (ft, msl): 472.11

Ground Water Elevation Previous Event (ft, msl): 471.78

Well Total Depth (feet): Top of Pump = 93.88

Well Total Depth Previous Event (feet): Top of Pump = 94.00

Dedicated Equipment: Yes ✓ No

Casing Diameter (inches): 2

One Borehole Volume (gal): Not Applicable

One Borehole Volume Previous Event (gal): N/A

Total Volume Purged (mL): 5,600

Purged Dry?: Yes _____ No

Water Level after Purge (feet): 21.98

Date/Time Completed: 12/03/15

PURGE DATA: Discharge: 4.5 sec Refill: 6.0 sec Pressure: 47 psi

Average Purge Rate: 311 mL/min

[illegible]



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sampling Method: Bladder Pump

Water Level @ Sampling (ft): 21.98

Parameters: Annual: Semi-Annual:

Sample Point ID: PZ-212-SS

Dedicated: Yes ✓ No

Well Collection Sequence #: of

Quarterly: Monthly: Other: ✓
Assessment

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
<u>12/23/15</u> <u>1130</u>	VOC: <u>~312.5</u> Other: <u>~312.5</u>	<u>13.8</u>	<u>7.39</u>	<u>810</u>	<u>74.27</u>		

INSTRUMENT CALIBRATION DATA:

Start of day: (Date/Time) 12/3/15 0730

End of day: (Date/Time) 12/3/15 1530

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 21205203

pH / Sp. Cond. Meter: 2124571

pH / Sp. Cond. Meter S/N: 2124571

Start of day		End of day	
<u>0.01</u>	NTU std = 0.02	<u>2.04</u>	NTU std = 0.02
<u>10.11</u>	NTU std = 10.0	<u>11.53</u>	NTU std = 10.0
<u>1004</u>	NTU std = 1,000	<u>1032</u>	NTU std = 1,000
<u>4.35</u>	<u>4.01</u>	<u>4.23</u>	
<u>7.16</u>	<u>7.00</u>	<u>7.07</u>	
<u>9.94</u>	<u>10.01</u>	<u>9.63</u>	
<u>1389</u>	<u>1413µS</u>	<u>1435</u>	

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Sunny, 40°

Sample Characteristics: clear, no odor

COMMENTS AND OBSERVATIONS:

Well Closed and Locked? Y/N Full Suite Collected? Y/N # Bottles Collected: 15

Date: 12/23/15 By: Ward Herst Title: Managing Director

Company: Herst & Associates, Inc.

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FIELD INFORMATION LOG Part 1

Top of Casing (ft. msl)	465.83
-------------------------	--------

Date/Time Completed: 12/03/15

Average Purge Rate: 353 mL / min

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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sampling Method: Bladder Pump

Water Level @ Sampling (ft): 42.89

Parameters: Annual: Semi-Annual:

Sample Point ID: PZ-205-SS

Dedicated: Yes ✓ No

Well Collection Sequence #: of

Quarterly: ✓ Monthly: Other:

SAMPLE DATA:

Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
12/03/15	VOC: <u>~450</u>	<u>17.8</u>	<u>7.26</u>	<u>762</u>	<u>2.89</u>		
1410	Other: <u>450</u>						

INSTRUMENT CALIBRATION DATA:

Start of day: (Date/Time) 12/3/15 0730

End of day: (Date/Time) 12/3/15 1530

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: 2020503

pH / Sp. Cond. Meter: Oakton Bental

pH / Sp. Cond. Meter S/N: 20124571

Start of day			End of day		
<u>0.01</u>	NTU std =	<u>0.02</u>	<u>0.04</u>	NTU std =	<u>0.02</u>
<u>10.11</u>	NTU std =	<u>10.0</u>	<u>11.53</u>	NTU std =	<u>10.0</u>
<u>1004</u>	NTU std =	<u>1,000</u>	<u>1032</u>	NTU std =	<u>1,000</u>
<u>4.35</u>	<u>4.01</u>	<u>4.23</u>			
<u>17.16</u>	<u>7.00</u>	<u>7.07</u>			
<u>9.94</u>	<u>10.01</u>	<u>9.63</u>			
<u>1389</u>	<u>1413 µS</u>	<u>1435</u>			

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: Sunny, 50's

Sample Characteristics: clear, no odor

COMMENTS AND OBSERVATIONS:

Sp. Cond. Prediction Limit = 1,046 µS; Historical Range from Nov 2010 - Aug 2015: 868 - 936 µS.

pH Prediction Limits = 6.45 - 7.89 s.u.; Historical Range from Nov 2010 - Aug 2015: 6.88 - 7.27 s.u.

Well Closed and Locked? Y/N Full Suite Collected? Y/N # Bottles Collected: 15

Date: 12/3/15 By: [Signature] Title: Managing Director

Company: Herst & Associates, Inc.



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FIELD INFORMATION LOG Part 1

Facility: Bridgeton Landfill

Location: Bridgeton, Missouri

Sample Matrix: Leachate

Sample Point ID: LCS-1D

Sampler(s): W. Hest

J. WYKMS or

Top of Casing (ft, msl) Not Applicable

PURGE INFORMATION:

Method of Well Purge: Not Applicable

Date/Time Initiated: Not Applicable

Initial Water Level (feet): Not Applicable

Initial Water Level Previous Event (feet): Not Applicable

Ground Water Elevation (ft, msl): Not Applicable

Ground Water Elevation Previous Event (ft. msl): N/A

Well Total Depth (feet): Not Applicable

Well Total Depth Previous Event (feet): Not Applicable

Dedicated Equipment: Yes _____ No ✓

Casing Diameter (inches): 2

One Borehole Volume (gal): Not Applicable

One Borehole Volume Previous Event (gal): N/A

Total Volume Purged (mL): Not Applicable

Purged Dry?: Yes N/A No N/A

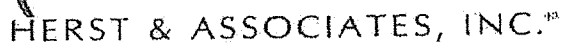
Water Level after Purge (feet): Not Applicable

Date/Time Completed: Not Applicable

PURGE DATA: Discharge: N/A sec Refill: N/A sec Pressure: N/A psi

Average Purge Rate: Not Applicable mL / min

[illegible]



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FIELD INFORMATION LOG Part 2

SAMPLING INFORMATION:

Sample Point ID: LCS-1D

Sampling Method: Leachate Grab

Dedicated: Yes ☒ No ☐

Water Level @ Sampling (ft): Not Applicable

Well Collection Sequence #: _____ of _____

Parameters: Annual: _____ Semi-Annual: _____ Quarterly: _____ Monthly: _____ Other: ☒

SAMPLE DATA:

SAMPLE DATA:							
Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
	VOC:						
	Other:						

INSTRUMENT CALIBRATION DATA:

Start of day:
(Date/Time)

End of day:
(Date/time)

Turbidity Meter: HF MicroTPW

Turbidity Meter S/N: _____

pH / Sp. Cond.
Meter:

pH / Sp. Cond.
Meter S/N:

Start of day		End of day	
	NTU std = 0.02		NTU std = 0.02
	NTU std = 10.0		NTU std = 10.0
	NTU std = 1,000		NTU std = 1,000

Other Calibration: Not Applicable

GENERAL INFORMATION:

Weather Conditions @ Sampling: _____

Sample Characteristics: _____

COMMENTS AND OBSERVATIONS:

Well Closed and Locked?: Y / N /// Full Suite Collected?: Y / N (N) # Bottles Collected: 7

DRY - sample port only blows air

Date: 12/01/15 By: Ward Rest Title: Managing Director

Company: Herst & Associates, Inc.



FIELD INFORMATION LOG Part 1

Sample Point ID: LCS-2D

Sampler(s): _____

Top of Casing (ft, msl) Not Applicable

Dedicated Equipment: Yes _____ No ☒

Casing Diameter (inches): 2

One Borehole Volume (gal): Not Applicable

One Borehole Volume Previous Event (gal): N/A

Total Volume Purged (mL): Not Applicable

Purged Dry?: Yes N/A No N/A

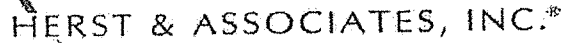
Water Level after Purge (feet): Not Applicable

Date/Time Completed: Not Applicable

sec Pressure: N/A psi

Average Purge Rate: Not Applicable mL / min

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FIELD INFORMATION LOG Part 2

Sample Point ID: LCS-2D

Dedicated: Yes ✓ No

Well Collection Sequence #: _____ of _____

SAMPLE DATA:							
Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance (µS = µmhos/cm)	Turbidity (NTU)	Other	Notes
	VOC:						
	Other:						

Start of day		End of day	
	NTU std = 0.02		NTU std = 0.02
	NTU std = 10.0		NTU std = 10.0
	NTU std = 1,000		NTU std = 1,000

Company: Herst & Associates, Inc.

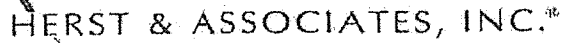
Page 263 of 265



FIELD INFORMATION LOG Part 1

Average Purge Rate: Not Applicable mL / min

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FIELD INFORMATION LOG Part 2

Sample Point ID: LCS-6B

Dedicated: Yes ✓ No

Well Collection Sequence #: _____ of _____

SAMPLE DATA:							
Time & Date	Sample Rate	Temp (°C)	pH (std units)	Specific Conductance ($\mu\text{S} = \mu\text{mhos/cm}$)	Turbidity (NTU)	Other	Notes
	VOC:						
	Other:						

Start of day		End of day	
	NTU std = 0.02		NTU std = 0.02
	NTU std = 10.0		NTU std = 10.0
	NTU std = 1,000		NTU std = 1,000

Company: Herst & Associates, Inc.

