APPENDIX C

Groundwater Analytical Data Validation Reports

LANGAN
ENGINEERING & ENVIRONMENTAL SERVICES

Technical Memorandum

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To: Ray Lees, Langan Senior Associate

From: Emily Strake, Langan Project Chemist/Risk Assessor

Date: June 27, 2014

Re: Data Validation Report
For Ametek Sellersville RCRA Site
Sellersville, Pennsylvania
Groundwater Samples Collected April 29, May 1, and May 2
Langan Project No.: 220051801

This memorandum presents the findings of an analytical data validation of the data generated from the analysis of twenty-one groundwater samples collected on April 29, May 1, and May 2, 2014 by Langan Engineering and Environmental Services ("Langan") at the Ametek U.S. Gauge Division RCRA Site located in Sellersville, Pennsylvania ("the Site"). The groundwater samples were analyzed by Test America, Inc. located in Burlington, Vermont (PADEP NELAP certification # 68-00469) for volatile organic compounds (VOCs) and 1,4-dioxane using the analytical methods specified below.

- Target Compound List (TCL) VOCs by USEPA SOM01.2 (4/2007)
- 1,4-Dioxane by USEPA 522 (9/2008)

Table 1, below, summarizes the laboratory and client sample identification numbers, sample collection dates, and analytical parameters subject to review.

Table 1: Sample Summary

SDG	***Lab Sample ID***	***Client Sample ID***	***Sample Date***	***Analytical Parameters***
J22132	200-22132-1EB	EB-1_042914	4/29/2014	1,4-Dioxane
J22132	200-22132-2	MW-18S_042914	4/29/2014	TCL VOCs
J22132	200-22132-3FB	FB-1_042914	4/29/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22132-4EB	EB-2_042914	4/29/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22132-5TB	TRIP BLANK	4/29/2014	TCL VOCs
J22132	200-22155-1	EB-3_050114	5/1/2014	1,4-Dioxane
J22132	200-22155-2	MW-19D_050114	5/1/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22155-3	MW-16S_050114	5/1/2014	TCL VOCs
J22132	200-22155-4	MW-17S_050114	5/1/2014	TCL VOCs
J22132	200-22155-5	MW-17D_050114	5/1/2014	TCL VOCs
J22132	200-22155-6	MW-21D_050114	5/1/2014	TCL VOCs

SDG	Lab Sample ID	Client Sample ID	Sample Date	Analytical Parameters
J22132	200-22155-7	MW-21S_050114	5/1/2014	TCL VOCs
J22132	200-22155-8	MW-22D_050114	5/1/2014	1,4-Dioxane
J22132	200-22155-9	MW-20S_050114	5/1/2014	TCL VOCs
J22132	200-22155-10	MW-11D_050114	5/1/2014	TCL VOCs
J22132	200-22155-11	MW-5D_050114	5/1/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22155-12	DUP_050114	5/1/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22155-13	MW-15D_050114	5/1/2014	TCL VOCs
J22132	200-22155-14	FB-2_050114	5/1/2014	TCL VOCs
J22132	200-22155-15TB	TRIP BLANK	5/1/2014	TCL VOCs
J22132	200-22183-1	MW-12S_050114	5/1/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22183-2	EB-4_050114	5/1/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22183-3	MW-24S_050114	5/1/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22183-4	EB-5_050214	5/2/2014	1,4-Dioxane
J22132	200-22183-5	MW-11S_050214	5/2/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22183-6	MW-12D_050214	5/2/2014	TCL VOCs
J22132	200-22183-7	MW-20D_050214	5/2/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22183-8	MW-15S_050214	5/2/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22183-9	MW-7S_050214	5/2/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22183-10	MW-5S_050214	5/2/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22183-11	EB-6_050214	5/2/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22183-12	FB-3_050114	5/2/2014	TCL VOCs, 1,4-Dioxane
J22132	200-22183-13	TB_050214	5/2/2014	TCL VOCs

Validation Overview

This data validation was performed in accordance with the, "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review" (June 2008, USPEA-540-R-08-01) and the specifics of the methods employed.

Validation includes reconstruction of the analytical data to verify that data are easily traceable and sufficiently complete to permit logical reconstruction by a qualified individual other than the originator. Items subject to review in this memorandum include holding times, sample preservation, sample extraction, instrument tuning, instrument calibration, laboratory blanks, laboratory control samples, system monitoring compounds, internal standard area counts, matrix spike/spike duplicate recoveries, target compound identification and quantification,

chromatograms, overall system performance, field blank, trip blank, and field duplicate sample results for 10% of the data. The samples selected for review are: MW-17D_050114 and MW-24S_050114. Also included in the review are the results from the field blank, equipment blank, field duplicate, and trip blank samples.

As a result of the review process, the following qualifiers may be assigned to the data in accordance with the USEPA's guidelines and best professional judgment:

- **R –** Unreliable result. Analyte may or may not be present in the sample.
- **J –** Analyte present. Reported value may not be accurate or precise.
- **UJ –** Not detected, quantitation limit may be inaccurate or imprecise.
- **U –** Not detected. The associated number indicates approximate sample concentration necessary to be detected.
- **NJ –** The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

If any validation qualifiers are assigned these qualifiers should supersede any laboratory-applied qualifiers. Data that is not qualified as a result of this data validation is considered acceptable on the basis of the items specified for review. Data that is qualified as "R" are not sufficiently valid and technically supportable to be used for data interpretation. Data that is otherwise qualified due to minor data quality anomalies are usable, as qualified.

Table 2: Validator-applied qualification

Client Sample ID	***Analysis***	***Analyte***	***CAS #***	***Validator Qualifier***
MW-24S_050114	VOCs	trans-1,2-Dichloroethene	156-60-5	J
MW-24S_050114	VOCs	1,1,1-Trichloroethane	71-55-6	J
MW-24S_050114	VOCs	1,1-Dichloroethene	75-35-4	J
MW-24S_050114	VOCs	Bromomethane	74-83-9	U (0.5)
MW-24S_050114	VOCs	Toluene	108-88-3	U (0.5)
MW-24S_050114	1,4-Dioxane	1,4-Dioxane	123-91-1	U (1.3)
FB-1_042914	VOCs	Bromomethane	74-83-9	U (0.5)
EB-2_042914	VOCs	Bromomethane	74-83-9	U (0.5)
TRIP BLANK	VOCs	Bromomethane	74-83-9	U (0.5)

Major Deficiencies:

Major deficiencies include those that grossly impact data quality and necessitate the rejection of results. No major deficiencies are identified.

Minor Deficiencies:

Minor deficiencies include anomalies that directly impact data quality and necessitate qualification, but do not result in unusable data. The section below describes the minor deficiencies that are identified.

VOCs by USEPA SOM01.2:

Sample MW-24S_050114 displayed surrogate recoveries greater than the upper control limit for 1,1-dichloroethene-d2 at 105% and 1,2-dichloroethane-d4 at 134%. Trans-1,2-dichloroethene and 1,1-dichloroethene are target compounds associated with1,1-dichloroethene-d2 and the results from the 1X dilution are qualified as "J." 1,1,1-trichloroethane is a target compound associated with 1,2-dichloroethane-d4 and the result from the 1X dilution is qualified as "J."

Method blank samples MB 200-71915/6, MB 200-72030/9, and MB 200-72092/4 displayed positive detections for bromomethane at 0.196 µg/L, 0.299 µg/L, and 0.347 µg/L, respectively. The associated positive detections in the field blank, equipment blank, and trip blank samples are qualified as "U" at the reporting limit and were not used to assess contamination resulting from field sampling or sample transport activities. The positive detection reported for sample MW-24S)050114 was also qualified as "U" at the reporting limit.

Equipment blank sample EB-6_050214 displayed a positive detection for toluene at 0.14 µg/L. The associated sample result for MW-24S_050214 is qualified as "U" at the reporting limit.

1,4-Dioxane by USEPA 522:

Field blank sample FB-2_050114 displayed a positive detection for 1,4-dioxane 0.63 µg/L. Equipment blank sample EB-4_050114 displayed a positive detection 1,4-dioxane at 0.61 µg/L. The associated positive detection for sample MW-24S_050114 is qualified as "U" at the sample concentration.

Other Deficiencies:

Other deficiencies include anomalies that do not directly impact data quality and do not

necessitate qualification. The section below describes the other deficiencies that are identified.

VOCs by USEPA SOM01.2:

Sample MW-24S_050114 displayed a surrogate recovery greater than the upper control limit for 1,2-dichloroethane-d4 at a 2.8X dilution. The compounds reported from the dilution are not associated with 1,2-dichloroethane-d4; therefore, no qualification is required.

Method blank sample MB 200-71915/6 displayed a positive detection for multiple unknown TICsm hexamethylcyclotrisiloxane, and octamethylcyclotetrasiloxane. Method blank samples MB 200-72030/9, MB 200-72092/4, and MB 200-72110/14 displayed positive detections for unknown compounds. Data is not qualified on the basis of TIC detections in method blank samples.

Method blank sample MB 200-72030/9 displayed positive detections for chloromethane at 0.184 µg/L, 1,2,4-trichlorobenzene at 0.224 µg/L, and 1,2,3-trichlorobenzene at 0.362 µg/L. The associated sample results were non-detect; no qualification is required.

Sample MW-24S_050114 displayed results for cis-1,2-dichloroethene and trichloroethene greater than the linear range of the instrument calibration at a 1X dilution. The sample was analyzed at a 2.8X dilution; these results should be used for data interpretation.

The continuing calibration analyzed on 5/13/2014 at 10:54 displayed a percent difference greater than the control limit with appositive bias for 1,2-dichloroethane at 35.8%. The associated sample results were non-detect; no qualification is required.

Field blank and equipment blank samples FB-1_042914 and EB-2_042914 displayed positive detections for methylene chloride at 0.36 µg/L and 0.37 µg/L, respectively. The associated sample results were non-detect; no qualification is required.

Acetone was detected in the trip blank sample collected on 04/29/2014 at 2.8 µg/L and the trip blank sample collected on 5/1/214 at 3.3 µg/L. The associated sample results were non-detect; no qualification is required.

Field blank sample FB-2_050114 displayed positive detections for acetone (16 µg/L), methylene chloride (0.38 µg/L), 2-butanone (8.7 µg/L), toluene (0.083 µg/L), and ethylbenzene (0.40 µg/L). The associated sample results for MW-17D_050114 were non-detect or greater than 10X the blank concentrations; no qualification is required.

Equipment blank sample EB-4_050114 displayed a positive detection for methylene chloride at 0.61 µg/L. The associated sample result for MW-17D_050114 was non-detect; no qualification is required.

Equipment blank sample EB-6_050214 displayed positive detections for acetone (20 µg/L) methylene chloride (0.34 µg/L) 2-butanone (13 µg/L), and ethylbenzene (0.28 µg/L). The associated sample results for MW-24S_050214 were non-detect; no qualification is required.

Field blank sample FB-3_050214 displayed positive detections for acetone (19 µg/L), methylene chloride (0.37 µg/L), 2-butanone (14 µg/L), toluene (0.12 µg/L), and ethylbenzene (0.40 µg/L). The associated sample results for MW-24S_050214 were non-detect or previously qualified on the basis of equipment blank contamination; no further action is required.

1,4-Dioxane by USEPA 522:

Equipment blank sample EB-5_050214 displayed a positive detection for 1,4-dioxane at 0.58 µg/L. The associated positive detections were greater than 10X the blank concentration; no qualification was required.

Equipment blank sample EB-6_050214 displayed a positive detection for 1,4-dioxane at 0.84 µg/L. The associated positive detections were greater than 10X the blank concentration; no qualification was required.

Field blank sample FB-3_050214 displayed a positive detection for 1,4-dioxane at 0.74 µg/L. The associated positive detections were greater than 10X the blank concentration; no qualification was required.

Comments:

All samples arrived at the laboratory properly preserved within the acceptable temperature range of 4°C±2°C.

A field duplicate and parent sample pair (DUP_050114 and MW-5D_050114) was collected and analyzed for VOCs and 1,4-dioxane. For results less than 5X the RL, analytes meet the precision criteria if the absolute difference is less than ±1X the RL. For results greater than 5X the RL, analytes meet the precision criteria if the RPD is less than or equal to 35%. All analytes in the field duplicate sample met the precision criteria, with the exceptions noted above.

On the basis of this evaluation, the laboratory appears to have followed the specified analytical methods with the exception of errors discussed above. If a given fraction is not mentioned above, that means that all specified criteria were met for that parameter.

All data are considered usable, as qualified. In addition, completeness, defined as the percentage of analytical results that are judged to be valid, is 100%.

Signed:

Emily Strake

Emily Strake
Project Chemist/Risk Assessor

APPENDIX D

Groundwater Monitoring Well Sampling Logs

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: Amatek

Location: Sellersville

Project No.:

Weather: Sunny Mid-60s

Water Quality Meter Make/Model: YSI MDS 650, 071F100594

Water Quality Meter Serial #: Pine 05118

Field Personnel: Breiner

Signature:

Well ID: MW-20D **Well Depth:** ft **Screened/Open Interval:** to ft below TOC

Well Permit #: **Well Diameter:** inches

PID/FID Readings (ppm)

Background: —

Beneath Inner Cap: —

Pump Intake Depth: 186 ft below TOC

Depth to Water Before Pump Installation: 58.77 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
10:10			7.85		0.882		-75.7		0.70		-7.3		14.39			
10:15			7.56		0.980		-56.6		0.56		-16.1		14.32	50.76		
10:20			7.51		0.983		-49.1		0.56		-24.6		14.42	50.73		
10:25			7.50		0.985		-49.1		0.53		-27.1		14.33	50.71		
10:30			7.50		0.984		-44.2		0.49		-30.2		14.50	50.71		
10:35			7.49		0.986		-41.0		0.46		-32.4		14.32	50.74		
10:40			7.48		0.981		-38.2		0.43		-33.2		14.09	50.82		
10:45			7.48		0.987		-29.9		0.43		-33.9		14.18	50.86		
10:50			7.47		0.984		-30.3		0.44		-33.7		13.98	50.94		

COMMENTS:

10:05 Started pumping 10:52 sampled

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: Ametek - Sellersville

Location: Sellersville, PA

Project No.:

Weather: Sunny mid. 50's

Water Quality Meter Make/Model: YSI 650 MDS, 07F100594

Water Quality Meter Serial #: Pine 05118

Field Personnel: Breiner

Signature:

Well ID: MW-12D

Well Depth: 227 ft

Screened/Open Interval: ____ to ____ ft below TOC

Well Permit #: —

Well Diameter: 6 inches

PID/FID Readings (ppm)

Background: —

Beneath Inner Cap: —

Pump Intake Depth: 187 ft below TOC

Depth to Water Before Pump Installation: 50.56 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
9:10			8.59		0.467		69.2		1.10		-18.0		12.23			50.79
9:15			7.73		0.740		-32.7		0.70		-17.5		12.19			51.61
9:20			7.57		0.760		-8.9		0.64		-23.8		12.21			
9:25			7.53		0.760		-3.5		0.60		-23.8		12.27			51.27
9:30			7.52		0.760		-21.8		0.57		-25.7		12.32			51.34
9:35			7.53		0.761		-20.8		0.50		-28.4		12.46			51.36
9:40			7.52		0.760		-20.4		0.45		-29.3		12.55			51.37
9:45			7.53		0.760		-20.6		0.43		-29.8		12.56			51.37

COMMENTS:

9:05 started pumping 9:46 sampled

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

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Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: Ametek

Location: Sellersville

Project No.:

Weather: Sunny Mid-50's

Water Quality Meter Make/Model: YSI 650 MDS, 07F100594

Water Quality Meter Serial #: PINE 05118

Field Personnel: Breiner

Signature:

Well ID: MW-11S

Well Depth: 125 ft

Screened/Open Interval: ____ to ____ ft below TOC

Well Permit #:

Well Diameter: 4 inches

PID/FID Readings (ppm)

Background: —

Beneath Inner Cap: —

Pump Intake Depth: 85 ft below TOC

Depth to Water Before Pump Installation: 39.27 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
8:05			7.01		1.149		217		1.05		-10.6		12.11			39.88
8:10			7.04		1.146		197		0.81		-24.6		12.24			40.11
8:15			7.07		1.146		187		0.74		-28.2		12.32			40.26
8:20			7.09		1.146		160.4		0.67		-30.5		12.30			40.57
8:25			7.10		1.144		157.5		0.61		-32.3		12.27			[redacted]
8:30			7.09		1.143		160.6		0.57		-32.6		12.36			41.00
8:35			7.11		1.143		156.9		0.55		-29.9		12.47			41.20

COMMENTS:

8:00 Start pumping 8:36 sampled

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

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Site Name: Ametek

Location: Sellersville PA

Project No.:

Weather: Cloudy 50's

Water Quality Meter Make/Model: YSI 650 MDS

Water Quality Meter Serial #: 17031

Field Personnel: T. Dugstad, M. Smith

Signature:

Well ID: MW-15S Well Depth: 122 ft Screened/Open Interval: 52 to ____ ft below TOC

Well Permit #: ____ Well Diameter: 6" inches

PID/FID Readings (ppm)

Background: 0

Beneath Inner Cap: 0

Pump Intake Depth: 95 ft below TOC

Depth to Water Before Pump Installation: 58.65 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0730	X		7.22		.767		241.9		5.30		6.0		11.86		400	N/A
0735	X		7.57		.684		166.8		4.63		8.0		12.20		400	
0740	X		7.70		.666		151.5		5.13		12.0		12.76		400	
0745	X		7.78		.662		139.1		5.57		13.8		12.88		400	
0750	X		7.80		.655		131.4		5.91		12.9		12.91		400	
0755	X		7.82		.653		124.6		6.18		15.4		12.98		400	
0800	X	X	7.83		.651		121.6		6.21		16.0		12.99		400	↓
																Pump
																Interfered
																With
																IP.

COMMENTS:

VOC's & 1,4 Dioxane @ 0803 (3 VOA's ~ 2-250 mL)

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

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Site Name: Ametek

Location: Sellersville, PA

Project No.:

Weather: Sunny 60's

Water Quality Meter Make/Model: YSI Pros 650

Water Quality Meter Serial #: 17031

Field Personnel: T. Dugstad, M. Smith

Signature:

Well ID: MW-7S

Well Depth: 125 ft

Screened/Open Interval: 106 to ____ ft below TOC

Well Permit #:

Well Diameter: 6" inches

PID/FID Readings (ppm)

Background: 0

Beneath Inner Cap: 0

Pump Intake Depth: 80 ft below TOC

Depth to Water Before Pump Installation: 28.56 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0820	X		7.72		1.190		132.9		4.24		8.7		13.72		400	28.90
0825	X		7.60		1.158		128.8		2.04		13.1		13.59		400	29.04
0830	X		7.59		1.162		117.1		1.55		15.8		14.16		400	29.35
0835	X		7.58		1.183		111.6		1.13		16.9		14.22		400	29.70
0840	X		7.57		1.198		106.9		.90		17.1		14.24		400	29.91
0845	X		7.57		1.199		104.0		.87		17.3		14.24		400	30.05
0850	X		7.57		1.204		101.4		.81		17.5		14.23		400	30.20
0855	X		7.56		1.205		100.4		.78		17.4		14.22		400	30.28

COMMENTS:

VOC's & 1,4 Dioxane @ 0858 (3 VOA's & 2-250mL)

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

(10)

Site Name: Ametex

Location: Sellersville, PA

Project No.:

Weather: Sunny 60's

Water Quality Meter Make/Model: YSI 650 MSD

Water Quality Meter Serial #: 17031

Field Personnel: TT Dugstad, M. Smith

Signature:

Well ID: MW-5S **Well Depth:** 97 ft **Screened/Open Interval:** 78 to _____ ft below TOC

Well Permit #: _____ **Well Diameter:** 6" inches

PID/FID Readings (ppm)

Background: 0

Beneath Inner Cap: 0

Pump Intake Depth: 67 ft below TOC

Depth to Water Before Pump Installation: 31.81 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0920	X		7.84		1.498		111.1		4.27		10.6		12.36		400	N/A
0925	X		7.60		1.606		114.9		1.55		14.1		12.65		400	
0930	X		7.56		1.635		112.3		1.21		15.0		12.77		400	
0935	X		7.56		1.645		108.4		1.04		15.9		12.83		400	
0940	X		7.55		1.648		106.8		.73		15.9		12.92		400	
0945	X		7.55		1.654		105.8		.64		16.3		12.86		400	
0950	X		7.55		1.655		105.4		.67		16.2		12.84		400	
																Pump Interfered with IP.

COMMENTS:

VOC's & 1,4 Dioxane @ 0953 (3 VOA's & 2-250 mL)

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

(6)

Site Name: Ametek

Location: Sellersville, PA

Project No.:

Weather: Sunny 70's

Water Quality Meter Make/Model: YSI 650 MDS

Water Quality Meter Serial #: 17031

Field Personnel: T. Dugstad, M. Smith

Signature:

Well ID: MW-15D **Well Depth:** 212 ft **Screened/Open Interval:** 166 to ____ ft below TOC

Well Permit #: ____ **Well Diameter:** 6" inches

PID/FID Readings (ppm)

Background: 0

Beneath Inner Cap: 0

Pump Intake Depth: 179 ft below TOC

Depth to Water Before Pump Installation: 25.37 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1430	X		8.59		.437		37.3		2.96		9.9		12.77		400	25.70
1435	X		7.86		.541		52.6		1.81		2.0		13.63		400	26.11
1440	X		7.83		.546		51.9		1.42		3.9		13.81		400	26.23
1445	X		7.81		.547		49.9		.98		7.3		13.85		400	26.52
1450	X		7.80		.546		48.3		.92		5.4		14.02		400	26.70
1455	X		7.79		.547		47.3		1.46		11.8		14.18		400	27.00
1500	X		7.77		.546		49.4		1.74		12.2		14.52		400	27.15
1505	X		7.77		.547		48.3		1.71		8.6		14.68		400	27.26
1510	X		7.77		.548		48.6		1.72		5.5		14.69		400	27.31

COMMENTS:

VOC's & 1,4 Dioxane @ 1513 (3 vom's & 2-200 mL)

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

(5)

Site Name: Ametex

Location: Sellersville, PA

Project No.:

Weather: Sunny 60's

Water Quality Meter Make/Model: YSI 650 MDS

Water Quality Meter Serial #: 17031

Field Personnel: T. Dugstad, M Smith

Signature:

Well ID: MW-5D (New) Well Depth: 247 ft

Screened/Open Interval: 150 to 247 ft below TOC

Well Permit #: Well Diameter: 6" inches

PID/FID Readings (ppm)

Background: 0

Beneath Inner Cap: 0

Pump Intake Depth: 199 ft below TOC

Depth to Water Before Pump Installation: 73.68 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1314	X		8.89		.482		-22.4		1.33		32.6		13.36		300	N/A
1319	X		8.67		.594		-99.3		8.5		31.4		13.58		300	
1324	X		8.44		.606		-100.0		1.30		31.0		13.48		300	
1329	X		8.34		.605		-101.0		1.34		33.2		13.24		300	
1334	X		8.24		.605		-96.6		1.35		33.6		13.10		300	
1339	X		8.21		.604		-96.1		1.40		34.4		13.17		300	
1344	X		8.16		.604		-98.9		1.49		34.9		13.17		300	
1349	X	X	8.12		.603		-97.0		1.48		35.0		13.12		300	* Pump Intake Raised With IP

COMMENTS: (2 VOA's) (5-250mL) Collected Dup-050114 Collected At MW-5D New @1358

VOCs & 1,4 Dioxane @ 1352 MS/MSD 050114 Collected At MW-5D New

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

6/1/14

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

(1)

Site Name: Ametex

Location: Sellersville, PA

Project No.:

Weather: Cloudy 60's

Water Quality Meter Make/Model: YSI 650 MDS

Water Quality Meter Serial #: ~~10261~~ 17031

Field Personnel: T. Dygstad M. Smith

Signature:

Well ID: MW-16S Well Depth: 125 ft Screened/Open Interval: 106 to ____ ft below TOC

Well Permit #: Well Diameter: 6" inches

PID/FID Readings (ppm)

Background: 0

Beneath Inner Cap: 0

Pump Intake Depth: 80.5 ft below TOC

Depth to Water Before Pump Installation: 29.36 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0815	X		7.30		.145		4.5		2.03		56.1		17.10		400	29.41
0820	X		7.46		.143		-1.7		1.61		12.8		12.24		400	29.64
0825	X		7.48		.143		-16.3		1.91		8.3		12.32		400	29.90
0830	X		7.52		.141		-21.1		1.32		11.1		12.33		400	30.10
0835	X		7.53		.142		-24.7		1.69		9.0		12.38		400	30.30
0840	X		7.52		.142		-26.2		1.66		8.5		12.45		400	30.45
0845	X	X	7.51		.141		-26.2		1.69		8.0		12.48		400	30.35

COMMENTS:

VOC'S @ 0847 (3 VOA'S)

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

5/1/14

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

(2)

Site Name: Ametek

Location: Sellersville, PA

Project No.:

Weather: Sunny 60's

Water Quality Meter Make/Model: YSI 650 MDS

Water Quality Meter Serial #: 17031

Field Personnel: T. Dugstad M. Smith

Signature:

Well ID: MW-175 **Well Depth:** 115 ft **Screened/Open Interval:** 103 to ____ ft below TOC

Well Permit #: ____ **Well Diameter:** 6" inches

PID/FID Readings (ppm)

Background: 0

Beneath Inner Cap: 0

Pump Intake Depth: 83 ft below TOC

Depth to Water Before Pump Installation: 46.80 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
0926	X		7.46		.636		75.0		4.93		35.7		13.64		300	46.78
0931	X		7.36		.637		84.5		3.22		37.6		13.50		300	46.78
0936	X		7.42		.636		84.5		3.17		38.5		13.73		500	46.78
0941	X		7.46		.638		84.4		2.99		38.0		13.94		500	46.80
0946	X		7.45		.640		86.6		2.92		37.7		13.93		500	46.79
0951	X	X	7.46		.640		87.7		2.89		37.6		13.94		500	46.79

COMMENTS: VOC's @ 0954 - (3 VOA'S)

*Increased Flow From 300mL to 500mL After 2nd Set of Readings.

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

5/1/14

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

(3)

Site Name: Ametek

Location: Sellersville, PA

Project No.:

Weather: Cloudy 60's

Water Quality Meter Make/Model: YSI 650 MDS

Water Quality Meter Serial #: 17031

Field Personnel: T. Dusstad, M. Smith

Signature:

Well ID: MW-17D Well Depth: 198 ft Screened/Open Interval: 48 to ____ ft below TOC

Well Permit #: ____ Well Diameter: 6" inches

PID/FID Readings (ppm)

Background: 0

Beneath Inner Cap: 0

Pump Intake Depth: 175 ft below TOC

Depth to Water Before Pump Installation: 46.68 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1000	X		8.42		.245		40.0		7.32		9.0		14.56		300	46.66
1005	X		8.63		.344		15.1		1.32		98.6		12.80		300	46.67
1010	X		7.65		.614		43.2		2.50		1.0		12.88		300	46.65
1015	X		7.60		.623		50.4		2.12		9.0		12.90		300	46.66
1020	X		7.59		.627		56.5		1.72		8.5		12.94		300	46.64
1025	X		7.59		.627		57.7		1.59		4.5		12.96		300	46.62
1030	X	X	7.59		.627		57.6		1.58		6.9		12.97		300	46.62

COMMENTS:

1 VOC'S @ 1033 - (3 VOA'S)

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

5/11/14

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

(4)

Site Name: Ametek

Location: Sellersville, PA

Project No.:

Weather: Cloudy 60's

Water Quality Meter Make/Model: YSI 650 MDS

Water Quality Meter Serial #: 17031

Field Personnel: T. Dusstad, M. Smith

Signature:

Well ID: MW-20S

Well Depth: 122 ft

Screened/Open Interval: 103 to 119 ft below TOC

Well Permit #:

Well Diameter: 6" inches

PID/FID Readings (ppm)

Background: 0

Beneath Inner Cap: 0

Pump Intake Depth: 89 ft below TOC

Depth to Water Before Pump Installation: 49.20 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1057	X		7.59		.405		104.7		8.26		16.0		14.83		300	49.21
1102	X		7.32		.525		108.4		5.63		34.2		14.42		300	49.20
1107	X		7.34		.540		106.3		5.33		35.1		14.79		300	49.19
1112	X		7.35		.547		105.6		5.26		36.8		15.07		300	49.21
1117	X		7.37		.548		104.1		5.18		37.6		15.35		300	49.22
1122	X		7.35		.547		104.0		5.22		39.0		15.10		300	49.22
1127	X		7.34		.545		104.2		5.24		39.0		15.10		300	49.22

COMMENTS:

VOC's @ 1130 (3 VOA's)

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

4-29-14

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: Amtak-Sellersville

Location:

Project No.:

Weather: Rain 45°

Water Quality Meter Make/Model: YSI 6920

Water Quality Meter Serial #:

Field Personnel: Dave & Stan SES Tech.

Signature: [illegible]

Well ID: MW-185 Well Depth: 123 ft Screened/Open Interval: 19 to 123 ft below TOC

Well Permit #: Well Diameter: 6" inches

PID/FID Readings (ppm)

Background: 0 PPM

Beneath Inner Cap: 0 PPM

Pump Intake Depth: 91' ft below TOC

Depth to Water Before Pump Installation: 54.68 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1130	X		START													
1140	X		7.55		0.887		140.1		9.49		19.7		14.0		300	N/A
1145	X		7.55		0.890		131.5		9.55		15.0		13.47		↓	↓
1150	X		7.56		0.893		129.8		9.58		12.1		12.86			
1155	X		7.55		0.888		128.0		9.50		12.1		12.69			
1200	X		7.57		0.888		127.6		9.49		12.0		12.65			
1205	X		7.56		0.889		126.8		9.50		12.1		12.62			
1207		X														

COMMENTS:

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

5/1/14

Site Name: Ametek - Sellersville

Location: Sellersville, PA

Project No.:

Weather: Sunny ~~60's~~ ~70°F

Water Quality Meter Make/Model: YSI 6920

Water Quality Meter Serial #: Pine 05118

Field Personnel: V Benesh

Signature: V Benesh

Well ID: MW-11D

Well Depth: _____ ft

Screened/Open Interval: _____ to _____ ft below TOC

Well Permit #:

Well Diameter: _____ inches

PID/FID Readings (ppm)

Background: NM

Beneath Inner Cap: NM

Pump Intake Depth: 164 ft below TOC

Depth to Water Before Pump Installation: 43.59 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY mS/cm ~~(µS/cm)~~ READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mV) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/L) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) READING	TURBIDITY CHANGE*	TEMPERATURE (°C) READING	TEMPERATURE CHANGE*	PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
14:25	X		8.62		0.288		115.2		0.93		13.6		14.69		300	43.70
14:30	X		7.61		0.661		131.2		0.69		4.3		14.24		300	44.04
14:35	X		7.49		0.706		130.7		0.65		7.3		14.07		300	44.30
14:40	X		7.48		0.710		123.8		0.61		5.1		14.51		300	44.49
14:45	X		7.47		0.710		114.4		0.60		1.5		14.61		300	44.69
14:50	X		7.47		0.710		109.5		0.58		1.6		14.68		300	44.84
14:55	X		7.47		0.709		104.8		0.58		1.6		14.71		300	44.99
15:00		X														

COMMENTS:
Start pump: 14:15
Sample @ 15:00 MW-11D-050114

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

NM = not measured

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

5/1/14

Site Name: Ametek-Sellersville

Location: Sellersville, PA

Project No.:

Weather: Sunny ~70°F

Water Quality Meter Make/Model: YSI 6920

Water Quality Meter Serial #: Pine 05118

Field Personnel: V Benedi

Signature: V. Benedi

Well ID: MW-22D

Well Depth: _____ ft

Screened/Open Interval: _____ to _____ ft below TOC

Well Permit #:

Well Diameter: 6" inches

PID/FID Readings (ppm)

Background: NM

Beneath Inner Cap: NM

Pump Intake Depth: 198 ft below TOC

Depth to Water Before Pump Installation: 7.03 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY mS/cm ~~(µS/cm)~~		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
13:15	X		7.86		~~0.365~~ 8.7		8.7		2.48		-7.2		15.16		400	7.70
13:20	X		7.69		0.639		-82.2		0.76		-25.5		15.96		400	8.11
13:25	X		7.71		0.687		-117.5		0.57		-26.5		16.69		400	8.48
13:30	X		7.74		0.690		-129.7		0.51		-28.9		17.50		400	8.74
13:35	X		7.73		0.707		-127.9		0.49		-29.0		17.10		400	9.07
13:40	X		7.73		0.705		-130.7		0.49		-30.5		17.48		400	9.30
13:45		X														

COMMENTS:
Start pump: 13:08 purge water turbid (orange/brown) to start. Clears in ~5min
Sample 13:45 → MW-22D-050114

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

(7)

Site Name: Ametek

Location: Sellersville PA

Project No.:

Weather: Sunny 70's

Water Quality Meter Make/Model: YSI 650 MDS

Water Quality Meter Serial #: 17031

Field Personnel: T. Duggstad Mi Smith

Signature:

Well ID: MW-24S **Well Depth:** 101 ft **Screened/Open Interval:** 81 to ____ ft below TOC

Well Permit #: ____ **Well Diameter:** 6" inches

PID/FID Readings (ppm)

Background: 0

Beneath Inner Cap: 0

Pump Intake Depth: 70 ft below TOC

Depth to Water Before Pump Installation: 34.80 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units) READING	pH CHANGE*	SPECIFIC CONDUCTIVITY (µS/cm) READING	SPECIFIC CONDUCTIVITY CHANGE*	REDOX POTENTIAL (mV) READING	REDOX POTENTIAL CHANGE*	DISSOLVED OXYGEN (mg/L) READING	DISSOLVED OXYGEN CHANGE*	TURBIDITY (NTU) READING	TURBIDITY CHANGE*	TEMPERATURE (°C) READING	TEMPERATURE CHANGE*	PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
1550	X		7.82		.660		83.2		4.55		30.6		13.85		400	N/A
1555	X		7.53		.648		96.4		3.20		36.6		13.18		400	N/A
1600	X		7.40		.650		111.8		3.11		38.9		13.62		400	↓
1605	X		7.43		.652		104.8		3.09		39.7		13.72		400	↓
1610	X		7.41		.653		104.6		3.09		40.6		13.61		400	↓
1615	X		7.41		.651		104.2		2.98		39.9		13.40		400	↓
1620	X		7.40		.651		102.7		2.99		40.1		13.42		400	↓
																*Pump
																Interfered
																With
																IP.

COMMENTS:

VOC's & 1,4 Dioxane @ 1623 (3 VOA's & 2-250 mL)

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

( )

5/1/14

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: Ametek

Location: Sellersville, PA

Project No.:

Weather: Sunny ~70°F

Water Quality Meter Make/Model:

Water Quality Meter Serial #:

Field Personnel:

Signature:

Well ID: MW-125 **Well Depth:** ____ ft **Screened/Open Interval:** ____ to ____ ft below TOC

Well Permit #: **Well Diameter:** 6" inches

PID/FID Readings (ppm)

Background: NM

Beneath Inner Cap: NM

Pump Intake Depth: 72 ft below TOC

Depth to Water Before Pump Installation: 49.35 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm)		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
1525	X		7.54		0.726		159.3		3.48		-36.1		15.08		400	*
1530	X		7.49		0.729		157.5		3.37		-38.6		15.27		400	*
1535	X		7.48		0.727		142.6		3.19		-38.7		15.66		400	*
1540	X		7.47		0.729		145.5		3.16		-38.3		15.79		400	*
1545	X		7.50		0.728		136.2		3.20		-40.0		15.75		400	*
1550	X		7.46		0.727		149.3		3.11		-40.6		15.83		400	*
1555	X		7.43		0.729		156.6		3.08		-36.8		15.96		400	*
1600	X		7.39		0.726		164.6		3.05		-36.6		15.77		400	*
1605	X		7.38		0.727		166.0		3.08		-36.2		15.80		400	
1607		X														

COMMENTS:
Bank eroding + exposing well casing. Start pump 15:20
* Pump interference with probe Sample @ 16:07 - MW-125_050114

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

5/1/14

Site Name: Ametek - Sellersville

Location: Sellersville, PA

Project No.:

Weather: Cloudy 65°F

Water Quality Meter Make/Model: YSI 6920

Water Quality Meter Serial #: Pine 05118

Field Personnel: Valentina Benesti

Signature: V. Benesti

Well ID: MW-19D

Well Depth: _____ ft

Screened/Open Interval: _____ to _____ ft below TOC

Well Permit #:

Well Diameter: 6" inches

PID/FID Readings (ppm)

Background: NM

Beneath Inner Cap: NM

Pump Intake Depth: 173 ft below TOC

Depth to Water Before Pump Installation: 83.48 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm) mS/cm		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
8:50	X		7.48		0.471		-43.0		0.74		-2.9		13.49		400	79.41
8:55	X		7.47		0.481		-98.3		0.55		-11.5		13.79		400	79.03
9:00	X		7.67		0.484		-103.9		0.52		-15.2		14.08		400	78.80
9:05	X		7.65		0.485		-109.9		0.51		-15.2		14.38		400	78.60
9:10	X		7.76		0.489		-105.6		0.47		-14.9		14.18		400	78.39
9:15	X		7.78		0.490		-107.1		0.45		-14.9		14.35		400	78.28
9:20	X		7.84		0.492		-121.3		0.40		-15.3		14.22		400	78.10
9:25	X		7.87		0.496		-126.6		0.38		-16.7		14.18		400	78.00
9:30	X		7.89		0.497		-128.9		0.38		-15.6		14.16		400	77.91
9:35		X														

COMMENTS:
Start pumping: 8:43 take sample: MW-19D-050114 9:35

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

( )

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

5/1/14

Site Name: Ametek- Sellersville
Location: Sellersville, PA
Project No.:
Weather: Cloudy - 65° F

Water Quality Meter Make/Model: YSI 6920
Water Quality Meter Serial #: Pine 05118
Field Personnel: Valentina Benosk
Signature: VBenosk

Well ID: MW-21D **Well Depth:** _____ ft **Screened/Open Interval:** _____ to _____ ft below TOC
Well Permit #: _____ **Well Diameter:** _____ inches

PID/FID Readings (ppm)
Background: NM
Beneath Inner Cap: NM

Pump Intake Depth: 170 ft below TOC
Depth to Water Before Pump Installation: 35.02 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY (µS/cm) mS/cm		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
9:57	X		8.91		0.485		3.6		2.12		-27.1		15.08		300	34.89
10:00	X		8.94		0.488		-8.6		1.56		-11.4		15.11		300	35.15
10:05	X		8.93		0.487		-8.9		1.05		-8.7		15.66		300	35.39
10:10	X		8.94		0.489		-8.0		0.83		-18.3		15.80		300	35.67
10:15	X		8.93		0.491		+1.9		0.72		-17.4		15.92		300	35.94
10:20	X		8.92		0.491		7.8		0.69		-21.0		16.09		300	36.10
10:25	X		8.92		0.492		11.0		0.65		-21.1		16.24		300	36.26
10:30	X		8.92		0.492		10.5		0.62		-20.8		16.30		300	36.35
10:35	X		8.92		0.492		18.8		0.56		-20.3		16.38		300	36.58
10:40		X														

COMMENTS:
Start pump: 9:55 Collect Sample MW-21D-050114 @ 10:40

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

5/1/14

Low-Flow Purging and Sampling Field Data Sheet

Langan Engineering and Environmental Services (NJDEP Laboratory PA035)

Site Name: Ametek - Sellersville

Location: Ametek, Sellersville, PA

Project No.:

Weather: Cloudy - ~65°F

Water Quality Meter Make/Model: YSI 6920

Water Quality Meter Serial #: Pine 05118

Field Personnel: J. Benesh

Signature: J. Benesh

Well ID: MW-21S

Well Depth: _____ ft

Screened/Open Interval: _____ to _____ ft below TOC

Well Permit #: _____

Well Diameter: 6" inches

PID/FID Readings (ppm)

Background: NM

Beneath Inner Cap: NM

Pump Intake Depth: 86' ft below TOC

Depth to Water Before Pump Installation: 39.51 ft below TOC

TIME	PURGING	SAMPLING	pH (standard units)		SPECIFIC CONDUCTIVITY ~~(µS/cm)~~ mS/cm		REDOX POTENTIAL (mV)		DISSOLVED OXYGEN (mg/L)		TURBIDITY (NTU)		TEMPERATURE (°C)		PUMPING RATE (mL/min)	DEPTH TO WATER (ft below TOC)
			READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*	READING	CHANGE*		
11:00	X		7.51		0.750		122.5		1.19		-20.4		16.30		400	39.75
11:05	X		7.43		0.749		110.2		0.95		-27.7		16.42		400	40.03
11:10	X		7.44		0.750		78.0		0.92		-32.9		16.97		400	40.31
11:15	X		7.43		0.751		70.2		0.86		-33.5		17.13		400	40.48
11:20	X		7.41		0.750		70.2		0.86		-34.0		16.99		400	40.60
11:25		X														

COMMENTS:

Start pump: 10:50 Collect sample: MW-21S_050114 @ 11:25

*INDICATOR PARAMETERS HAVE STABLIZED WHEN 3 CONSECUTIVE READINGS ARE WITHIN: ± 0.1 for pH; ± 3% for Specific Conductivity and Temperature; ± 10 mv for Redox Potential; and ± 10% for Dissolved Oxygen and Turbidity

APPENDIX E

O&M Forms

Operation and Maintenance Summary- 2013

June 4, 2013

- Air stripper intake cleared, system samples collected, system check completed.

June 28, 2013

- System down upon arrival. Restart pumps. Clear all areas in woods with power equipment. Clear around all wells for easy access for gauging activities.

July 3, 2013

- Air stripper intake cleared, system samples collected, bag filters changed, system check completed.

July 10, 2013

- System down upon arrival. Try to restart, but still goes into high alarm. Empty stripper to get off of high-high. Check contactors in panel and reset. Still not running
- Check fuses with volt meter and find one is blown. Replace fuse, close panel and restart. All three pumps are operating.

August 7, 2013

- Air stripper intake cleared, system samples collected, system check completed.

September 3, 2013

- 10S panel in alarm. Alarm was reset, but only light lit on panel is the main power (no high level probe or pump running light are on), but pump is still running. Probable issue with panel. 10S pump shut off.
- Air stripper intake cleared, system samples collected, system check completed.
- Evidence of people on property (paintballs shot against roll up door on system shed)
- Airflow rate exiting stripper low (0.38 iw). Removed air flow tube and cleaned and reinstalled (0.43 iw flow). Had to adjust damper as a result of pressure dropping after system ran for 20 min. Changed blower pressure 19 iw, exit pressure 0.41 iw.
- Fixed rusted locks on most wells.

September 13, 2013

- On site to restart system after shutdown. Turn power off to panels, allow to sit for a few minutes then restart. The pumps start then shutdown. All panels show alarms. All power is turned off to system. S&S is on site later and finds that the transfer pump needs to be replaced.

October 2, 2013

- System down upon arrival
- Install new transfer pump. Replaced PVC and check valve influent to the pump. Installed a trueunion ball valve effluent on the pump. New motor electric box was not set up the same. Went to Lowes and picked up electrical supplies. New pump works well.
- Built enclosure around the stripper air intake
- MW-10S Panel- circuit board had a blown fuse. Replace fuse and it immediately plows again. Ad circuit board.

- MW-6s Panel- would not work in Auto. Check the probe and it was okay. Panel not working. Called John Scripter (GeoTech) for Tech support and was told they no longer work on these panels. He is sending over a quote for 1- panel to run all three well pumps
- RW-1 panel is still working well. The alarms worked as long as the control power was left on for the 6S and 10 S panels. Turned the breakers off for well pumps 6S and 10S.
- Kids have been riding skate boards on the property. They broke the doorknob off the system door and the light overhead. Thanks to the deadbolt they were not able to get into the system. The police stopped by and were alerted about the vandalism. Police were going to fill out a report and give it to their contact (property owner??). They suggested repairing the fence around the property and getting security cameras.
- Only RW-1 is running.

October 9, 2013

- Air stripper intake cleared, system samples collected, system check completed.
- Walked entire fenced perimeter of site, took notes on fallen trees and areas that fence needs to be repaired.
- Put up "No Trespassing" signs on all gates and access points to property

October 14, 2013

- System down upon arrival
- The new transfer pump that was just installed had one blown fuse. The other two fuses good. The motor was really hot and trying to run. Installed a new fuse and the motor does still run. When the new control panel is installed the pump needs to be rewired so it shuts down also when we get an alarm.
- The control panel for the stripper is not operating properly. Turn power off and back on and the relays chatter sometimes and sometimes they don't. Checked power and it was good. By passed all alarms and it was still doing the same thing. Reconnected every wire going through the relays thinking something was loose. Still same thing.
- Whole system still down.
- Called C&L electric they are schedule to come out Wednesday morning 10-16-13.

October 16, 2013

- System down upon arrival
- With electrician, rewire panel connections and install new motor starter and time delay relay.
- RW-1 running. New control panel ordered to control all pumps. Estimated three-four week delivery time.

October 28, 2013

- Repairs made to door and lock on system shed and light replaced over system door with a motion detector spot light.
- Three trees cut up across fence close to MW-15s and fence repaired in four locations.
- Combination locks and chains added to gates on fence that go to MW-16S and MW-17S.
- ADT and Access security companies on site to evaluate site for alarm system and security camera.
- RW-1 running upon departure.

November 4, 2013

- System samples collected, and system check completed.
- Chain and lock added to the gate next to MW-18S (lock set to 777)

December 2, 2013

- System shut down (RW-1) and three pump control panels removed. New control panel mounted.

December 3, 2013

- Conduit and wire run for all three pumps, power and controls, and alarm signal for stripper control panel. System was started to check for proper operation. Only RW01 would work in automatic mode.
- Damaged fence across from old Building 15 was checked. Fence post to be replaced was dug out.

December 4, 2013

- Trouble-shoot new control panel. Found 6S high level probe was not working and replace with a spare that was in the compound. All three pumps were working correctly.
- Auto dialer set up so if any of the pump stop pumping for any reason it will call out.
- Checked all alarms on stripper control panel (air stripper low pressure, air stripper low air flow, air stripper high water level, moisture separator high water level, and influent vapor carbon high pressure). All working.
- Installed new fence post and secured the fence back in place. New lock added to gate with code 777.

Operation and Maintenance Summary-2014

January 8, 2014

- Air stripper intake cleared, system samples collected, system check completed.

January 15, 2014

- Alarm system notifies that system is not running at 2:15am
- Tina (Langan) meets Dave (S&S) on site to troubleshoot the system. Air striper alarm was on. Check the high water level and see that it was ok. Turn the outlet and inlet blower control nobs to "hand" until air stripper alarm light turns off. Blower began running and control panel is restarted. All pumps start up. Wait ~20 minutes to confirm system continues to run.

January 17, 2014

- Alarm system notifies that system went down at 6:00pm 1/16/14
- Tina (Langan) checks the system, but is not able to restart. Appears there is a power supply issue that needs to be addressed by Dave (S&S) on Monday 1/20/14.

January 20, 2014

- Dave (S&S) found blown fuse for the control voltage on the air stripper control panel and replaced it.
- Rewired the new water pump control panel per GEOTECH for alert condition 4 to alarm when stripper control panel goes into alarm. Checked for proper operation and it works well.
- Restarted system and watched stripper effluent transfer pump cycle a couple times to make sure it was working well.

January 23, 2014

- Chuck (S&S) on site. System down. Troubleshoot and find a blown fuse. Replace fuse and restart system.
- Clean air inlet of built up snow
- All pumps are running well and pressure sand flow rates look good.

January 24, 2014

- Chuck (S&S) on site. System down. Troubleshoot stripper panel-may be a blown fuse.
- Check inside stripper for any signs of ice, none visible.
- Check all relays and wire connections. Found one relay that was lose, replugged in relay and retighted a few wires to ensure good contact.
- Pick up more fuses to store at site.
- Installed fuse and restarted system
- Replaced shut off valve at effluent sample port (was leaking). Valve looked corroded, no leaks with new valve.
- Checked inside stripper after running for 1.5 hrs. No ice was visible.
- Exit air stripper air flow- 0.43 IW, blower discharge pressure 22.5 IW

January 29, 2014

- Dave, Chuck, and Travis (S&S) on site. System down.

- Blown fuse on stripper control panel
- Took air stripper completely apart and cleaned (removed calcium build up on bottom tray, drilled out each hole, cleaned and removed sediment from stripper sump.)
- Checked each alarm for the air stripper for proper operation
- Found the high level for the air stripper worked about half the time (N/C float switch need to replace) and low level float switch was not working correctly (N/O float switch-bought at Lowes and replaced). Could not locate the N/C float switch in the area. Ordered from Grainger in Norristown and they will have it 1/30/2014 in the morning.
- Put air stripper back together. System down upon departure.

January 30, 2014
- Cuck (S&S) on site and system is down.
- Installed new high-high float in stripper. Set level and wired to panel.
- Restarted system. Checked on and off levels for transfer pump-OK.
- Shut off transfer pump to check if high-high float. Shut system down at the right water level in stripper to avoid water entering blower.
- Monitored system and transfer pump cycles for 30 minutes to make sure all system components are function properly.
- System running with no issues.

February 7, 2014
- Air stripper intake cleared, system samples collected, system check completed.

March 5, 2014
- Air stripper intake cleared, system samples collected, system check completed.

April 2, 2014
- Air stripper intake cleared, system samples collected, system check completed.

May 2, 2014
- Air stripper intake cleared, system samples collected, system check completed.

May 25, 2014
- System Down approximately 6am.

May 27, 2014
- Tina (Langan) on site to restart system, but was unsuccessful

May 28, 2014
- Dave (S&S) on site to investigate problem with the system. Finds that the motor for the booster blower needs to be replaced.

June 10, 2014
- Dave (S&S) installs new motor. System operating.

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		High
MW-10S System Status	P1	MW-10S		No Alarms
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	81987150
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	4679459
MW-10S Totalizer	FQI 101	MW-6D	≈.1-2 gpm	5902519
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	12
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	12
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	12
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	12
Filter changed on schedule?***			(yes)/no	Not changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/(N)
Probes cleaned? Y/(N)
ΔP Vessel A < 15 psi? (Y)/N
ΔP Vessel B < 15 psi? (Y)/N
Changed filters?*** Y/(N)

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Non Stop @ 60 gpm
MW-6S Non Stop @ 10.0 gpm
MW-10S Non Stop @ 6.5 gpm
Transfer Pump On - 12 min
Off - 1 min 10 sec

*****Filter change-out required monthly.**

Comments

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 1/8/14 **Time:** 0925

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	24.0
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	7.5
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	7
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.43

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		56°F
Transfer blower effluent temperature	TI-129	TI-129		79°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	33
Pressure between GACs	PI-104	PI-104	10-20 i.w.	9
OVA before GAC1	---		PPM	1.1
OVA between GAC1 and GAC2	---		PPM	0.0
OVA after GAC2	---		0.9 x GAC1 value	0.0

	Circle		
Air stripper trays cleaned?	Y/N		
Transfer pump probe cleaned?	Y/N		
ΔP across air stripper?	i.w. 16.5		ΔP = PI121 - PI123
ΔP across moisture separator?	i.w. -0.5		ΔP = PI123 - PI125
ΔP across GAC1?	i.w. 24		ΔP = PI128 - PI104
Air bag samples taken?	Y/N		
Moisture separator drained?	Y/N		

Record instrument and method used to collect vapor readings.

Comments Calibrated Minirae Multigas PID to 100 ppm isobutylene (1/8/14 CD)

Sampler Name Chuck Drevo **Signature:** [signature] **Date:** 1/8/14 **Time:** 0950

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			52°F
Air Stripper Pump Discharage Pressure	PI-110			40 psi
Effluent Water Flowrate	F4		60-90 gpm	~85
Effluent pH	—		6.0-9.0****	7.3
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? (Y/N) See COCs
Effluent from air stripper? (Y/N)

Comments Calibrated pH meter to 7.0 (1/8/14 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 1/8/14 **Time:** 1010

- 0725 on site, system running good. Tim Beneski of Langan is on site
- Inspected system + checked air intake - OK
- Collected monthly system samples, packed on ice, completed COCs + air bill
- Completed system check
- Calibrated YSI 6920 for sampling to be done later today
- Complete monthly gauging of all wells with Tim
- Sample MW-5S + MW-24S
- Pump purge water through system
- Clean up equipment
- 1600 Depart site
- Drop samples at Fed Ex

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: Langan Engineering + Environmental Services	Project Manager: Judd Herr	Date: 1/8/14	Chain of Custody Number: 185327
Address: 30 South 17th St Suite 300	Telephone Number (Area Code)/Fax Number: 215-491-6542		Lab Number:
City: Philadelphia; State: PA; Zip Code: 19103	Site Contact:	Lab Contact:	Page 1 of 1
Project Name and Location (State): Amtek - PA	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.:			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): 8260B SIM to achieve low level RL (0.05 ug/L) for 1,4 Dioxane			Special Instructions/ Conditions of Receipt
Effluent Air Stripper	1/8/14	0839		X							X				X			
Trip Blank				X							X				X			

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: C+S Technologies	1/8/14	1600	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: Langan Engineering + Environmental Services	Project Manager: Todd Herr	Date: 1/8/14	Chain of Custody Number: 185326
Address: 30 South 17th St Suite 300	Telephone Number (Area Code)/Fax Number: 215-491-6542	Lab Number	Page 1 of 1
City: Philadelphia; State: PA; Zip Code: 19103	Site Contact	Lab Contact	
Project Name and Location (State): Ametek - PA	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): FAA 624	Special Instructions/ Conditions of Receipt
Effluent Air Stripper	1/8/14	0839		X							X				X	
Influent Air Stripper	1/8/14	0830		X							X				X	
Trip Blank				X							X				X	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [illegible]	1/8/14	1600	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

S & S Technologies, Inc.
Field Activity Log

Project: Innetek **Date:** 1/23/14

Technician: **Chuck Drevo**

- 0700 On site
- System down - troubleshoot & find blown fuse.
- Replace fuse and restart system
- Clean air inlet of built up snow
- All pumps running good
- Pressures + flow rates look good
- 0800 Depart site

Signature: [signature]

S & S Technologies, Inc.
Field Activity Log

Project: Ametek **Date:** 1/24/14

Technician: **Chuck Drevo**

- 1030 On site, system down
- Troubleshoot Stripper panel - may be a blown fuse
- Check inside Stripper for any signs of ice, none visable
- Check all relays and wire connections, Found one relay that was loose, replugged in relay and retightened a few wires to ensure good contact.
- Go to Electrical supply in Quakertown to purchase more fuses
- Installed fuse + restarted system OK
- Replaced shut off valve at effluent sample port, was leaking. Valve looked to be corroded, no leaks with the new valve
- Checked inside stripper after running for 1.5 hrs. No ice was visable.
- Exit air Stripper air flow - 0.43 IW, Blower discharge pressure - 22.5 IW
- 1330 System running good, Depart site

Signature: [signature]

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		High
MW-10S System Status	P1	MW-10S		No Alarms
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	83705750
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	4918787
MW-10S Totalizer	FQI 101	MW-6D	≈.1-2 gpm	6081937
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	13
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	12
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	13
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	12
Filter changed on schedule?***			yes/no	Not changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/N
Probes cleaned? Y/N
ΔP Vessel A < 15 psi? Y/N
ΔP Vessel B < 15 psi? Y/N
Changed filters?*** Y/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Non Stop @ 58 gpm
MW-6S Non Stop @ 9.4 gpm
MW-10S Non Stop @ 6.8 gpm
Transfer Pump On - 11 min 40 sec
off - 1 min 10 sec

*****Filter change-out required monthly.**

Comments

Sampler Name Chuck Drevo **Signature:** [signature] **Date:** 2/7/14 **Time:** 0900

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	22.5
Control Panel Status	----	----	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	7.5
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	7
Air Flowrate Exiting Stripper	----	Photobolic gauge	.40-.50 i.w.	0.42

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		56°F
Transfer blower effluent temperature	TI-129	TI-129		80°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	32
Pressure between GACs	PI-104	PI-104	10-20 i.w.	9
OVA before GAC1	----		PPM	1.3
OVA between GAC1 and GAC2	—		PPM	0.0
OVA after GAC2	—		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? (Y)N 1/29/14
Transfer pump probe cleaned? (Y)N cleaned + replaced 1/30/14
ΔP across air stripper? i.w. 15.0 ΔP = PI121 - PI123
ΔP across moisture separator? i.w. 0.5 ΔP = PI123 - PI125
ΔP across GAC1? i.w. 23.0 ΔP = PI128 - PI104
Air bag samples taken? Y(N)
Moisture separator drained? (Y)N empty

Record instrument and method used to collect vapor readings.

Comments Calibrated MiniRae Multigas PID to 100 ppm isobutylene (2/7/14 CD)

Sampler Name Chuck Drevo **Signature:** [signature] **Date:** 2/7/14 **Time:** 0940

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			52°F
Air Stripper Pump Discharage Pressure	PI-110			45 psi
Effluent Water Flowrate	F4		60-90 gpm	~85
Effluent pH	---		6.0-9.0****	7.3
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? ~~Y~~N
Effluent from air stripper? ~~Y~~N See COCs

Comments Calibrated pH meter to 7.0 (2/7/14 CD)

Sampler Name Chuck Drevo **Signature:** [signature] **Date:** 2/7/14 **Time:** 1010

- 0645 on site, lot of snow and ice on site - difficult getting around site + opening gates.
- System running good
- Clean air inlet
- Collect monthly system samples, pack on ice, complete COCs, airbill
- Tina Beneski of Langan is on site, she is starting the monthly gauging
- Complete system check
- Complete monthly gauging of all wells with Tina. Could not gauge MW-16S due to ice over vault. Also could not gauge MW-215 + 210 + 170 due to snow and ice over manholes
- 1275 Depart site
- Drop samples at Fed Ex

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
[illegible]	[illegible]	2/17/14	159332
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
[illegible]	215-691-1542		

City	State	Zip Code	Site Contact	Lab Contact
[illegible]	[illegible]	[illegible]		

Project Name and Location (State)	Carrier/Waybill Number
[illegible]	

Contract/Purchase Order/Quote No.

Analysis (Attach list if more space is needed): [illegible]

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH		[illegible]											
[illegible]	[illegible]	[illegible]		X							X				X											
[illegible]	[illegible]	[illegible]		X							X				X											
[illegible]				X							X				X											

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other_____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By [illegible]	[illegible]	[illegible]	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-2B0 (0508)

Client	Project Manager	Date	Chain of Custody Number
Langan Engineering & Environmental Services	Todd Herr	2/12/14	159371
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
30 Cecil Pl Ste 200	215-491-6542		
City / **State** / **Zip Code**	**Site Contact** / **Lab Contact**		
Philadelphia / PA / 19103			
Project Name and Location (State)	**Carrier/Waybill Number**		
Fairless - PA			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): Total Hg (245.7)	Dissolved Hg (245.7)	Total As (Boxwork)	Special Instructions/ Conditions of Receipt
Effluent Air Stripper	2/12/14	0930		X			X						X			
Top Well				X			X						X			

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

Relinquished By	Date	Time	Received By	Date	Time
1. [illegible]	2/12/14	1300	1.		
2.			2.		
3.			3.		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		High
MW-10S System Status	P1	MW-10S		No Alarms
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	85895210
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	5269687
MW-10S Totalizer	FQI 101	MW-6D	≈1-2 gpm	6331745
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	12
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	12
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	12
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	12
Filter changed on schedule?***			yes/no	Not changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/N
Probes cleaned? Y/N
ΔP Vessel A < 15 psi? Y/N
ΔP Vessel B < 15 psi? Y/N
Changed filters?*** Y/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Min Stop @ 59 gpm
MW-6S Min Stop @ 9.2 gpm
MW-10S Min Stop @ 6.7 gpm
Transfer Pump
On - 11 min 35 sec
Off - 1 min 12 sec

*****Filter change-out required monthly.**

Comments

Sampler Name Chuck Drevo **Signature:** [signature] **Date:** 3/5/14 **Time:** 1035

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	22.5
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	7
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	7.5
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.41

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		55°F
Transfer blower effluent temperature	TI-129	TI-129		79°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	31.5
Pressure between GACs	PI-104	PI-104	10-20 i.w.	9
OVA before GAC1	---		PPM	0.8
OVA between GAC1 and GAC2	---		PPM	0.0
OVA after GAC2	---		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y/N
Transfer pump probe cleaned? Y/N
ΔP across air stripper? i.w. 15.5 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. -0.5 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 22.5 — ΔP = PI128 - PI104
Air bag samples taken? Y/N
Moisture separator drained? Y/N Empty

Record instrument and method used to collect vapor readings.

Comments Calibrated Mini Rae Multiquas PID to 100 ppm isobutylene (3/5/14 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 3/5/14 **Time:** 1100

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			52°F
Air Stripper Pump Discharage Pressure	PI-110			44 psi
Effluent Water Flowrate	F4		60-90 gpm	~85 gpm
Effluent pH	----		6.0-9.0****	7.3
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? (Y)N see COCs
Effluent from air stripper? (Y)N

Comments Calibrated pH meter to 7.0 (3/5/14 CD)

Sampler Name Chuck Drevo **Signature:** [signature] **Date:** 3/5/14 **Time:** 1130

- 0700 On site, about 1 foot of snow + ice on site, very difficult to get around property even in 4wd System running good
- Cleaned air inlet
- Tina Beneski of Langan is on site, set her up to begin gauging
- Collected monthly system samples, pack on ice, complete COCs + air bill
- Complete system check
- Complete gauging of all wells with Tina
- Secure compound + site
- 1345 Depart site
- Drop samples at Fed Ex

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Langan Engineering + Environmental Services	Todd Herr	3/5/14	187935
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
10 South 17th St Suite 300	215-491-6542		

City	State	Zip Code	Site Contact	Lab Contact
Philadelphia	PA	19103		

Project Name and Location (State)	Carrier/Waybill Number
Phase II - PA	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): 8260B Gas Toxicants (Low Level 01 GC/MS) for 1,4 Dioxane											Special Instructions/ Conditions of Receipt
Effluent dir Stripper	3/5/14	1009		X				X							X											
Trip Blank				X				X							X											

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature] TAS Tech	3/5/14	1600	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Langan Engineering + Environmental Services	Judd Herr	3/5/14	187934
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
10 South 17th St Suite 300	215-491-6542		

City	State	Zip Code	Site Contact	Lab Contact
Philadelphia	PA	19103		

Project Name and Location (State)	Carrier/Waybill Number
Apotex - PA	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): EPA Co14											Special Instructions/ Conditions of Receipt
Effluent Air Stripper	3/5/14	1009		X							X				X											
Influent Air Stripper	3/5/14	1000		X							X				X											
Trip Blank				X							X				X											

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By	Date	Time	1. Received By	Date	Time
[signature] STS Tech	3/5/14	1600			
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		High
MW-10S System Status	P1	MW-10S		No Alarms
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	88735650
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	5644497
MW-10S Totalizer	FQI 101	MW-6D	≈.1-2 gpm	6598057
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	13
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	12
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	13
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	12
Filter changed on schedule?***			yes/no	Not changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/N
Probes cleaned? Y/N
ΔP Vessel A < 15 psi? Y/N
ΔP Vessel B < 15 psi? Y/N
Changed filters?*** Y/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Non Stop @ 60 gpm
MW-6S Non Stop @ 9.3 gpm
MW-10S Non Stop @ 6.6 gpm
Transfer Pump On - 11 min 40 sec
Off - 1 min 10 sec

*****Filter change-out required monthly.**

Comments

Sampler Name Chuck Drevo **Signature:** [signature] **Date:** 4/7/14 **Time:** 0900

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	21.5
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	6.5
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	7
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.41

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		57°F
Transfer blower effluent temperature	TI-129	TI-129		81°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	31
Pressure between GACs	PI-104	PI-104	10-20 i.w.	8
OVA before GAC1	---		PPM	0.9
OVA between GAC1 and GAC2	---		PPM	0.0
OVA after GAC2	---		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y/N
Transfer pump probe cleaned? Y/N
ΔP across air stripper? i.w. 15 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. -0.5 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 23 — ΔP = PI128 - PI104
Air bag samples taken? Y/N
Moisture separator drained? Y/N Empty

Record instrument and method used to collect vapor readings.

Comments Calibrated Min-Rae Multigas PID to 100ppm isobutylene (4/2/14 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 4/2/14 **Time:** 0930

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			57°F
Air Stripper Pump Discharage Pressure	PI-110			44 psi
Effluent Water Flowrate	F4		60-90 gpm	~85 gpm
Effluent pH	----		6.0-9.0****	7.2
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? (Y/N) See COCs
Effluent from air stripper? (Y/N)

Comments Calibrated pH meter to 7.0 (4/2/14 CO)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 4/7/14 **Time:** 1000

- 0700 On site, system running good
- Changed air inlet
- Tina Benesiki of Langan is on site, will begin monthly gauging
- Collected Monthly system samples, pack on ice, complete COCs + air bill
- Complete system check
- Complete monthly gauging of all wells
- Take final readings, secure compound
- 1200 Depart site
- Drop samples at Fed Ex

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Langan Engineering & Environmental Services	Judd Herr	4/2/14	184630
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
30 South 17th St Suite 300	215-491-6542		

City	State	Zip Code	Site Contact	Lab Contact
Philadelphia	PA	19103		

Project Name and Location (State)	Carrier/Waybill Number
Ambler PA	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): EPA 624											Special Instructions/ Conditions of Receipt
Effluent Air Stripper	4/2/14	0800		X							X				X											
Influent Air Stripper	4/2/14	0800		X							X				X											
Trip Blank				X							X				X											

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature] SES Tech	4/2/14	1500	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

[redacted]

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Langan Engineering & Environmental Services	Judd Hoir	4/2/14	184631
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
30 South 17th St Suite 700	215-491-6542		

City	State	Zip Code	Site Contact	Lab Contact
Philadelphia	PA	19103		

Project Name and Location (State)	Carrier/Waybill Number
Austell - GA	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): 8260B Sign to Austell	Iodinated KI (Iodine)	Gr 1,4 Dioxane	Special Instructions/ Conditions of Receipt
Effluent Air Stripper	4/2/14	1209		X				X							X			
Trip Blank				X				X							X			

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By	Date	Time	1. Received By	Date	Time
[signature] SES Tech	4/2/14	1500			
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		High
MW-10S System Status	P1	MW-10S		No Alarms
RW-1 Totalizer	FQI 103	RW-1	≈60 gpm	90742280
MW-6S Totalizer	FQI 102	MW-6S	≈9 gpm	6043600
MW-10S Totalizer	FQI 101	MW-6D	≈6 gpm	6881765
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	13
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	13
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	13
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	13
Filter changed on schedule?***			yes/no	Not changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/N
Probes cleaned? Y/N
ΔP Vessel A < 15 psi? Y/N
ΔP Vessel B < 15 psi? Y/N
Changed filters?*** Y/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Non Stop @ 58 gpm
MW-6S Non Stop @ 9.3 gpm
MW-10S Non Stop @ 6.4 gpm
Transfer Pump
On - 11 min 35 sec
Off - 1 min 8 sec

*****Filter change-out required monthly.**

Comments

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 5/2/14 **Time:** 1310

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	20.5
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	5.5
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	8
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.41

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		58°F
Transfer blower effluent temperature	TI-129	TI-129		82°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	30
Pressure between GACs	PI-104	PI-104	10-20 i.w.	8
OVA before GAC1	---		PPM	1.6
OVA between GAC1 and GAC2	---		PPM	0.0
OVA after GAC2	---		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y/N
Transfer pump probe cleaned? Y/N
ΔP across air stripper? i.w. 15 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. -2.5 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 22 — ΔP = PI128 - PI104
Air bag samples taken? Y/N
Moisture separator drained? Y/N Empty

Record instrument and method used to collect vapor readings.

Comments Calibrated Mini Rae Multigas PID to 100ppm isobutylene (5/2/14 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 5/2/14 **Time:** 1340

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			54°F
Air Stripper Pump Discharage Pressure	PI-110			45 psi
Effluent Water Flowrate	F4		60-90 gpm	~85
Effluent pH	----		6.0-9.0****	7.3
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Judd Herr at 215-491-6542 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? (Y)N
Effluent from air stripper? (Y)N See COCs

Comments Calibrated pH meter to 7.0 (5/2/14 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 5/2/14 **Time:** 1405

- 0700 on site for GWS, system running good
- Cleaned air inlet
- Gauged all wells as part of GWS activities on 4/29/14
- Collected Monthly system samples, packed on ice, complete COCs + air bill
- Complete system check
- Take final readings + secure compound
- 1415 Depart site

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Langan Engineering + Environmental Services	Todd Herr	5/2/14	191066
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
30 South 17th St Suite 200	215-491-6542		

City	State	Zip Code	Site Contact	Lab Contact
Philadelphia	PA	19103		

Project Name and Location (State): Oreland - PA

Carrier/Waybill Number:

Contract/Purchase Order/Quote No.:

Analysis (Attach list if more space is needed): EPA 624

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH		EPA 624												
Effluent Air Stripper	5/2/14	1237		X							X				X												
Influent Air Stripper	5/2/14	1230		X							X				X												
Trip Blank				X							X				X												

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By: [signature] STS Tech	5/2/14	1530	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Langan Engineering + Environmental Services	Judd Herr	5/2/14	191765
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
30 South 17th St Suite 300	215-491-6542		

City	State	Zip Code	Site Contact	Lab Contact
Philadelphia	PA	19103		

Project Name and Location (State)	Carrier/Waybill Number
Amtrak - PA	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): 8260B SIM Tetrahydrofuran low level RL (20 ug/L) for 14 days											Special Instructions/ Conditions of Receipt
Effluent Air Stripper	5/2/14	1239		X				X							X											
Trip Blank				X				X							X											

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature] J.S. Tech	5/2/14	1530	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		High
MW-10S System Status	P1	MW-10S		No Alarms
RW-1 Totalizer	FQI 103	RW-1	≈60 gpm	93730490
MW-6S Totalizer	FQI 102	MW-6S	≈9 gpm	6433545
MW-10S Totalizer	FQI 101	MW-6D	≈6 gpm	7147951
Particulate Filters (Before Air Stripper)	F-1	F-1		after changeout
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	18 → 11
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	12 → 11
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	18 → 11
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	12 → 11
Filter changed on schedule?***			(yes)/no	Changed bag filters
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/(N)
Probes cleaned? Y/(N)
ΔP Vessel A < 15 psi? (Y)/N
ΔP Vessel B < 15 psi? (Y)/N
Changed filters?*** (Y)/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Never Stop @ 57 gpm
MW-6S Never Stop @ 9.3 gpm
MW-10S Never Stop @ 7.0 gpm
Transfer Pump
On - 11 min 15 sec
Off - 1 min 6 sec

*****Filter change-out required monthly.**

Comments

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 6/17/14 **Time:** 0935

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	19.5
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	5
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	9.5
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.40

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		60°F
Transfer blower effluent temperature	TI-129	TI-129		84°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	30
Pressure between GACs	PI-104	PI-104	10-20 i.w.	8
OVA before GAC1	---		~~PPM~~ ppb	0.0
OVA between GAC1 and GAC2	---		~~PPM~~ ppb	0.0
OVA after GAC2	---		0.9 x GAC1 value ppb	0.0

Circle

Air stripper trays cleaned? Y(N)
Transfer pump probe cleaned? Y(N)
ΔP across air stripper? i.w. 14.5 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. ~4.5 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 32 — ΔP = PI128 - PI104
Air bag samples taken? Y(N)
Moisture separator drained? (Y)N empty

Record instrument and method used to collect vapor readings.

Comments Calibrated ppb Rae plus PID to 10 ppm isobutylene (6/17/14 CD)
Pine # 10604

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 6/17/14 **Time:** 1000

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_2O Temp	TI-101			53°F
Air Stripper Pump Discharage Pressure	PI-110			42 psi
Effluent Water Flowrate	F4		60-90 gpm	~85
Effluent pH	---		6.0-9.0****	7.84
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Judd Herr at 215-491-6542 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? (Y)/N
Effluent from air stripper? (Y)/N
see COCs

Comments Calibrated Oakton pH meter to 7.0 (6/17/14 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 6/17/14 **Time:** 1035

- 0700 On site, system running good
- Cleaned air inlet
- Collected monthly system samples, completed COCs, pack on ice
- Change bag filters
- Complete system check
- Monthly gauging of all wells w/ Tim Benesko of Langan
- 1210 Depart site
- Drop samples at Fed Ex

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Langan Engineering, Environmental Services	Todd Herr	6/19/14	159678
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
210 South 17th St Suite 300	215-491-6542		

City	State	Zip Code	Site Contact	Lab Contact
Philadelphia	PA	19103		

Project Name and Location (State)	Carrier/Waybill Number
Ametek PA	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): EPA 624											Special Instructions/ Conditions of Receipt
Effluent Air Stripper	6/19/14	0809		3							X				X											
Influent Air Stripper	6/19/14	0800		3							X				X											
Trip Blank				2							X				X											

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: Todd Herr	6/19/14	1500	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Langan Engineering + Environmental Services	Client Project Manager: Todd Herr	Site Contact:	Lab Contact:	COC No: 048883
Address: 30 South 17th St Suite 300	Telephone: 215-491-6542	Telephone:	Telephone:	1 of 1 COCs
City/State/Zip: Philadelphia PA 19103	Email:	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone:		TAT if different from below _____		Walk-in client ☐
Project Name: Austin PA	Method of Shipment/Carrier:	☐ 3 weeks		Lab pickup ☐
		☐ 2 weeks		Lab sampling ☐
Project Number:	Shipping/Tracking No:	☐ 1 week		Job/SDG No:
		☐ 2 days		
		☐ 1 day		

P O #			Matrix					Containers & Preservatives																				
Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Filtered Sample (Y / N)	Composite C / Grab G	Sample Sum to lines 1 and 2 RL (2 ml) for 1,4 Dioxane											Sample Specific Notes / Special Instructions:
Effluent Air Stripper	10/14			1									X				X											
Trip Blank				2									X				X											

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[illegible]	[illegible]	10/14 1600			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		Off
MW-6S Probe Status	P2	MW-6S		Off
MW-6S System Status	P2	MW-6S		off
MW-10S Pump Status	P1	MW-10S		off
MW-10S Probe Status	P1	MW-10S		off
MW-10S System Status	P1	MW-10S		off
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	74710010
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	4159458
MW-10S Totalizer	FQI 101	MW-6D	≈.1-2 gpm	5567197
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	10
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	10
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	10
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	10
Filter changed on schedule?***			yes/no	Not changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/N
Probes cleaned? Y/N
ΔP Vessel A < 15 psi? Y/N
ΔP Vessel B < 15 psi? Y/N
Changed filters?*** Y/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for: **Plant Well RW-1** 60 gpm
MW-6S – 0
MW-10S – 0
Transfer Pump
On - 6 min 10 sec
Off - 1 min 25 sec

*****Filter change-out required monthly.**

Comments

Sampler Name Chuck Drevo **Signature:** [signature] **Date:** 10/9/13 **Time:** 0900

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	20.5
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	5.5
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	8
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.41

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		56°F
Transfer blower effluent temperature	TI-129	TI-129		79°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	32
Pressure between GACs	PI-104	PI-104	10-20 i.w.	9
OVA before GAC1	---		PPM	1.5
OVA between GAC1 and GAC2	---		PPM	0.0
OVA after GAC2	---		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y/(N)
Transfer pump probe cleaned? Y/(N)
ΔP across air stripper? i.w. 15 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. -2.5 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 23 — ΔP = PI128 - PI104
Air bag samples taken? Y/(N)
Moisture separator drained? (Y)/N empty

Record instrument and method used to collect vapor readings.

Comments Calibrated Mini Rae Multigas PID to 100 ppm isobutylene (10/9/13 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 10/7/13 **Time:** 0930

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			53°F
Air Stripper Pump Discharage Pressure	PI-110			47 psi
Effluent Water Flowrate	F4		60-90 gpm	~85
Effluent pH	---		6.0-9.0****	7.2
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? (Y)N
Effluent from air stripper? (Y)N see COCs

Comments Calibrated pH meter to 7.0 (10/9/13 CD)

Sampler Name Chuck Drevo **Signature:** [signature] **Date:** 10/9/13 **Time:** 0950

- 0700 on site, RW-1 running good, RW-6S + 10S are shut off
- Tina Benesiki of Langan is on site
- Inspected system + checked air stripper intake
- Collected monthly system samples, packed on ice, completed COCs + air bill
- Completed system check
- Completed gauging of all wells with Tina
- Completed sampling of MW-5S + MW-24S
- Walked entire fenced perimeter of site, took notes on fallen trees + areas that fence needs to be repaired
- Put up "No Trespassing" signs on all gates + access points to property
- 1630 Depart site

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: Langan Engineering & Environmental Services	Project Manager: Todd Herr	Date: 10/9/13	Chain of Custody Number: 174335
Address: 30 South 17th St Suite 300	Telephone Number (Area Code)/Fax Number: (215) 491-6542	Lab Number	Page 1 of 1
City: Philadelphia; State: PA; Zip Code: 19103	Site Contact	Lab Contact	
Project Name and Location (State): Ametek - PA	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil	Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Analysis (Attach list if more space is needed): Method 8260B Gas to Carbon Tetrachloride Tetrachloride for 1,1 Dichloroethane	Special Instructions/ Conditions of Receipt
Effluent Air Stripper	10/9/13	0809		X			X						X	
Trip Blank				X			X						X	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature] STS Tech	10/9/13	1600	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Langan Engineering & Environmental Services	~~Kevin Burns~~ Todd Herr	10/9/13	174384
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
30 South 17th St Suite 300	(215) 491-6542		

City	State	Zip Code	Site Contact	Lab Contact
Philadelphia	PA	19103		

Project Name and Location (State)	Carrier/Waybill Number
Ametek	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): EPA Co2											Special Instructions/ Conditions of Receipt
Effluent Air Stripper	10/9/13	0800		X							X				X											
Influent Air Stripper	10/9/13	0800		X							X				X											
Trip Blank				X							X				X											

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [illegible] SES Tech	10/9/13	1600	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		ON
Plant Well RW-1 Probe Status	P3	RW-1		HIGH
Plant Well RW-1 System Status	P3	RW-1		NO ALARMS
MW-6S Pump Status	P2	MW-6S		OFF
MW-6S Probe Status	P2	MW-6S		↓
MW-6S System Status	P2	MW-6S		↓
MW-10S Pump Status	P1	MW-10S		OFF
MW-10S Probe Status	P1	MW-10S		↓
MW-10S System Status	P1	MW-10S		↓
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	76713400
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	4159450
MW-10S Totalizer	FQI 101	MW-6D	≈.1-2 gpm	5567200
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	12
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	11
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	12
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	11
Filter changed on schedule?***			yes/no	YES-
Well Packer Pressure	P1		130 psi	N/A

Circle

Pumps pulled? Y/N
Probes cleaned? Y/N
ΔP Vessel A < 15 psi? Y/N
ΔP Vessel B < 15 psi? Y/N
Changed filters?*** Y/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for: **Plant Well RW-1** NON-STOP @
MW-6S OFF
MW-10S OFF
Transfer Pump ON - 6 min / OFF - 1 min 15 sec } Approx 85 GPM

*****Filter change-out required monthly.**

Comments

Sampler Name: Dave Sawyer **Signature:** [signature] **Date:** 11-4-13 **Time:** 0830

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	21.0
Control Panel Status	----	----	Alarm Condition (Y/N)	No
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	6
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	-7
Air Flowrate Exiting Stripper	----	Photobolic gauge	.40-.50 i.w.	.42

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		57°
Transfer blower effluent temperature	TI-129	TI-129		80°
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	32
Pressure between GACs	PI-104	PI-104	10-20 i.w.	8
OVA before GAC1	---		PPM	0.9
OVA between GAC1 and GAC2	---		PPM	0.2
OVA after GAC2	---		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y/N
Transfer pump probe cleaned? Y/N
ΔP across air stripper? i.w. 15 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. -1 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 24 — ΔP = PI128 - PI104
Air bag samples taken? Y/N
Moisture separator drained? Y/N Empty

Record instrument and method used to collect vapor readings.

Comments MultiRAE Plus - calibrated to 100 PPM.

Sampler Name: Dave Seaman **Signature:** [signature] **Date:** 11-4-13 **Time:** 0910

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			53°
Air Stripper Pump Discharage Pressure	PI-110			47
Effluent Water Flowrate	F4		60-90 gpm	Approx 85
Effluent pH	—		6.0-9.0****	7.40
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? Y/N
Effluent from air stripper? Y/N

Comments Calibrated PH meter to 4.0, 7.0 & 10.0. (D.S. 11-4-13)

Sampler Name: Dave Seaman **Signature:** Dave Se **Date:** 11-4-13 **Time:** 0955

0715 system running upon arrival.
- Met with Tina on site.
- Completed system samples.
- Completed system check.
- Tina completed well gauging
- Went to Lowes and got a chain and lock for the gate next to MW-185. Set Lock to (7777).
- 1130 Departed site

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact			
Company Name: Langan Engineering	Client Project Manager: Judd Herr	Site Contact:	Lab Contact:
Address: 2700 Kelt, Dr. Warrington	Telephone:	Telephone:	Telephone:
City/State/Zip: Warrington, PA 18976	Email: Jherr@Langan.com		
Phone: 215-491-6542			
Project Name: AmetekK-PA	Method of Shipment/Carrier:		
Project Number:	Shipping/Tracking No:		
PO#			

COC No: 063112
1 of 1 COCs

Analysis Turnaround Time (in BUS days)
TAT if different from below _____
☐ 3 weeks
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

For lab use only
Walk-in client ☐
Lab pickup ☐
Lab sampling ☐
Job/SDG No:

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C/Grab=G	Analyses: Method 8260B SIM to achive low level RL (2.0 ug/L) For 1,4 Dioxane				Sample Specific Notes / Special Instructions:
Effluent Air Stripper	11-4-13	0800		X									X			G	X	X	X	X	
Trip Blank																	X	X	X	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dave [illegible]	S&S Tech	11-4-13 1080			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact

Company Name: Langan Engineering	Client Project Manager: Judd Herr	Site Contact:	Lab Contact:	COC No: 063113
Address: 2700 Kelly Dr	Telephone:	Telephone:	Telephone:	1 of 1 COCs
City/State/Zip: Warrington, PA 18976	Email: Jherr@Langan.com	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: 215-491-6542		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab pickup ☐ Lab sampling ☐
Project Name: Ametek-PA	Method of Shipment/Carrier:			
Project Number:	Shipping/Tracking No:			Job/SDG No:
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	Analyses: EPA 624										Sample Specific Notes / Special Instructions:
Effluent Air Stripper	11-4-13	0800		X						X							X										
Influent Air Stripper	11-4-13	0751		X						X							X										
Trip Blank				X						X							X										

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Dave Dean	SES Tech	11-4-13 1010			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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Ametek

1-20-14 Dave Seaman S&S Tech

0710 System down upon arrival

- Found a blown fuse for the control voltage on the air stripper control panel.
- Rewired the new water pump control panel per GEOTECH for alert condition 4 to alarm when stripper control panel goes into alarm. Checked for proper operation and it works good.
- Restarted system.
- Watched stripper effluent transfer pump cycle a couple times. Working good.
- 0930 System running upon departure.

- Stripper Air Flow .40 H_2O
- Stripper Sump pressure 21.0 H_2O
- RW-1 Totalizer 82650700
- 65 4745610
- 105 5977970

- Called Tina to update.

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		-
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		-
MW-6S System Status	P2	MW-6S		No alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		-
MW-10S System Status	P1	MW-10S		No alarms
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	79125225
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	4173236
MW-10S Totalizer	FQI 101	MW-6D	≈.1-2 gpm	5574584
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	21 → 12
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	13 → 12
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	20 → 12
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	13 → 12
Filter changed on schedule?***			(yes)/no	changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/(N)
Probes cleaned? (Y)/N [illegible] install
ΔP Vessel A < 15 psi? (Y)/N Dirty
ΔP Vessel B < 15 psi? (Y)/N
Changed filters?*** (Y)/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Nm Stop @ 60 gpm
MW-6S Nm Stop @ 10 gpm
MW-10S Nm Stop @ 5.7 gpm
Transfer Pump On - 12 min
Off - 1 min

*****Filter change-out required monthly.**

Comments

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 12/5/13 **Time:** 0920

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	20.5
Control Panel Status	—	—	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	6
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	8
Air Flowrate Exiting Stripper	----	Photobolic gauge	.40-.50 i.w.	0.40

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		56°F
Transfer blower effluent temperature	TI-129	TI-129		80°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	31
Pressure between GACs	PI-104	PI-104	10-20 i.w.	8
OVA before GAC1	—		PPM	0.8
OVA between GAC1 and GAC2	—		PPM	0.0
OVA after GAC2	—		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y/N
Transfer pump probe cleaned? Y/N
ΔP across air stripper? i.w. 14.5 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. ~2 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 23 — ΔP = PI128 - PI104
Air bag samples taken? Y/N
Moisture separator drained? Y/N Empty

Record instrument and method used to collect vapor readings.

Comments Calibrated MiniRae Multigas PID to 100 ppm isobutylene (12/5/13 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 12/5/13 **Time:** 0950

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			53°F
Air Stripper Pump Discharage Pressure	PI-110			46 psi
Effluent Water Flowrate	F4		60-90 gpm	~85
Effluent pH	----		6.0-9.0****	7.1
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? (Y/N)
Effluent from air stripper? (Y/N) see COCs

Comments Calibrated pH meter to 7.0 (12/5/13 CD)

Sampler Name Chuck Drevo **Signature:** [signature] **Date:** 12/5/13 **Time:**_____

- 0855 On site, system running good. Started system at approx 1500 on 12/4/13
- Inspected system + check air intake - ok
- Tina Beneski of Langan is on site
- Collected monthly system samples, packed on ice + completed COCs + air bill
- Completed system check
- Adjusted flow rates for each well and effluent discharge
- Change bag filters, readjust flow rate for each pump
- Complete monthly gauging of all wells with Tina
- 1220 Depart site
- Drop samples at Fed Ex

Denver
4955 Yarrow Street

Arvada, CO 80002
phone 303.736.0100 fax 303.431.7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Judd Herr	Site Contact:	Date: 12/5/13	COC No.
Your Company Name here Langan Engineering & Env Services	Tel/Fax:	Lab Contact:	Carrier:	1 of 1 COCs
Address 30 South 17th St Suite 300	Analysis Turnaround Time			Job No.
City/State/Zip Philadelphia PA 19103	Calendar (C) or Work Days (W) _____			
(xxx) xxx-xxxx Phone 215-491-6547	TAT if different from Below _____			
(xxx) xxx-xxxx FAX	☐ 2 weeks			SDG No.
Project Name: Ametek - PA	☐ 1 week			
Site:	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample: EPA 624	Sample Specific Notes:
Effluent Air Stripper	12/5/13	0839	grab	GW	3	X	
Influent Air Stripper	12/5/13	0830	grab	GW	3	X	
Trip Blank					2	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____ 1,2

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	S+S Tech	12/5/13 1700			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Denver
4955 Yarrow Street

Arvada, CO 80002
phone 303.736.0100 fax 303.431.7171

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Project Manager: Jude Herr	Site Contact:	Date: 12/5/13	COC No:
Your Company Name here: Langan Engineering + Env. Services	Tel/Fax:	Lab Contact:	Carrier:	1 of 1 COCs
Address: 30 South 17th St Suite 300	Analysis Turnaround Time			Job No.
City/State/Zip: Philadelphia PA 19103	Calendar (C) or Work Days (W) _____			
(xxx) xxx-xxxx Phone: 215-691-6562	TAT if different from Below _____			
(xxx) xxx-xxxx FAX	☐ 2 weeks			SDG No.
Project Name: Ametek - PA	☐ 1 week			
Site:	☐ 2 days			
PO#	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type	Matrix	# of Cont.	Filtered Sample	8260B SIM to achieve low level RL (0.0 ug/L) for 1,4 Dioxane																	Sample Specific Notes:
Effluent Air Stripper	12/5/13	0839	Grab	GW	3		X																	
Trip Blank					2		X																	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other _____

Possible Hazard Identification
☐ *Non-Hazard* ☐ *Flammable* ☐ *Skin Irritant* *Poison B* ☐ *Unknown* ☐

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	S+S Tech	12/5/13 1700			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:

Ametek
1-29-14 - Dave, Chuck & Travis - S&S Technologies

0730 System down upon arrival.
- Blown fuse on stripper control panel.
- Took air stripper completely apart and cleaned
  - Removed calcium build up on bottom tray.
  - Drilled out each hole
  - Cleaned and removed sediment from stripper sump.
  - Checked each alarm for the air stripper for proper operation
  - Found the high level for the air stripper worked about half the time. (N/C Float switch need replaced)
  - Found the low level float switch was not working correctly. (N/O Float switch - Bought at Lowes and replaced)
- Could not locate the N/C Float switch in the area. Ordered from Grainger in Norristown and they will have it in Tomorrow morning after 0900.
- Put the air Stripper back together.
- Called Tina to update.
- System down upon departure 1345

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		High
MW-10S System Status	P1	MW-10S		No alarms
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	65105070
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	2672990
MW-10S Totalizer	FQI 101	MW-6D	≈.1-2 gpm	4778249
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	12
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	12
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	12
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	12
Filter changed on schedule?***			yes/no	Not changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/N (N)
Probes cleaned? Y/N (N)
ΔP Vessel A < 15 psi? (Y)/N
ΔP Vessel B < 15 psi? (Y)/N
Changed filters?*** Y/N (N)

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Non Stop @ 59 gpm
MW-6S Non Stop @ 9.8 gpm
MW-10S Non Stop @ 6.2 gpm
Transfer Pump On - 8 min 16 sec
Off - 1 min 6 sec

*****Filter change-out required monthly.**

Comments

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 5/23/13 **Time:** 0950

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	17.5
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	3
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	10.5
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.41

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		58°F
Transfer blower effluent temperature	TI-129	TI-129		82°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	28.5
Pressure between GACs	PI-104	PI-104	10-20 i.w.	7.5
OVA before GAC1	---		PPM	1.3
OVA between GAC1 and GAC2	---		PPM	0.0
OVA after GAC2	---		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y/(N)
Transfer pump probe cleaned? Y/(N)
ΔP across air stripper? i.w. 14.5 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. -7.5 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 21 — ΔP = PI128 - PI104
Air bag samples taken? Y/(N)
Moisture separator drained? (Y)/N Empty

Record instrument and method used to collect vapor readings.

Comments Calibrated Mini Rae Multigas PID to 100ppm isobutylene (5/23/13 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 5/23/13 **Time:** 1030

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			54°F
Air Stripper Pump Discharage Pressure	PI-110			57 psi
Effluent Water Flowrate	F4		60-90 gpm	~85
Effluent pH	---		6.0-9.0****	7.1
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? Y(N)
Effluent from air stripper? Y(N)

Comments Calibrated pH meter to 7.0 (5/23/13 CD)

Sampler Name Chuck Drevo **Signature:** CDC **Date:** 5/23/13 **Time:** 1100

- 0920 arrive on site, system running good
- Clean air stripper intake
- Calibrated PID + pH meters
- Completed system check, all pumps running good
- 1115 Depart site

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		High
MW-10S System Status	P1	MW-10S		No Alarms
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	63973100
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	2477557
MW-10S Totalizer	FQI 101	MW-6D	≈.1-2 gpm	4605925
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	12
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	12
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	12
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	12
Filter changed on schedule?***			yes/no	Not changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/N
Probes cleaned? Y/N
ΔP Vessel A < 15 psi? Y/N
ΔP Vessel B < 15 psi? Y/N
Changed filters?*** Y/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Non Stop @ 59 gpm
MW-6S Non Stop @ 10.0 gpm
MW-10S Non Stop @ 6.3 gpm
Transfer Pump On - 8 min 10 sec
Off - 1 min 10 sec

*****Filter change-out required monthly.**

Comments

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 5/9/13 **Time:** 1150

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	18.5
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	4
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	10
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.42

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		58°F
Transfer blower effluent temperature	TI-129	TI-129		82°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	29
Pressure between GACs	PI-104	PI-104	10-20 i.w.	8
OVA before GAC1	---		PPM	0.8
OVA between GAC1 and GAC2	---		PPM	0.0
OVA after GAC2	---		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y/N
Transfer pump probe cleaned? Y/N
ΔP across air stripper? i.w. 14.5 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. -6 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 31 — ΔP = PI128 - PI104
Air bag samples taken? Y/N
Moisture separator drained? Y/N Empty

Record instrument and method used to collect vapor readings.

Comments Calibrated MiniRae Multiquas PID to 100 ppm isobutylene (5/9/13 ①)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 5/9/13 **Time:** 1730

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			54°F
Air Stripper Pump Discharage Pressure	PI-110			56 psi
Effluent Water Flowrate	F4		60-90 gpm	~85
Effluent pH	—		6.0-9.0****	7.3
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? Y(N)
Effluent from air stripper? Y(N)

Comments Calibrated pH meter to 7.0 (5/9/13 CD)

Sampler Name Chuck Drevo **Signature** [signature] **Date:** 5/9/13 **Time:** 1250

- 1000 on site, system running good
- Cleaned air stripper intake
- Calibrated PID + pH meters
- Collected system samples, completed COCs + air bill, packed samples on ice
- Completed system check
- 1300 Depart site
- Drop samples at Fed Ex

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: Langan Engineering & Environmental Services	Project Manager: [illegible]	Date: 5/9/13	Chain of Custody Number: 168742
Address: 30 South 17th St Suite 1300	Telephone Number (Area Code)/Fax Number: 215-446-2943	Lab Number	Page 1 of 1
City: Philadelphia; State: PA; Zip Code: 19103	Site Contact	Lab Contact	
Project Name and Location (State): Amtrak - PA	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): 624 GC/MS	Special Instructions/ Conditions of Receipt
Effluent Air Stripper	5/9/13	1119		X							X				X	
Influent Air Stripper	5/9/13	1110		X							X				X	
Trip Blank				X							X				X	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

1. Relinquished By: [illegible]	Date: 5/9/13	Time: 1600	1. Received By	Date	Time
2. Relinquished By	Date	Time	2. Received By	Date	Time
3. Relinquished By	Date	Time	3. Received By	Date	Time

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: Langan Engineering & Environmental Services	Project Manager: Kevin Burns	Date: 5/4/13	Chain of Custody Number: 166741
Address: 30 Soth Min St Suite 1300	Telephone Number (Area Code)/Fax Number: 215-446-2943	Lab Number	Page 1 of 1
City: Philadelphia; State: PA; Zip Code: 19103	Site Contact	Lab Contact	
Project Name and Location (State): [illegible] - PA	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): Dissolved Solids	Total Alkalinity	Total Kjeldahl Nitrogen	Total Phosphorus	Special Instructions/ Conditions of Receipt
Effluent Air Stripper	5/4/13	1112		X				X							X				

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [illegible]	5/4/13	1600	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		High
MW-10S System Status	P1	MW-10S		No Alarms
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	66117410
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	2537500
MW-10S Totalizer	FQI 101	MW-6D	≈1-2 gpm	4531298
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	13
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	12
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	14
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	13
Filter changed on schedule?***			yes/no	Not changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/N
Probes cleaned? Y/N
ΔP Vessel A < 15 psi? Y/N
ΔP Vessel B < 15 psi? Y/N
Changed filters?*** Y/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Run Stop @ 58 gpm
MW-6S Run Stop @ 9.9 gpm
MW-10S Run Stop @ 6.0 gpm
Transfer Pump On - 9 min 0 sec
Off - 1 min 5 sec

*****Filter change-out required monthly.**

Comments

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 6/4/13 **Time:** 0830

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	18.5
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	4
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	10
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.41

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		57°F
Transfer blower effluent temperature	TI-129	TI-129		81°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	29
Pressure between GACs	PI-104	PI-104	10-20 i.w.	8
OVA before GAC1	---		PPM	0.7
OVA between GAC1 and GAC2	---		PPM	0.0
OVA after GAC2	---		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y(N)
Transfer pump probe cleaned? Y(N)
ΔP across air stripper? i.w. 14.5 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. -6 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 21 — ΔP = PI128 - PI104
Air bag samples taken? Y(N)
Moisture separator drained? (Y)/N Empty

Record instrument and method used to collect vapor readings.

Comments Calibrated M.n.Rae Multigas PID to 100ppm isobutylene (6/4/13 CD)

Sampler Name Chuck Drevo **Signature:** CDD **Date:** 6/4/13 **Time:** 0900

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			53°F
Air Stripper Pump Discharage Pressure	PI-110			58 psi
Effluent Water Flowrate	F4		60-90 gpm	~ 55 gpm
Effluent pH	---		6.0-9.0****	7.1
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? (Y/N) see COCs
Effluent from air stripper? (Y/N)

Comments Calibrated pH meter to 7.0 (6/4/13 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 6/4/13 **Time:** 0920

- 0645 on site, System running good
- Cleaned air stripper intake
- Collected system samples, packed on ice + prepared for shipping
- Yavuz Gunger + Tiner of Langan are on site
- Completed system check
- Gauged all wells
- Set up for low flow sampling at MW-5S + MW-24S
- Complete sampling of MW-5S + 24S
- Run purged water through system
- Decon equipment, load up + secure site
- 1600 leave site
- Drop system samples at Fed Ex

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
[illegible]	[illegible]	[illegible]	173517
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page** 1 **of** 1
[illegible]	[illegible]		

City	State	Zip Code	Site Contact	Lab Contact
[illegible]	[illegible]	[illegible]		

Project Name and Location (State)	Carrier/Waybill Number
[illegible]	

Contract/Purchase Order/Quote No.

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): [illegible]	[illegible]	[illegible]	[illegible]								Special Instructions/ Conditions of Receipt
[illegible]	[illegible]	[illegible]		X				X							X											
[illegible]				X				X							X											

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By [illegible]	[illegible]	[illegible]	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

[redacted]

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
[illegible]	[illegible]	[illegible]	173518
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
[illegible]	215-446-3943		

City	State	Zip Code	Site Contact	Lab Contact
Philadelphia	PA	19104		

Project Name and Location (State)	Carrier/Waybill Number
[illegible] PA	

Contract/Purchase Order/Quote No.

Analysis (Attach list if more space is needed): [illegible]

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH		[illegible]											
[illegible]	[illegible]	0855		X							X				X											
[illegible]	[illegible]	0955		X							X				X											
[illegible]				X							X				X											

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By [illegible]	[illegible]	[illegible]	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		High
MW-10S System Status	P1	MW-10S		No Alarms
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	68364130
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	3207283
MW-10S Totalizer	FQI 101	MW-6D	≈.1-2 gpm	5045786
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	20 → 12 ← after change
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	12 → 12
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	20 → 12
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	12 → 12
Filter changed on schedule?***			(yes)/no	Changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/(N)
Probes cleaned? Y/(N)
ΔP Vessel A < 15 psi? (Y)/N
ΔP Vessel B < 15 psi? (Y)/N
Changed filters?*** (Y)/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Non Stop @ 56 gpm → 59 gpm after bag filter change out
MW-6S Non Stop @ 8.6 gpm → 9.8 gpm
MW-10S Non Stop @ 4.3 gpm → 6.5 gpm
Transfer Pump On - 9 min
Off - 1 min

*****Filter change-out required monthly.**

Comments

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 7/3/13 **Time:** 0900

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	17.5
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	3
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	10
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.41

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		59°F
Transfer blower effluent temperature	TI-129	TI-129		83°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	28
Pressure between GACs	PI-104	PI-104	10-20 i.w.	8
OVA before GAC1	---		PPM	1.1
OVA between GAC1 and GAC2	---		PPM	0.0
OVA after GAC2	---		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y/N
Transfer pump probe cleaned? Y/N
ΔP across air stripper? i.w. 14.5 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. -7 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 20 — ΔP = PI128 - PI104
Air bag samples taken? Y/N
Moisture separator drained? Y/N Empty

Record instrument and method used to collect vapor readings.

Comments Calibrated Mini Rae Multigas PID to 100ppm isobutylene (7/3/13 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 7/3/13 **Time:** 0930

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			55°F
Air Stripper Pump Discharage Pressure	PI-110			56 psi
Effluent Water Flowrate	F4		60-90 gpm	~85 gpm
Effluent pH	—		6.0-9.0****	7.2
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? (Y)N
Effluent from air stripper? (Y)N See COCs

Comments Calibrated pH meter to 7.0 (7/3/13 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 7/3/13 **Time:** 1000

- 0650 arrive on site, system running good
- Clean air stripper inlet screen
- Collect system samples, pack on ice, complete COCs
- Complete system check
- Change bag filters
- Changed batteries in Sensaphone - AA batteries
- Gauge all wells with Tim of Langan
- Sensaphone still indicating low batteries. Only other battery in series with Sensaphone is a Werker Battery 6V WKA6-5F. Tim took pictures.
- 1420 Depart site
- Drop samples at FedEx

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client	Project Manager	Date	Chain of Custody Number
Langan Engineering + Environmental Services	Kim Burns	7/3/13	160422
Address	**Telephone Number (Area Code)/Fax Number**	**Lab Number**	**Page 1 of 1**
30 South 17th St Suite 1300	215-446-2963		
City / State / Zip Code	**Site Contact / Lab Contact**		
Philadelphia / PA / 19103			
Project Name and Location (State)	**Carrier/Waybill Number**		
Airtek - NJ			
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): EPA 624	Special Instructions/ Conditions of Receipt
Effluent pre Stripper	7/3/13	0800		X							X				X	
Effluent post Stripper	7/3/13	0900		X							X				X	
Trip Blank				X							X				X	

Possible Hazard Identification

☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal

☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

(A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required

☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

Relinquished By	Date	Time	Received By	Date	Time
1. [signature]	7/3/13	1500	1.		
2.			2.		
3.			3.		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: Langan Engineering & Environmental Services	Project Manager: Kevin Burns	Date: 7/3/13	Chain of Custody Number: 160[illegible]
Address: 10 South 13th St Suite 1300	Telephone Number (Area Code)/Fax Number: 215-446-2943	Lab Number	Page 1 of 1
City: Philadelphia; State: PA; Zip Code: 19103	Site Contact	Lab Contact	
Project Name and Location (State): Amtech - PA	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil		Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Method 8260B	SIM 1,4-dioxane	Tentatively Identified Compounds for 14 days										Special Instructions/ Conditions of Receipt
Effluent Air Stripper	7/3/13	0809		X				X							X												
Trip Blank				X				X							X												

Analysis (Attach list if more space is needed)

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [illegible]	7/3/13	1500	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		High
MW-10S System Status	P1	MW-10S		No Alarms
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	71089900
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	3657887
MW-10S Totalizer	FQI 101	MW-6D	≈.1-2 gpm	5379207
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	12
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	12
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	12
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	12
Filter changed on schedule?***			yes/no	Not changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/N
Probes cleaned? Y/N
ΔP Vessel A < 15 psi? Y/N
ΔP Vessel B < 15 psi? Y/N
Changed filters?*** Y/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for:
Plant Well RW-1 Run Step @ 6.1 gpm
MW-6S Run Step @ 9.5 gpm
MW-10S Run Step @ 6.2 gpm
Transfer Pump On - 12 min
Off - 1 min 8 sec

*****Filter change-out required monthly.**

Comments

Sampler Name: Chuck Drevo **Signature** [signature] **Date:** 8/7/13 **Time:** 0850

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	18 iw
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	3 iw
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	10 iw
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.41 iw

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		58°F
Transfer blower effluent temperature	TI-129	TI-129		82°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	29 iw
Pressure between GACs	PI-104	PI-104	10-20 i.w.	8 iw
OVA before GAC1	---		PPM	0.7
OVA between GAC1 and GAC2	---		PPM	0.0
OVA after GAC2	---		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y/N
Transfer pump probe cleaned? Y/N
ΔP across air stripper? i.w. 15 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. -7 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 21 — ΔP = PI128 - PI104
Air bag samples taken? Y/N
Moisture separator drained? Y/N Empty

Record instrument and method used to collect vapor readings.

Comments Calibrated Mini Rae Multigas PID to 100 ppm isobutylene (8/7/13 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 8/7/13 **Time:** 0920

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			54°F
Air Stripper Pump Discharage Pressure	PI-110			58 psi
Effluent Water Flowrate	F4		60-90 gpm	~85
Effluent pH	----		6.0-9.0****	7.0
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? (Y)/N
Effluent from air stripper? (Y)/N See COCs

Comments Calibrated pH meter to 7.0 (8/7/13 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 8/7/13 **Time:** 0955

- 0705 Arrive on site, system running good
- Clean air stripper inlet screen
- Collect system samples, pack samples on ice, complete COCs, airbill
- Complete system check
- Gauge all wells with Tina of Langan
- 1150 Depart site
- Drop samples at Fed Ex

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-260 (0508)

Client: Langan Engineering + Environmental Services	Project Manager: Kevin Burns	Date: 8/7/13	Chain of Custody Number: 159311
Address: 30 South 17th St Suite 1300	Telephone Number (Area Code)/Fax Number: 215-446-2943		Lab Number:
City: Philadelphia; State: PA; Zip Code: 19103	Site Contact:	Lab Contact:	Page 1 of 1
Project Name and Location (State): Ametek - PA	Carrier/Waybill Number:		
Contract/Purchase Order/Quote No.:			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Other	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Other	Analysis (Attach list if more space is needed): Arsenic 3260B	Sulfide, total	Low level Hg 1631	for 1,4 Dioxane									Special Instructions/ Conditions of Receipt
Effluent Air Stripper	8/7/13	0840		X				X							X												
Trip Blank				X				X							X												

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify):

	Date	Time		Date	Time
1. Relinquished By	8/7/13	1500	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: Langan Engineering + Environmental Services	Project Manager: Kevin Burns	Date: 8/7/13	Chain of Custody Number: 159312
Address: 30 South 17th St Suite 1300	Telephone Number (Area Code)/Fax Number: 215-446-2943	Lab Number	Page 1 of 1
City: Philadelphia; State: PA; Zip Code: 19103	Site Contact	Lab Contact	
Project Name and Location (State): Amtrak - PA	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Matrix: Air	Aqueous	Sed.	Soil		Containers & Preservatives: Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		Analysis (Attach list if more space is needed): EPA 624											Special Instructions/ Conditions of Receipt
Effluent Air Stripper	8/7/13	1210		X							X				X											
Influent Air Stripper	8/7/13	1219		X							X				X											
Trip Blank				X							X				X											

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other_____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature]	8/7/13	1500	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Submersible Pumps and Controls

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Plant Well RW-1 Pump Status	P3	RW-1		On
Plant Well RW-1 Probe Status	P3	RW-1		High
Plant Well RW-1 System Status	P3	RW-1		No Alarms
MW-6S Pump Status	P2	MW-6S		On
MW-6S Probe Status	P2	MW-6S		High
MW-6S System Status	P2	MW-6S		No Alarms
MW-10S Pump Status	P1	MW-10S		On
MW-10S Probe Status	P1	MW-10S		None
MW-10S System Status	P1	MW-10S		No Alarms
RW-1 Totalizer	FQI 103	RW-1	≈50 gpm	73395530
MW-6S Totalizer	FQI 102	MW-6S	≈25 gpm	4038906
MW-10S Totalizer	FQI 101	MW-6D	≈.1-2 gpm	5565880
Particulate Filters (Before Air Stripper)	F-1	F-1		
Influent Filter Unit, Vessel A	PI-104	PI-104	0-15 psi	12
Effluent Filter Unit, Vessel A	PI-105	PI-105	0-5 psi	12
Influent Filter Unit, Vessel B	PI-106	PI-106	0-15 psi	12
Effluent Filter Unit, Vessel B	PI-107	PI-107	0-5 psi	12
Filter changed on schedule?***			yes/no	Not changed
Well Packer Pressure	P1		130 psi	0

Circle

Pumps pulled? Y/N
Probes cleaned? Y/N
ΔP Vessel A < 15 psi? Y/N
ΔP Vessel B < 15 psi? Y/N
Changed filters?*** Y/N

ΔP = PI104 - PI105
ΔP = PI106 - PI107

Record cycle time and flow rate for: **Plant Well RW-1** Non Stop @ 6.1 gpm
MW-6S Non Stop @ 9.8 gpm
MW-10S Non Stop @ 6.0 gpm
Transfer Pump On - 14 min 20 sec
Off - 1 min 10 sec

*****Filter change-out required monthly.**

Comments

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 9/3/13 **Time:** 0850

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Air Stripper and Control Panel

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Stripper blower discharge pressure	PI-121	Between blower and stripper	14-24 i.w.*	17.5 iw
Control Panel Status	---	---	Alarm Condition (Y/N)	N
Stripper Exit Pressure	PI-123	PI-123	0-10 i.w.	3.5 iw
Moisture Separator Exit Pressure	PI-125	PI-125	0-15 i.w.	11 iw
Air Flowrate Exiting Stripper	---	Photobolic gauge	.40-.50 i.w.	0.38 iw → 0.64 after removing + cleaning tubing in air stream

Air Stripper Off-Gas Treatment

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Transfer blower influent temperature	TI-139	TI-139		59°F
Transfer blower effluent temperature	TI-129	TI-129		84°F
Transfer blower discharge pressure	PI-128	PI-103	20-40 i.w.	29 iw
Pressure between GACs	PI-104	PI-104	10-20 i.w.	8 iw
OVA before GAC1	---		PPM	1.2
OVA between GAC1 and GAC2	---		PPM	0.0
OVA after GAC2	---		0.9 x GAC1 value	0.0

Circle

Air stripper trays cleaned? Y/N
Transfer pump probe cleaned? Y/N
ΔP across air stripper? i.w. 14.0 — ΔP = PI121 - PI123
ΔP across moisture separator? i.w. -7.5 — ΔP = PI123 - PI125
ΔP across GAC1? i.w. 21 — ΔP = PI128 - PI104
Air bag samples taken? Y/N
Moisture separator drained? Y/N Empty

Record instrument and method used to collect vapor readings.

Comments Calibrated MiniRae Multigas PID to 100 ppm isobutylene (9/3/13 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 9/3/13 **Time:** 0930

AMETEK U.S. GAUGE DIVISION
PLANT #2, SELLERSVILLE, PA
TREATMENT SYSTEM INSPECTION LOG

Post-Air Stripper Water Filtration and System Discharge

PARAMETER	P&ID SYMBOL	LOCATION	OPTIMUM VALUE (UNITS)	READING (UNITS)
Pre-Air Stripper H_20 Temp	TI-101			55°F
Air Stripper Pump Discharage Pressure	PI-110			58 psi
Effluent Water Flowrate	F4		60-90 gpm	~80
Effluent pH	---		6.0-9.0****	7.3
System Effluent Pressure	PI-111		0 psi	0

******Effluent criteria range is 6.0-9.0. Anything outside this range is noncompliant. Telephone Matt Lesley at 302-884-6901 or Ray Lees at 215-399-4281.**
NPDES Sampling

Influent to air stripper? Y/N
Effluent from air stripper? Y/N see COCs

Comments Calibrated pH meter to 7.0 (9/3/13 CD)

Sampler Name: Chuck Drevo **Signature:** [signature] **Date:** 9/3/13 **Time:** 1300

- 0700 On site, found IOS in alarm, reset panel. Only light lit on panel is main power - no high level probe or pump running light are on but pump is running. Probable issue with panel. Called Dave to discuss. Will shut pump off once done with system check + system samples
- Inspected system + cleaned air stripper intake
- Collected Monthly system samples, packed on ice, completed COCs + ran bill
- Completed system check
- Tina Beneski of Langan is on site for monthly gauging
- Inspected electrical panel + heat trace at IOS since there is evidence of people on property (paintballs shot against roll up door on system shed) Heat trace is working good + no visual evidence of tampering of panel or wires
- Air flow rate exiting stripper low (0.38 iw) Removed air flow tube from pipe + cleaned reinstalled now (0.43 iw) * Had to adjust damper as a result of pressure dropping to 0.38 iw after system ran for 20 min. Now - Blower pressure 19 iw, exit pressure 0.41 iw
- Fixed rusted locks on most wells

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-280 (0508)

Client: Langan Engineering & Environmental Services	Project Manager: Kevin Burns	Date: 9/3/13	Chain of Custody Number: 165122
Address: 30 South 17th St Suite 300	Telephone Number (Area Code)/Fax Number: 215-446-2943	Lab Number	Page 1 of 1
City: Philadelphia; State: PA; Zip Code: 19103	Site Contact	Lab Contact	
Project Name and Location (State): Ametek - PA	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH		EPA 624	Special Instructions/ Conditions of Receipt
Effluent Air Stripper	9/3/13	0809		X						X				X	
Influent Air Stripper	9/3/13	0800		X						X				X	
Trip Blank				X						X				X	

Analysis (Attach list if more space is needed)

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature] SES Tech	9/3/13	1600	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Chain of Custody Record

Sampler ID _____

Temperature on Receipt _____

Drinking Water? Yes ☐ No ☐

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-4124-260 (0508)

Client: Langan Engineering + Environmental Services	Project Manager: Kevin Burns	Date: 9/3/13	Chain of Custody Number: 165194
Address: 19 South 17th St Suite 300	Telephone Number (Area Code)/Fax Number: 215-446-2943	Lab Number	Page 1 of 1
City: Philadelphia; State: PA; Zip Code: 19103	Site Contact	Lab Contact	
Project Name and Location (State): Amtek - PA	Carrier/Waybill Number		
Contract/Purchase Order/Quote No.			

Analysis (Attach list if more space is needed): Method 8260B; Stan to determine Tma Inst RL (10 ug/L) for 1,4-Dioxane

Special Instructions/ Conditions of Receipt

Sample I.D. No. and Description (Containers for each sample may be combined on one line)	Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Method 8260B; Stan to determine Tma Inst RL (10 ug/L) for 1,4-Dioxane
Effluent Air Stripper	9/3/13	0809		X			X						X
Trip Blank				X			X						X

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal: ☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months (A fee may be assessed if samples are retained longer than 1 month)

Turn Around Time Required: ☐ 24 Hours ☐ 48 Hours ☐ 7 Days ☐ 14 Days ☐ 21 Days ☐ Other _____

QC Requirements (Specify)

	Date	Time		Date	Time
1. Relinquished By: [signature] TAS Tech	9/3/13	1600	1. Received By		
2. Relinquished By			2. Received By		
3. Relinquished By			3. Received By		

Comments

DISTRIBUTION: WHITE - Returned to Client with Report; CANARY - Stays with the Sample; PINK - Field Copy

Ametek. — Dave & Chuck S&S Technologies

12-2-13
0930 Arrived on site.
- System running upon arrival. (RW-1)
- Shut the system down.
- Performed LO/TO
  - Removed the 3 pump control panels.
  - Mounted new control panel
1630 Departed site (System down) (Picked up some supplies)

12-3-13
0700 Arrived on site
- Ran conduit and landed wires for all 3 pumps power & controls and Alarm signal from stripper-control panel.
- Started the system to check for proper operation. Only RW-1 would work in Auto.
- Checked on damaged fence across from where old Bldg is use to be. Dug out one fence post that needs to be replaced.
1730 Departed site (System down)

Ametek - Dave & Chuck S&S Technologies

12-4-13
0700 Arrived on site
- Continued trouble shooting new panel.
- Found the 6S high level probe was not working correctly. Replaced with a spare one that was in the compound.
- Got all 3 pumps working correctly.
- Set up the auto dialer so if any of the 3 pumps stop pumping for any reason it will call out.
- Auto dialer Alarms
  Zone 1 - RW-1
  Zone 2 - MW-6S
  Zone 3 - MW-10S
  Zone 4 - Air Stripper Control panel alarm.
- The only alarm on the auto dialer not working properly is zone 4. GeoTech is working on a solution to the problem. In the mean time this is not a problem for the system to run because the stripper control panel alarm shuts down all 3 pumps which will call out.
- Checked all alarms on stripper control panel. Air stripper low pressure, Air Stripper low air flow, Air Stripper High water level,

Ametek - Dave & Chuck S&S Technologies

12-4-13 (Continued)

moisture seperator high water level and influent vapor carbon high pressure. All are working.
- Installed new fence post and secured the fence back in place. (Across from old bldg 15)
- P&T system up and running good with new control panel.

1630 Departed site

Ametek

5-28-14

0730 System down upon arrival.

- Stripper panel alarm
- Found booster blower had a blown fuse.
  - Had to go get 40 amp replacement fuses.
  - Replaced fuse. Started motor and it started smoking and blew a fuse again.
  - Took blower apart to get motor shaft size
  - Found a new motor replacement at Grainger
- Call Tina with update. (Emailed pictures)
- Tried to use a wheel puller to remove fan blade from the motor shaft. Could not get it to work. Will try pry bars next visit.
- Cleaned up site.
- Whole system down.
- 1100 Departed site. (Turned on alarm system)

Ametek

6-10-14 Dave Seaman & Chuck Drevo

0700 System down upon arrival.

- Remove booster blower 10 Hp motor and installed new motor.
- Restarted system. Blower runing good.
- 1230 System running upon departure.

APPENDIX F

Pump and Treatment System Status Log

Appendix F
Table F-1
Pump and Treat Telemetry System Status
AMETEK, Sellersville, PA

7/1/2013	OK	OK	OK	OK	OK	On	LOW	OFF	Replace Batteries
7/2/2013	OK	OK	OK	OK	OK	On	LOW	OFF	Replace Batteries
7/3/2013	OK	OK	OK	OK	OK	On	LOW	OFF	Replace Batteries
7/5/2013	OK	OK	OK	OK	OK	On	LOW	OFF	Replace Batteries
7/9/2013	not OK	not OK	not OK	not OK	OK	On	LOW	OFF	Replace Batteries
7/10/2013	not OK	not OK	not OK	not OK	OK	On	LOW	OFF	Replace Batteries
7/11/2013	OK	OK	OK	OK	OK	On	LOW	OFF	Replace Batteries
7/12/2013	OK	OK	OK	OK	OK	On	LOW	OFF	Replace Batteries
7/15/2013	OK	OK	OK	OK	OK	On	LOW	OFF	Replace Batteries
7/16/2013	OK	OK	OK	OK	OK	On	LOW	OFF	Replace Batteries
7/17/2013	OK	OK	OK	OK	OK	On	OK	OFF	
7/18/2013	OK	OK	OK	OK	OK	On	OK	OFF	
7/19/2013	OK	OK	OK	OK	OK	On	OK	OFF	
7/22/2013	OK	OK	OK	OK	OK	On	OK	OFF	
7/23/2013	OK	OK	OK	OK	OK	On	OK	OFF	
7/24/2013	OK	OK	OK	OK	OK	On	OK	OFF	
7/25/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/1/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/2/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/6/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/7/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/8/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/9/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/12/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/13/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/16/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/19/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/20/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/21/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/22/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/23/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/26/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/27/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/29/2013	OK	OK	OK	OK	OK	On	OK	OFF	
8/30/2013	OK	OK	OK	OK	OK	On	OK	OFF	
9/2/2013	OK	OK	OK	OK	OK	On	OK	OFF	
9/3/2013	OK	OK	not OK	OK	OK	On	OK	OFF	control panel for 10S down and pump to 10S turned off.
9/4/2013	OK	OK	not OK	OK	OK	On	OK	OFF	
9/5/2013	OK	OK	not OK	OK	OK	On	OK	OFF	
9/6/2013	OK	OK	not OK	OK	OK	On	OK	OFF	
9/8/2013	OK	OK	not OK	OK	OK	On	OK	OFF	
9/9/2013	OK	OK	not OK	OK	OK	On	OK	OFF	
9/10/2013	OK	OK	not OK	OK	OK	On	OK	OFF	

Appendix F
Table F-1
Pump and Treat Telemetry System Status
AMETEK, Sellersville, PA

9/11/2013	OK	OK	not OK	OK	OK	On	OK	OFF	
9/12/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	System Shutdown ~7:30 pm
9/13/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
9/16/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
9/17/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
9/18/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
9/19/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
9/20/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
9/23/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
9/24/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
9/25/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
9/26/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
9/27/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
9/30/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	
10/1/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	new transfer pump arrives
10/2/2013	OK	not OK	not OK	Ok	OK	On	OK	OFF	pump installed, 6S and 10S panels not functioning
10/3/2013	OK	not OK	not OK	Ok	OK	On	OK	OFF	
10/4/2013	OK	not OK	not OK	Ok	OK	On	OK	OFF	
10/6/2013	OK	not OK	not OK	Ok	OK	On	OK	OFF	
10/7/2013	OK	not OK	not OK	Ok	OK	On	OK	OFF	
10/8/2013	OK	not OK	not OK	Ok	OK	On	OK	OFF	
10/9/2013	OK	not OK	not OK	Ok	OK	On	OK	OFF	
10/10/2013	OK	not OK	not OK	Ok	OK	On	OK	OFF	
10/13/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	System Shutdown ~8:00 pm
10/14/2013	not OK	not OK	not OK	not OK	OK	On	OK	OFF	Dave from S&S on site to check system. Problem with blower control panel. System still down.
10/15/2013									System shut down. Phone alarm system disconnected by Dave.
10/16/2013	OK	OK	not OK	OK	OK	On	OK	OFF	System Repaired. RW-1. 6s panel says "OK" but pump is not on.
10/17/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
10/18/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
10/21/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
10/22/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
10/23/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
10/24/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
10/25/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
10/28/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
10/29/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
10/30/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
10/31/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/1/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/4/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/5/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/6/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/7/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.

Appendix F
Table F-1
Pump and Treat Telemetry System Status
AMETEK, Sellersville, PA

11/8/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/11/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/12/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/13/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/14/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/15/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/18/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/19/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/20/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/21/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/22/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/25/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/26/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/27/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/28/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
11/29/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on.
12/2/2013	OK	OK	not OK	OK	OK	On	OK	OFF	6s panel says "OK" but pump is not on. System shut down at 9:30 am for new panel installation
12/3/2013	System shutdown for repairs								
12/4/2013	System shutdown for repairs until the afternoon. System running (RW-1, 10s, and 6s as of ~3:30 pm)								
12/5/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/6/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/9/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/10/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/11/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/12/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/13/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/16/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/17/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/18/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/19/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/23/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/26/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/27/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/30/2013	OK	OK	OK	OK	OK	On	OK	OFF	
12/31/2013	OK	OK	OK	OK	OK	On	OK	OFF	
1/1/2014	OK	OK	OK	OK	OK	On	OK	OFF	
1/2/2014	OK	OK	OK	OK	OK	On	OK	OFF	
1/3/2014	OK	OK	OK	OK	OK	On	OK	OFF	
1/6/2014	OK	OK	OK	OK	OK	On	OK	OFF	
1/7/2014	OK	OK	OK	OK	OK	On	OK	OFF	
1/8/2014	OK	OK	OK	OK	OK	On	OK	OFF	
1/9/2014	OK	OK	OK	OK	OK	On	OK	OFF	
1/10/2014	OK	OK	OK	OK	OK	On	OK	OFF	

Appendix F
Table F-1
Pump and Treat Telemetry System Status
AMETEK, Sellersville, PA

1/13/2014	OK	OK	OK	OK	OK	On	OK	OFF	
1/14/2014	OK	OK	OK	OK	OK	On	OK	OFF	
1/15/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	Down 2:15 AM. Pumps restarted ~13:15.
1/16/2014	OK	OK	OK	OK	OK	On	OK	OFF	System down at 6pm
1/17/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
1/20/2014	OK	OK	OK	OK	OK	On	OK	OFF	System back up ~9:30 am
1/21/2014	OK	OK	OK	OK	OK	On	OK	OFF	
1/22/2014	OK	OK	OK	OK	OK	On	OK	OFF	Down ~5:00 pm
1/23/2014	OK	OK	OK	OK	OK	On	OK	OFF	System back up ~8:00 am. System down ~2:30 pm
1/24/2014	OK	OK	OK	OK	OK	On	OK	OFF	System back up ~1 pm
1/26/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	System down ~12:00 pm
1/27/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
1/28/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
1/29/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
1/30/2014	OK	OK	OK	OK	OK	On	OK	OFF	System back up ~12:30 pm
1/31/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/2/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/3/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/4/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/5/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/6/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/7/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/10/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/11/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/12/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/13/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/14/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/17/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/18/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/19/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/20/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/21/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/24/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/25/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/26/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/27/2014	OK	OK	OK	OK	OK	On	OK	OFF	
2/28/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/3/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/4/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/5/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/6/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/10/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/11/2014	OK	OK	OK	OK	OK	On	OK	OFF	

Appendix F
Table F-1
Pump and Treat Telemetry System Status
AMETEK, Sellersville, PA

3/12/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/13/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/14/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/17/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/18/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/19/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/20/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/24/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/25/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/26/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/27/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/28/2014	OK	OK	OK	OK	OK	On	OK	OFF	
3/31/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/1/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/2/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/3/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/4/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/7/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/8/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/9/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/10/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/11/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/14/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/15/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/16/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/17/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/21/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/22/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/23/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/24/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/25/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/28/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/29/2014	OK	OK	OK	OK	OK	On	OK	OFF	
4/30/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/1/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/2/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/5/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/6/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/7/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/8/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/9/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/12/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/13/2014	OK	OK	OK	OK	OK	On	OK	OFF	

Appendix F
Table F-1
Pump and Treat Telemetry System Status
AMETEK, Sellersville, PA

5/14/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/15/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/16/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/19/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/20/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/21/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/22/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/23/2014	OK	OK	OK	OK	OK	On	OK	OFF	
5/25/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	System down ~6am
5/27/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
5/28/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
5/29/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
5/30/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
6/2/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
6/3/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
6/4/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
6/5/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
6/6/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
6/9/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
6/10/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	Install new motor. System running in the afternoon.
6/11/2014	OK	OK	OK	OK	OK	On	OK	OFF	
6/15/2014	OK	OK	OK	OK	OK	On	OK	OFF	
6/16/2014	OK	OK	OK	OK	OK	On	OK	OFF	
6/17/2014	OK	OK	OK	OK	OK	On	OK	OFF	
6/18/2014	OK	OK	OK	OK	OK	On	OK	OFF	
6/19/2014	Not OK	Not OK	Not OK	Not OK	OK	On	OK	OFF	
6/19/2014	OK	OK	OK	OK	OK	On	OK	OFF	System restarted ~3:00 pm
6/20/2014	OK	OK	OK	OK	OK	On	OK	OFF	
6/23/2014	OK	OK	OK	OK	OK	On	OK	OFF	
6/24/2014	OK	OK	OK	OK	OK	On	OK	OFF	
6/25/2014	OK	OK	OK	OK	OK	On	OK	OFF	
6/26/2014	OK	OK	OK	OK	OK	On	OK	OFF	
6/27/2014	OK	OK	OK	OK	OK	On	OK	OFF	
6/30/2014	OK	OK	OK	OK	OK	On	OK	OFF	